ures, the Uniform Crime Reports show a record number of law enforcement officers—86—were killed by felonious criminal action. This is a 34-percent increase over 1968. The previous high was 76 in 1967. The tragic toll of 561 deaths was totaled for the years 1960–69.

Percentagewise, these attacks have risen rapidly. In 1969, there were 16.9 assaults for every 100 officers. This was an increase from 15.8 in 1968 and 13.5 in 1967.

Justice is a quantity to which every American is entitled. When a class of individuals such as law enforcement officers starts to become a special target of antisocial violence, then it is time to act on the Federal level.

Our proposed law does just this and does not attempt to supplant existing State and municipal statutes. We feel not only that this law is necessary, but that we would be derelict in our duty if we did not attempt to provide additional protection for law enforcement officials engaged in performance of their duties.

We hope that early hearings on this bill will be conducted by the Judiciary Committee on what we consider is important legislation. We also hope that in time there will be testimony on the extent of fines and imprisonment that should be imposed in various cases arising under this bill.

To our colleagues who cosponsored this bipartisan legislation, we offer our thanks and we insert their names in the CONGRESSIONAL RECORD:

LIST OF COSPONSORS

Ben B. Blackburn, Republican, of Georgia.
Elford Cederberg, Republican, of Michigan.
Frank Clark, Democrat, of Pennsylvania.
James C. Cleveland, Republican, of New Hampshire.
James M. Collins, Republican, of Texas.
Robert J. Corbett, Republican of Pennsylvania.
Jorge L. Córdova, of Puerto Rico.
W. C. Daniel, Democrat, of Virginia.
John W. Davis, Democrat, of Georgia.
John H. Dent, Democrat, of Pennsylvania.
Marvin L. Esch, Republican, of Michigan.
Edwin D. Eshleman, Republican, of Pennsylvania.
Hamilton Fish, Republican, of New York.
Daniel J. Flood, Democrat, of Pennsylvania.
Walter Flowers, Democrat, of Alabama.
Gerald R. Ford, Republican, of Michigan.
Edwin B. Forsythe, Republican, of New Jersey.
Peter Frelinghuysen, Republican, of New Jersey.
Bill Frenzel, Republican of Minnesota.
James G. Fulton, Republican, of Pennsylvania.
Don Fuqua, Democrat, of Florida.
Joseph M. Gaydos, Democrat, of Pennsylvania.
George A. Goodling, Republican, of Pennsylvania.
Ella T. Grasso, Democrat, of Connecticut.
Seymour Halpern, Republican, of New York.
Orval Hansen, Republican, of Idaho.
James Harvey, Republican, of Michigan.
Ken Hechler, Democrat, of West Virginia.
Craig Hosmer, Republican, of California.
Albert W. Johnson, Republican, of Pennsylvania.
William J. Keating, Republican, of Ohio.
Jack F. Kemp, Republican, of New York.
Robert McClory, Republican, of Illinois.
John Y. McCollister, Republican, of Nebraska.
Joseph M. McDade, Republican, of Pennsylvania.
Ray J. Madden, Democrat, of Indiana.
Romano L. Mazzoli, Democrat, of Kentucky.
Ralph H. Metcalfe, Democrat, of Illinois.
Robert H. Michel, Republican, of Illinois.
Bradford F. Morse, Republican, of Massachusetts.
Walter E. Powell, Republican, of Ohio.
Tom Railsback, Republican, of Illinois.
Donald W. Riegle, Republican, of Illinois.
Fred B. Rooney, Democrat, of Pennsylvania.
John P. Saylor, Republican, of Pennsylvania.
Herman T. Schneebeli, Republican, of Pennsylvania.
Fred Schwengel, Republican, of Iowa.
Keith G. Sebelius, Republican, of Kansas.
Richard G. Shoup, Republican, of Montana.
Floyd Spence, Republican, of South Carolina.
Charles M. Teague, Republican, of California.
John H. Terry, Republican, of New York.
Vernon W. Thomson, Republican, of Wisconsin.
Guy Vander Jagt, Republican, of Michigan.
John Ware, Republican, of Pennsylvania.
G. William Whitehurst, Republican, of Virginia.
Lawrence G. Williams, Republican, of Pennsylvania.
Wendell Wyatt, Republican, of Oregon.
Louis C. Wyman, Republican, of New Hampshire.
Gus Yatron, Democrat, of Pennsylvania.
Roger H. Zion, Republican, of Indiana.

# SENATE—*Tuesday, March 23, 1971*

The Senate met at 10 a.m. and was called to order by Hon. GEORGE MCGOVERN, a Senator from the State of South Dakota.

The Chaplain, the Reverend Edward L. R. Elson, D.D., offered the following prayer:

O God and Father of all mankind, impart Thy grace and higher wisdom to all in the service of this country that they may be faithful to their trust and by their labors advance Thy kingdom on earth.

O God, whom prison walls cannot exclude, be present with all who are held as prisoners of war. In hours of loneliness draw near to them. Let thoughts of Thee be their strength and stay. O Thou who comest as a still, small voice, speak to them comfortably. Uphold them in their weakness, whether of body, mind, or spirit. Give their loved ones reassurance concerning them, and temper the acts and actions of their keepers with mercifulness; through Jesus Christ, the Great Deliverer of all. Amen.

## DESIGNATION OF THE ACTING PRESIDENT PRO TEMPORE

The PRESIDING OFFICER. The clerk will read a communication to the Senate from the President pro tempore (Mr. ELLENDER).

The assistant legislative clerk read the following letter:

U.S. SENATE,
PRESIDENT PRO TEMPORE,
*Washington, D.C., March 23, 1971.*

*To the Senate:*

Being temporarily absent from the Senate, I appoint Hon. GEORGE MCGOVERN, a Senator from the State of South Dakota, to perform the duties of the Chair during my absence.

ALLEN J. ELLENDER,
*President pro tempore.*

Mr. MCGOVERN thereupon took the chair as Acting President pro tempore.

## MESSAGES FROM THE PRESIDENT

Messages in writing from the President of the United States were communicated to the Senate by Mr. Leonard, one of his secretaries.

## FEDERAL ACTIVITIES IN JUVENILE DELINQUENCY, YOUTH DEVELOPMENT, AND RELATED FIELDS—MESSAGE FROM THE PRESIDENT

The ACTING PRESIDENT pro tempore (Mr. MCGOVERN) laid before the Senate the following message from the President of the United States, which was referred to the Committee on Labor and Public Welfare:

*To the Congress of the United States:*

I have the honor to present herewith a report of Federal activities in juvenile delinquency, youth development, and related fields, as required by section 408 of the Juvenile Delinquency Prevention and Control Act of 1968 (Public Law 90–445).

The report covers the period from July 1, 1968, to June 1970, and evaluates activities of the Youth Development and Delinquency Prevention Administration (formerly the Office of Juvenile Delinquency and Youth Development) in the Social and Rehabilitation Service of the Department of Health, Education, and Welfare, which is responsible for the program. It also includes a description of the activities of other Federal agencies and departments in the field of juvenile delinquency.

Early in 1970 it became evident that certain changes in direction and emphasis in the program of the Youth Development and Delinquency Prevention Administration would be highly desirable. This report also incorporates these proposed changes.

I commend this report to your careful attention.

RICHARD NIXON.

THE WHITE HOUSE, March 22, 1971.

## EXECUTIVE MESSAGE REFERRED

As in executive session, the President pro tempore laid before the Senate a message from the President of the United States submitting the nomination of Raymond J. Broderick, of Pennsylvania, to be a U.S. district judge for the eastern

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district of Pennsylvania, which was referred to the Committee on the Judiciary.

## THE JOURNAL

Mr. MANSFIELD. Mr. President, I ask unanimous consent that the reading of the Journal of the proceedings of Friday, March 19, 1971, be dispensed with.

The ACTING PRESIDENT pro tempore. Without objection, it is so ordered.

## COMMITTEE MEETINGS DURING SENATE SESSION

Mr. MANSFIELD. Mr. President, I ask unanimous consent that all committees be authorized to meet during the session of the Senate today.

Mr. SAXBE. Mr. President, I will have to object to all committees meeting during the session of the Senate today. Perhaps the distinguished Senator from Montana would amend his request to include all committees but the Committee on Commerce; if so, I would not object.

Mr. MANSFIELD. The Senator from Ohio is doing so by request, I assume.

Mr. SAXBE. Yes.

Mr. MANSFIELD. Mr. President, I amend my unanimous-consent request that all committees be authorized to meet during the session of the Senate today except for the Committee on Commerce.

The ACTING PRESIDENT pro tempore. Is there objection to the request of the Senator from Montana? The Chair hears none, and it is so ordered.

Mr. PASTORE subsequently said: Mr. President, it is the understanding of the senior Senator from Rhode Island that this morning the senior Senator from Ohio, on behalf of someone else whom I do not know, whose name has not been revealed, objected to the Committee on Commerce sitting at 2 o'clock.

The Committee on Commerce is considering a so-called ceiling on campaign expenditures. I know there is strong feeling on the part of some who would rather have no bill at all. But I think the RECORD should show that the meeting was set for 10 o'clock this morning and over the weekend I received a call from the distinguished Senator from Tennessee (Mr. BAKER) who explained that because there was no session on Monday many Senators would be traveling Tuesday and they could not be here by 10 a.m. In order to accommodate him I set the time for the meeting of the committee at 2 p.m. instead of 10 a.m.

I hope we are not getting into dilatory tactics with respect to this bill. All I want to say at this juncture, and I say it as kindly as I can say it, to use a phrase constantly used by Mr. Nixon, I hope we are not getting into the game of dirty pool.

## ORDER FOR RECESS UNTIL 9:40 A.M.

Mr. MANSFIELD. Mr. President, I ask unanimous consent that when the Senate completes its business today, it stand in recess until the hour of 9:40 a.m. tomorrow.

The ACTING PRESIDENT pro tempore. Without objection, it is so ordered.

(Subsequently, this order was rescinded.)

## ORDER FOR RECOGNITION OF SENATOR MUSKIE TOMORROW

Mr. MANSFIELD. Mr. President, I ask unanimous consent that tomorrow, after disposition of the reading of the Journal and the recognition of the majority and minority leaders, the distinguished Senator from Maine (Mr. MUSKIE) be recognized for not to exceed 15 minutes.

The ACTING PRESIDENT pro tempore. Without objection, it is so ordered.

(Subsequently, this order was rescinded.)

## ORDER OF BUSINESS

The ACTING PRESIDENT pro tempore. Under the previous order, the Chair now recognizes the distinguished senior Senator from Massachusetts (Mr. KENNEDY) for a period of not to exceed 15 minutes.

## THE SST

Mr. KENNEDY. Mr. President, the final hour in the debate over the SST is approaching. The decision by the Senate tomorrow, hopefully, will signal the end to Government underwriting of the cost of the supersonic transport. The decision follows weeks of intensive lobbying by proponents of the SST.

We have been bombarded with a broadside of radio and newspaper advertisements, slick folders and polished pamphlets telling of the glories of traveling to Paris at 1,800 miles per hour. These last-minute high-pressure efforts were unsuccessful in the House of Representatives last week. I sincerely hope that they will have even less effect here.

Witnesses have traced the factual and philosophical arguments for and against the SST during the past several weeks of hearings by both the House and Senate Appropriations Committees. Unanimity of opinion was a rare visitor at those sessions. But I believe these hearings have documented compelling reasons why the American taxpayer should no longer bear the burden of financing the costs of a plane which will be barred from supersonic overland flight, a plane which will cost more than double the price of today's jets, a plane which will carry only the intercontinental commuter.

First, the SST should not be funded because it presents grave threats to the environment, threats which cannot be resolved until after extensive research has been completed. Nearly every conservation and environmental group in the Nation and scientific panels including the President's own advisers view the atmospheric pollution, the sonic boom and the noise pollution of the SST with deep and genuine concern.

The most serious threat to the environment relates to the upper atmosphere where the SST's will fly. In the 50,000 to 60,000 feet level of the stratosphere—the thin dry layer of air far above the cruising altitude of today's commercial jets—pollutants cannot be easily absorbed. Accumulating with each flight, they will remain between 1 and 3 years. Government witness Dr. William W. Kellogg, associate director of the National Center for Atmospheric Research, testified that each of the four SST engines will spew out on the hour: 5 pounds of soot, 6 to 30 pounds of sulfur dioxide, 16 pounds of unused hydrocarbon fuel and 1,400 pounds of nitric oxide. He also testified that a fleet of SST's operating 7 hours a day would add 10 percent to the stratospheric water vapor around the globe. In the high usage corridors in the north Atlantic, Dr. Kellogg said the additional water vapor could be 100 percent greater than it is today. The impact of those exhaust emissions on the climate of earth and on man himself is unclear, but it cannot be dismissed.

Dr. Kellogg was not alone in calling for more research. Perhaps the most frightening specter of commercial supersonic flight came in investigations conducted by James McDonald, senior physicist at the Institute of Atmospheric Physics at the University of Arizona. He concluded that the additional water vapor pumped into the stratosphere by a fleet of SST's could reduce the ozone which filters ultraviolet rays from the sun. Dr. McDonald testified the increase in this ultraviolet radiation could cause 5,000 to 10,000 more cases of skin cancer in the United States. A number of cancer specialists and meteorologists subsequently confirmed the logic of Dr. McDonald's theories and unanimously endorsed further research. Some even termed "conservative" Dr. McDonald's estimate of the probable increase in skin cancer.

William Ruckelshaus, Director of the Environmental Protection Agency, testified at House hearings:

> It is my understanding . . . that no definitive answer can be given as to the impact of water vapor on the ozone and the amount of that impact or of the resultant impact of increased radiation on the earth.

No one is ready to say with certainty what will be the effect on the environment and on man's health when a fleet of SST's are working the skies.

Nor are all of the answers available on the matter of noise pollution. Department of Transportation officials state the modifications in the engine design will permit the SST to meet the 108 FAA-approved decibel level by 1978. However, the National Academy of Sciences/National Academy of Engineering study recommends that the noise standard be dropped by 10 decibels by 1975. No one has ever argued that this is feasible for the SST's. The engine modifications to reduce the sideline noise from 124 to 108 decibels already have meant an increase of 50,000 pounds in the takeoff weight of the SST. Those modifications also have boosted the price by several million dollars. In addition, a Boeing executive has testified that the requirement to lower the noise level could shorten the range of the plane at the rate of 50 miles for each decibel of noise reduction.

Thus, the question remains whether an SST, ours or a foreign product, will be built at any time in the near future so that its noise level meets our requirements without impairing its economic viability. And State legislatures, including the legislature in my own State of Massachusetts, are acting to insure that foreign SST's meet the same standards as subsonic jets if they wish to land at our airports.

The sonic boom also is an unsettled issue of concern. Hopefully, the bill passed last week by the Senate will receive speedy consideration by the House and will be signed into law by the President. That has not yet occurred. Nor have the regulations promised by the FAA yet gone into effect. Neither has there been any conclusive research into the ecological effect of supersonic flight over the oceans.

The environmental issues of pollution of the upper atmosphere, of sonic boom and noise pollution are unsettled. Scientists and ecology groups have testified that the SST presents extremely serious threats to our environment; threats to which no one yet has an adequate response. We should find out the answers. Research into these matters should be undertaken.

But nothing, absolutely nothing, requires that two SST prototypes be built in order to find out the answers to these questions. As Mr. Ruckelshaus testified:

I think it is generally agreed that we can find answers to the environmental questions without going ahead with the production of the two prototypes.

Mr. President, we have a fragile environment and it is the only one we have. I think that we can protect it best by not going ahead with the SST.

Second, the notion is totally false that additional Government financing of the SST is required to safeguard the economy. SST proponents state flatly that the SST will mean 150,000 jobs and a favorable future balance of payments. Even if those assertions were true, which they are not, the Government still must decide whether other Federal expenditures could provide even greater economic benefits, serve more people and do so without harmful environmental effects.

Economists including Nobel Prize winner Paul Samuelson, Dr. Milton Friedman, Dr. John Kenneth Galbraith, and Dr. Arthur Okun, as well as nearly every other non-Government economist, are unanimous in their condemnation of the alleged economic justification for the SST. Even the Council of Economic Advisers told President Nixon in 1969 that they viewed the SST as a "white elephant."

Some 14,000 persons are now employed in the SST prototype program. Another 6,000 are expected to be employed at its height during the next several years, a total of 20,000. If the SST ever arrives at high level production, the Department of Transportation estimates that 50,000 persons will be employed. The other 100,000 jobs the Department of Transportation holds out hope for are the barbers, milkmen, gas station attendants and salesmen who would be providing services to the SST employees. This is sheer propaganda. Those same men and women would be providing the same services to the same 50,000 persons who could be working in hospitals, schools or water pollution abatement projects. It depends only on where we decide to spend Federal dollars—on a plane for the elite or on services for the majority.

Funding the SST is one of the least productive expenditures in terms of the number of jobs that can be produced. For every dollar spent on the SST, many more jobs could be created if we were to spend that money on health, education, or housing.

Walter Heller, former Chairman of President Kennedy's Council of Economic Advisers, said:

On strictly economic grounds, the SST is an enormously costly way to create jobs. Except by attaching some dubious and unproved multipliers to the limited direct employment on the SST, one can't begin to match the job-creating power of a public service jobs program, or a housing program, or even a carefully selected program of consumer stimulus that could be mounted with the same funds that are involved in the SST program.

Arthur Okun, of Brookings said the same:

There is simply no evidence that expenditure of federal funds on SST will create more jobs or better jobs than expenditures for manpower programs or health or urban renewal. I submit that if one asks where an extra $290 million will do the most to create jobs, SST will not be the answer.

Even the prospective production line jobs in the aircraft industry will not be saved or lost by a vote on the SST. Employment in the aircraft industry has dropped as the economy has declined and an uneconomic project like the SST cannot be the panacea. A strong economy is the only guarantee for the future of the aircraft industry and for the men who build its planes.

The irrelevancy of the jobs argument to the decision on the SST is matched only by the irrelevancy of the assertion that SST development is vital to our future balance of payments. The calculations of the alleged imbalance depend on extremely tenuous assumptions. In fact, the U.S. Treasury Department in 1969 argued against Government financing of the SST because their calculations showed a net unfavorable balance of payments resulting from the SST.

C. P. Kindleberger, MIT economics professor and an expert in the field of international trade, stated:

I believe there is very little validity to these estimates of the balance of payments losses from not building the SST.

He added:

This is a faulty basis for deciding the question in the first place.

Dr. Kindleberger has pointed to the Achilles heel of the pro-SST argument. As with jobs, if the object is to improve the balance of payments, there are better ways to do it and the construction of SST's cannot be justified for those reasons.

Third, the SST should not be funded because it is an economically unsound program for the Government, for the airlines, and for the American taxpayer.

For the Government, it means throwing good money after bad. Already $864 million has been spent on the SST. Now we are being asked to spend $478 million more, which would mean a cost of $1,342 billion to the American taxpayer.

We have unresolved doubts about the feasibility of the SST. We have unresolved doubts about its usefulness. We have unresolved doubts about its danger to our environment. Why should the U.S. Government accept the risk that the SST will be the world's fastest flying Edsel?

Dr. Okun testified:

If the SST is nearly as good—as feasible technically, as sound commercially, and as demonstratively safe environmentally—as its proponents insist, then the SST does not need public funds. If however, the SST is not attractive to private investors, that should be be decisive evidence that the SST should not be built or further developed at this time. I see no public interest in the construction of the SST that would warrant the expenditure of taxpayers' money if the project fails to meet the market test and to attract private investors' funds.

If private industry wants the SST, then let them pay for it.

For the airlines, the SST is a plane for the future which despite all of the public protestations of support, they surely do not want to buy today and probably will not be ready for in 1978. General E. R. Quesada, former Administrator of the Federal Aviation Agency and a director of American Airlines, told the Senate Appropriations Committee:

I can't make myself believe that the air transportation industry at this time longs for this airplane. I think the air transportation industry would love to have a breathing spell and not be forced into another round of new equipment.

General Quesada's comments should not be surprising. The airlines industry showed a net loss of $178.3 million last year and their domestic revenue passenger mileage has continued to drop for the past 5 months. Only last week, the CAB approved fare hikes on the profitable European routes to try and ease the financial doldrums of the airlines. This does not appear to me to be an industry that can afford to purchase a $40 million airplane today, nor do I think it is an industry that can afford the $2 to $5 billion cost of financing the actual production of these planes.

In order to tempt the airlines to buy a $40 million plane or invest billions of dollars in its production, it would have to be a sure thing, and the SST is far from that. It has all of the symptoms and characteristics of being a civilian version of the C–5A, an economic "white elephant" of the grandest and most expensive proportions we have yet witnessed.

There are logical reasons why airlines probably would like to pay off their 747 debt and forget about the SST for some time.

The SST now costs over $40 million, double the price of the 747 and the price tag is expected to rise to over $50 million by the time it actually moves down the runway.

The SST will carry only 298 passengers compared to 350 for the 747 of today and an anticipated 500 for the 747 of the near future.

The SST has a 3,600- to 4,000-mile range without refueling while the 747 has an optimum 6,000-mile range.

The SST per passenger operating costs are estimated to be substantially more than the 747.

High SST operating costs relate directly to its voracious fuel appetite. The SST requires 115,000 pounds of jet fuel per hour. The Department of Transportation said that by 1990 some 500 million barrels of fuel would be needed to fuel a fleet of 500 SST's.

Since the SST consumes approximately twice the fuel per passenger-mile as a 747, whenever delays in landing or takeoff occur—as they unfortunately do with regularity—the costs are greater to the SST which consumes more fuel in circling and idling than its 747 counterpart.

The magnitude of the SST appetite for fuel is evident when one realizes that the estimated production of the proposed Alaska pipeline, 2 million barrels a day, would be consumed by the 1990 world fleet of SST's. And despite all of the assertions to the contrary, this gargantuan fuel appetite will place an additional pressure on the Nation's oil supply and add to the likelihood of future oil price hikes. There is no doubt that the world's potential oil resources are adequate to meet these needs, but our past experience in New England proves that high profit fuels such as jet fuel will be produced from the available crude oil and the low profit fuels that New England needs to heat its homes and industries will be in even shorter supply than they are today.

The tremendous fuel costs, the high operating costs, the inflationary sales price and the likelihood of higher costs as its designers struggle to meet noise suppression requirements all come together to label the SST—as did Dr. Paul Samuelson—"an economic and human disaster."

For the American taxpayer, the SST, is an immensely costly mistake. For the $864 million of taxpayers' dollars already spent to be repaid, some 216 planes would have to be sold. But that is not all. The American taxpayer has enough knowledge of the way things work to have a healthy disregard for the assurances by administration officials this year that the cost of production, the $2.5 billion cost of production, will not fall upon his shoulder. Under Secretary of Transportation Beggs was more honest last year when he told the Joint Economic Committee:

> While I was of the opinion that private financing would be available, if it were not at that time, and if we felt that we had a successful SST program on our hands—that is, a successful transport after the prototype testing—and it required some Government-guaranteed loans, then I would think we would so recommend.

This year, the administration officials have emphasized that the production phase always was intended to be through private financing but testimony before the Congress makes it evident that the American taxpayer is being viewed as a financier of last resort if private financial institutions decide the $2 to $5 billion SST production cost is too risky.

There is a final reason why the SST is an uneconomic investment for the American taxpayer. Approximately, 99 percent of the American taxpayers who are being asked to pay for it will not be able to use it. It will be a high fare, first class plane for an expense account, first class passenger. Today, some 6 million passenger miles are flown internationally by U.S. citizens—which represents 3 percent of the population. Of those, between 5 and 10 percent fly first class. So today, less than 1 percent of the U.S. population is flying first class on international flights. The Department of Transportation estimates that in 1985, when SST's are planned for operation, 25 million passenger miles will be flown internationally by U.S. citizens. Since the SST will have a surcharge higher than even the first-class fare for subsonic jets, we can assume that the percentage of passengers who go SST will be similar to the percentage who fly first class today. Thus, perhaps one or two percent of the U.S. population will fly on the SST. If that is not a flying toy for the jet set, then I do not know what is.

Finally, I can think of no single decision facing the Senate which will have a greater impact in reestablishing national priorities than a decision tomorrow to halt Federal funding of the SST. Many of us campaigned for re-election last fall on a platform of redirecting the energies of the Nation toward solving the problems of our cities, the problems of the poor, the problems of the elderly. Voting for the SST is a jarring disavowal of any intention to readjust the direction of our Government toward improving the quality of life in the Nation.

Some argue that $290 million is a small part of the total Federal budget. And that the $478 million needed for the prototype program also represents a tiny portion of our resources. I question that line of reasoning. If that money is to be spent, I want it aimed at other problems.

Urban mass transit is vitally needed to unsnarl the transportation networks of our major cities. Yet this year, the administration has frozen $200 million from a $600 million mass transit appropriation. There is a $2.2 billion backlog of applications in the Department of Transportation from cities and counties around the Nation. I would rather see the administration spend that $200 million and more on urban mass transit which is needed today and which will benefit millions of Americans, rather than continuing the SST which will benefit only the international business executive and the affluent tourist.

For fiscal 1971, the administration asked for $290 million for the SST yet the President vetoed the Hill-Burton hospital construction bill because it contained $350 million more than he had requested.

To develop the SST he asked for $290 million but to fund the National Cancer Institute, he requested almost $90 million less. To fund the SST, he asked for $290 million but to fight air pollution he requested only $115 million. To fund the SST he asked for $290 million but for the Older Americans Act, he requested $31 million.

These are the kinds of misallocations of resources and concerns that the SST represents.

As a Nation, we must apply the skilled resources and talents of our scientists and engineers to the most urgent tasks facing us. The funds that we cut out of the budget for the SST should be channelled to socially useful programs—programs which lead to enriching human life. And scientists and engineers can play a vital role in those new programs. I have introduced S. 32 to provide for retraining scientists and engineers to direct their talents to social needs. In the supplemental appropriations bill this year, I shall introduce an amendment to shift $25 million of the money we cut from the SST into the National Science Foundation for retraining scientists and engineers for research and development in social programs. In this way, we can get on with the business of redirecting our energies toward our most vital needs.

Mr. President, if we are concerned about avoiding an unnecessray threat to the environment of man, if we are concerned about economic viability of the airlines, if we are concerned about jobs and balance of payments, if we are concerned about where this Nation places its priorities, then we should vote against continuing the appropriations for the SST. I strongly urge my colleagues to end the Federal SST subsidy.

Mr. President, I want to call the attention of the Members of the Senate to a particularly cogent analysis of the economic implications of the SST for the U.S. aviation industry.

In an article published today in the Wall Street Journal, Allen R. Ferguson, former Coordinator for International Aviation in the State Department and a consulting economist, has outlined the detrimental impact of the SST on future international fares, on future international travel, and on the financial condition of the airlines.

He states that the SST reverses the traditional U.S. aviation position. Innovation since World War II, "Has typically combined greater speed, comfort and range with reduced costs per seat-mile," he said.

As a result, the U.S. aviation industry has dominated the world market.

But with the SST, costs per seat-mile will be substantially higher than the subsonic jets it is designed to replace.

To meet those costs, the airlines would be faced with a 25- to 30-percent fare surcharge. But Mr. Ferguson said it was unlikely higher fares needed by the SST's to operate economically would be imposed. Instead, as Government subsidies force political decisions to insure SST sales, pressure will be placed on the airlines to boost their subsonic jet fares on international flights to subsidize the SST.

The impact of higher fares across the

board would be to reduce international travel—in fact, Mr. Ferguson cited a study showing that for each 1-percent change in fares, a 2-percent change in travel resulted. He said:

If this sensitivity in the future is only half its estimated level in the past, a 20% increase in overall fares would cause a 20% drop in travel compared to what it would be with a more efficient, subsonic fleet.

The result would be less travel, less jobs, and less profits for the airline industry.

Mr. Ferguson's conclusion is to be recommended strongly to my distinguished colleagues. The SST should not be subsidized by the American taxpayer. When technological changes occur to reduce the SST costs or when other developments obviate the need for the SST, private industry will finance the economically profitable plane.

I ask unanimous consent to include the article in the RECORD.

There being no objection, the article was ordered to be printed in the RECORD, as follows:

WHY THE SST IS NOT GOOD BUSINESS

(By Allen R. Ferguson)

The question that the Senate will settle tomorrow afternoon is not whether there should someday be an American SST, but whether one should be developed and built before the private sector is prepared to finance it, and hence whether the taxpayers should be required to pay for its development.

The basic economic fact about the U.S. SST is that if it were expected to be economical, there would be no need to subsidize it. Its advocates argue that the investment is too large and too risky for the private sector, but it is obvious that the private capital market could raise the $1.3 billion the administration plans to put into the development. Last year the capital market provided American industry with more than $30 billion in new debt and equity money. That the large financial institutions resist financing the prototype development simply indicates that the SST is not good business.

It is economically unsound because it poses a problem that is largely new in aviation. Until the SST, innovation has typically combined greater speed, comfort and range with reduced costs per seat-mile. Since World War II, with the introduction first of the large four-engined piston aircraft and then with the jets, the American aircraft industry has dominated the airways of the world. This dominance has been based on designing and producing technically and economically superior aircraft that could be operated at lower unit cost than their foreign rivals. The consequent secular decline in the costs of air travel and shipment has, of course, been the major force behind three decades of spectacular growth in commercial aviation.

With the SST the situation is different in a crucial way. Whereas the SST would offer many technical advances and be a monument to the sophisticated design and production capabilities of American industry, it is expected, even by its most enthusiastic supporters, to be more costly per seat-mile than the subsonic jets it is intended to replace.

COST INCREASES

The FAA has estimated that ideally the seat-mile costs of the SST would approximate those of present subsonic jets at maximum range, but they would be higher at shorter ranges and, of course, over populated areas where, according to present regulations, it would have to fly at subsonic speeds. Thus, its average cost, even by FAA estimates, would exceed those of present jets. However, in the eight to ten years before the SST was in extensive service, there will be improvements in the wide-bodied subsonic jets that will reduce their operating costs. Further, clearing up the remaining technical problems and imposing any additional restrictions on its use, such as restricting airport operations at night, would probably raise its operating costs further. The SST is expected to cost one-quarter to one-third more per seat-mile than the then-existing fleet of subsonic jets.

This would pose a serious problem of both domestic and international fare policy for the government. A policy that would be both efficient and equitable would require a fare premium reflecting the cost differential between the supersonic and the subsonic vehicles. If the fares were set 25% to 30% above the corresponding fares of the subsonics, SST passengers would have to pay for the speed advantage, and travelers at subsonic speeds would not have to subsidize SST operations through excessive fares. The advantages of each type of service would be available to passengers in accordance with their willingness to pay. However, aviation experts simply do not believe that to most travelers supersonic speed will be worth what it costs. Consequently a fare policy that made broad economic sense would visit financial disaster on the whole SST venture.

If the SST is eventually produced under federal support it is likely to be impossible for the U.S. government to insist on rational pricing of its services. Once the government has subsidized its creation and in various ways induced American and foreign carriers to buy it, letting the U.S. SST become a financial failure would be, to say the least, politically difficult. Obviously, to retain the appearance that the American taxpayers were recouping their investment in the SST, the government would be under great pressure to force many of them to subsidize the SST through excessive fares.

If, as is to be expected, there were little or no fare differential, travelers would presumably prefer the time-saving and would fly on the SST. Payloads on subsonics would tend to be depressed. Their early retirement from the affected routes would be forced on the industry. A larger and larger proportion of at least the trans-ocean fleets would become supersonic, and hence, to avoid losses, the fares on those services would have to approach the seat-mile costs of the SST. Thus, such a fare policy would almost certainly force fares on virtually all types of aircraft substantially above the level at which they would otherwise rest.

Given the effect of the SST on fares, the implications of "success" of the SST program are not hard to draw. First and most obvious, there would be less air travel than otherwise.

If air travel is constricted there will be less employment in the airlines, fewer aircraft will be needed and, hence, eventually perhaps less employment even in the aircraft industry.

DECREASE IN AIR TRAVEL

How much of a decrease in air travel could be expected is impossible to predict with precision, but in 1964, when the most recent sweeping reductions in trans-Atlantic rates went into effect, an average reduction of about 15% was followed by a 40% increase in travel. A major study of the sensitivity of the volume of travel to fares in the North Atlantic indicated that for each one-percent change in fares there had tended to be a two-percent change in travel. If this sensitivity in the future is only half its estimated level in the past, a 20% increase in overall fares would cause a 20% drop in travel compared to what it would be with a more efficient, subsonic, fleet.

These are the obvious direct consequences for the aviation industry of a technically successful SST program. They are at least among the reasons why many airline executives privately—and a few publicly—express reservations about the SST. There are other consequences. Since subsonics would be displaced at a faster rate than would otherwise be the case, the obsolescence of the recently acquired wide-bodied and other subsonics would be accelerated; consequently, depreciation and interest charges or equipment write-offs would be increased, reducing airline profits. The financial problems of the airlines would be aggravated. Their debt is now at historic highs; major carriers are incurring unprecedented losses, such as American Airlines' $10 million loss in the month of February. To burden present operations and financing with the prospect of billions of dollars of additional investment for a basically inefficient vehicle seems hardly prudent.

There is another serious adverse potential. The U.S. international air network is based on a traditionally liberal structure of bilateral agreements, which impose relatively few limitations on traffic and operations. Opposition to this relatively free and expansive arrangement has been increasing in recent years and has accelerated frequently in response to American innovations and to financial difficulties of foreign airlines. The introduction of the SST might induce major restrictions by foreign governments, removing one of the foundations on which American efficiency and pre-eminence in world aviation are based.

But what of the "threat" of foreign supersonics, the British-French Concorde and the Russian TU-144? Will the airlines of the world be forced to replace their American-built fleets with them—as is often alleged? Both these foreign supersonics are ahead of the U.S. SST. Both will probably prove technically operational. But neither is certain. More important, some things about both are certain. Neither will be able to fly even New York-Rome non-stop, to say nothing of Los Angeles-London or San Francisco-Tokyo. Neither will be allowed to fly across the U.S. or across Europe at supersonic speeds. Both will be extremely costly to operate: Last November the British Aircraft Corporation announced that the Concorde's expected seat-mile cost would be 36% higher than that of the 747.

There is simply no way that such equipment can penetrate a large segment of the world's aviation market. Whether it penetrates any significant fraction of the U.S.-international market at all depends largely on the policy of the American government. Unless the U.S. government permits fares in international travel (over which it can exert considerable influence) to force travelers on the American-built subsonics to subsidize the Concorde or the TU-144, they will have virtually no markets of significance—even if their remaining technical and operational problems are all solved.

This brings us to the question of American "aviation leadership." Aviation leadership consists of the leadership of our manufacturers and of our airlines.

It is clear that within the aviation community both at home and abroad the U.S. would certainly gain some "prestige" from producing a superior and ultimately dominant SST. Throughout the world there are many aviation authorities afflicted with that form of myopia which prevents their seeing beyond technological elegance to social and economic utility. But many aviation officials also do understand and would resent the economic and financial strains that would be imposed upon their own carriers by artificially premature obsolescence of their American-built subsonic jets, in the interest of U.S. prestige.

The consequences for U.S. leadership in aircraft production go much further. Now, the U.S. has an indisputable lead: The world flies

American equipment. The British failed to capture any significant fraction of the market with the technically premature Comet or the luxurious but costly VC–10. The U.S. leadership is soundly based on economic reality, not technological novelty. To jeopardize it with a speculative program whose economics are so unpromising that the private sector eschews its opportunities to participate fully would be, at least, a most questionable choice.

Similarly, the U.S. airlines enjoy a highly prestigious, traditionally profitable and socially functional position in international aviation. This, too, is based more on superior economic efficiency than on any other single factor. To try to shift the basis of this leadership to some intangible and rather esoteric advantages associated with the employment of an elaborately inefficient vehicle is, at best, risky.

What would be appropriate policy, in the real interests of U.S. aviation? First, the aerospace industry is facing its present serious problems, not because of any developments in the civil air market but because of shifts and reductions in the nature and level of defense expenditures, particularly the secular decline in the procurement of strategic weaponry (and space equipment). No policy concerning civil aviation can solve its problem. It is clearly not appropriate to undertake half measures to try to help some aircraft companies at the expense of the taxpayers or American aviation interests in general. The problems of unemployment in the aerospace industry can only be addressed effectively through a national policy of maintaining generally high levels of employment and through suitable manpower programs.

SUBSIDIES AND UNCERTAINTIES

Second, appropriate policy on the SST for most U.S. aviation interests would involve opposing the present program to subsidize the SST. The SST should be allowed to develop in due course as technological advances in various areas and changes in air transport markets reduce the costs and uncertainties now associated with it—or produce other developments that obviate the "need" for the SST.

Third, aviation interests should press for an early statement that American policy on fares will not permit discrimination either against foreign-built vehicles or, more particularly, against travelers using subsonic equipment—a policy in the interest of air travelers of all nationalities and in the interest of most foreign as well as U.S. airlines.

Fourth, once the U.S. SST is stopped, the U.S. should pursue an international agreement to discontinue subsidization of SST development.

In general the self-interest of U.S. airlines and most manufacturers is served by policies that play to their established economic superiority, rather than to the unstructured game of competitive governmental subsidization.

## ORDER OF BUSINESS

The ACTING PRESIDENT pro tempore. Under the previous order, the Senator from Connecticut (Mr. WEICKER) is recognized for a period of not to exceed 15 minutes.

## THE PRIORITY OF MASS TRANSIT

Mr. WEICKER. Mr. President, for a few minutes today I would like to bring to life the priority of mass transit.

I do this because the time is now in this Nation when peoples' energies are best spent on being "for" rather than "against." Frankly, I know I can make a better case against the SST by using my energies speaking for mass transit. There is the added benefit that after the smoke clears, what is left are not victors and vanquished but a positive result. If the argument I present today fails, let it be so because someone else won his point by being more positive, more constructive, more of a builder—and not because he was more of a wrecker.

In short, what I am saying is that whether in the best of times or worst of times governing will always mean choosing and I hope the choices of this Nation will be survivors of tests of logic and intellect and not products of successful ridicule, fear, or untruth.

First, I would like to set my feelings straight on many of the arguments used against the SST.

I do not think it would be ecologically or environmentally unsound.

I believe that science and technology must go forward, can be compatible with nature, and would be so in this instance.

Do I expect the products of free enterprise any more than the products of the U.S. Senate to be total perfection from the instant of their birth? No, I do not, and anybody who is trying to make us a nation of instant perfectionists puts a priority on timidity rather than achievement. The greatness of this country was built on trial and error—on the fact that men and women could make their dreams tangible without fear that if they risked and lost, their freedoms or even their lives would be forfeited.

Do I think the proponents of the SST are insensitive to the well-being of the people of the United States? No, I do not. They are fighting for their beliefs as evidenced by their project—now I am going to fight for mine as evidenced by mass transit.

The years 1971–72 with their shortage of domestically allocated funds and deluge of domestic demands make hard-nosed choosing inevitable. But to be very specific, let us narrow the choosing process down to transportation only. In other words, "no fair" comparing the SST to housing anymore than mass transit to education, and so forth. But "fair" to compare the situation, the money and the people served as between the SST and mass transit.

THE SITUATION

Cities without mass transit,

Suburbs without commuter service.

Cities with mass transit, but in inadequate or dangerous condition.

Suburbs with commuter service but in inadequate or dangerous condition.

Urban and suburban areas without bus service.

Nonexistent intercity passenger rail service.

Airports without mass transit facilities to the areas they serve.

Urban areas choked with automobiles.

Highways, freeways, and throughways that are inadequate before they are complete. The countryside laid cold by concrete and asphalt.

In short, the mobile American whether on the move for business or pleasure can only move if he leaves the continental United States. At home, he has slowly been grinding to a halt. The machinery of transportation is faster—transportation is not.

THE MONEY

For the record, I am submitting an abbreviated version of the 1971–72 budgets for the Department of Transportation. The figures for urban mass transit, rail transport, and the SST look rather innocuous until we move on to the next category.

Mr. President, I ask unanimous consent to have printed in the RECORD a table which represents an abbreviated version of the 1971–72 budgets of the Department of Transportation.

There being no objection, the table was ordered to be printed in the RECORD, as follows:

DEPARTMENT OF TRANSPORTATION BUDGETS FOR FISCAL YEARS 1971 AND 1972 [1]

[Dollars in thousands]

| Item | Fiscal 1971 | | Fiscal 1972 | |
|---|---|---|---|---|
| | Budget authority | Percentage of budget authority (percent) | Budget authority | Percentage of budget authority (percent) |
| SST | $290,000 | 3.71 | $235,000 | 2.78 |
| Air transport (excluding SST) | 1,475,000 | 18.24 | 1,995,002 | 23.62 |
| Highway transport | 5,732,500 | 70.91 | 5,997,665 | 70.99 |
| Rail transport | 29,300 | .36 | 50,550 | .60 |
| Urban mass transport | [2] 400,000 | 4.95 | [2] 600,000 | 7.10 |
| Total | 8,084,570 | 100.00 | 8,447,820 | 100.00 |

[1] Budget requests for the office of the Secretary, Coast Guard and the National Transportation Safety Board are excluded from the separate figures but are included in the overall totals.

[2] The figures for budget authority for the Urban Mass Transit Administration are pro rated from the congressional authorization of October 1970 of $3,100,000,000 over a 5-year period. Levels stated reflect Presidential estimates in lieu of appropriations.

Mr. WEICKER. Mr. President, the table to which I have referred indicates that in 1971, 3.71 percent of the Transportation budget was for the SST and 4.95 percent was for urban mass transport. In fiscal 1972, 2.78 percent was for the SST and 7.1 percent was for urban mass transit.

THE PEOPLE SERVED

Mr. President, international air travel serves over 6 million people in 1971. Railroad and urban mass transit serve over 6 billion. The figure for international air travel rises to 7½ million in 1972 while the other figure remains the same.

Mr. President, I ask unanimous consent to have printed in the RECORD a table showing the estimated number of American passengers traveling by various modes of transportation.

There being no objection, the table was ordered to be printed in the RECORD, as follows:

TABLE II.—NUMBERS OF AMERICAN PASSENGERS TRAVELING BY VARIOUS MODES (ESTIMATE)

| MODE | Fiscal 1971 | Fiscal 1972 |
|---|---|---|
| Air-International | 6,450,000 | [1] 7,418,000 |
| Railroads: | | |
| Inter City | 80,000,000 | 78,000,000 |
| Commuter | 206,500,000 | 206,500,000 |
| Urban mass transit | 5,868,000,000 | 5,757,000,000 |

[1] Approximately 35 percent of all Americans flying internationally travel to the West Indies, Canada, Mexico or Central America, routes to which would appear to be inappropriate for SST flight based on projected sonic-boom and cost restrictions.

Mr. WEICKER. Mr. President, the table shows 6 million American passengers in international air travel in fiscal 1971 and nearly 6 billion American passengers in ground transportation in fiscal 1971.

When related to the previous table this demonstrates that Federal expenditures per passenger for various modes of transportation are as indicated on the following table entitled "Federal Expenditures per Passenger for Various Modes of Transportation," which I ask unanimous consent to have printed in the RECORD.

There being no objection, the table was ordered to be printed in the RECORD, as follows:

FEDERAL EXPENDITURES PER PASSENGER FOR VARIOUS MODES OF TRANSPORTATION

| Mode | Fiscal 1971 | Fiscal 1972 |
|---|---|---|
| SST | $44.96 | $31.68 |
| Railroads | 0.10 | 0.18 |
| Urban mass transit | 0.07 | 0.10 |

Mr. WEICKER. Mr. President, if the full SST request were, in fact, appropriated, we would be spending 3.7 percent of the transportation budget on somewhat over 6 million passengers, while we would spend only 5.3 percent on over 6 billion passengers using all forms of surface mass transit.

Put in a different way, to bring mass transit funding up to the level of funding for the SST on a per passenger basis—and it seems to me that is the business of government—we would have to spend more than the entire Federal budget—$212,755,000,000.

Put the use of the domestic traveler alongside the figures of the Federal budget and the truth of wretched performance becomes shockingly clear.

Even though this administration, to its credit, has upped the funding of mass transit in 1971–72 budgets, those budgets like transportation itself, are inadequate because they minimize the most important factor—people, their increasing numbers, their changing life styles.

At the rate of the 1971–72 budgets mass transit will not be grinding to a halt—it will petrify.

Mr. President, in this year of hard choices, I think the time has come to insist that 6 billion travel happenings be accomplished—be accomplished safely—be accomplished excellently.

The real prestige of America rises and falls on how well it does by its people.

Move 6 billion people well and you know democracy works. Not just in the eyes of the world, but in the eyes of the 6 billion.

And that is a priority—1971–72 style.

Tomorrow, when I vote against the SST, it will be a vote for mass transit.

## ORDER OF BUSINESS

Mr. BYRD of West Virginia. Mr. President, how much time remains under the time allocated to the able Senator from Connecticut (Mr. WEICKER)?

The ACTING PRESIDENT pro tempore. The Senator has 5 minutes remaining.

Mr. BYRD of West Virginia. Mr. President, will the Chair proceed to announce the next order, please?

The ACTING PRESIDENT pro tempore. The Chair advises the Senator that under the previous order the Senator from Kansas (Mr. DOLE) and others were to be recognized for colloquy for not to exceed 30 minutes.

Mr. BYRD of West Virginia. Mr. President, on behalf of the Senator from Kansas (Mr. DOLE), I yield to the Senator from Arkansas (Mr. MCCLELLAN).

The ACTING PRESIDENT pro tempore. The Senator from Arkansas is recognized.

## NATIONAL WEEK OF CONCERN FOR PRISONERS OF WAR/MISSING IN ACTION

Mr. MCCLELLAN. Mr. President, as a cosponsor of the legislation to authorize the President to designate this period as "National Week of Concern for Prisoners of War/Missing in Action," I lend my voice, my heart, and my office to our men held captive in Southeast Asia.

These men are truly being tested. Cut off from their units, their loved ones, and from each other, they alone know the full meaning and measure that their country sometimes must demand.

Though opinion may well differ on the reason for American presence in Vietnam, Americans are as one in our desire to see these men returned safely home and in our determination to do everything within our power to see that happy day.

Unfortunately, just as the enemy takes our lack of will to win, and our vacillation in Southeast Asia as a sign of weakness, so too, I fear, will they mistake our humanitarianism—our concern—and our entreaties on behalf of our men in captivity as a further mark of weakness. I urge the administration to try to dispel this erroneous impression.

The tragedies of war take many forms. We are touched by all of them. But none unites us—moves us—and steels our determination more than the inhumane, barbaric treatment being inflicted on our captured men by other North Vietnamese.

The administration assures us that everything possible is being done to secure humane treatment and the eventual release of our prisoners. Regrettably, these efforts have not proved fruitful, but I urge the Government and the President to continue to press unanimously and unrelentingly this issue until the release of our men is procured.

The ACTING PRESIDENT pro tempore. The Senator from Tennessee (Mr. BROCK) is recognized.

Mr. BROCK. Mr. President, I want to again express my deep gratitude to this body and to my former colleagues in the House for their unanimous response to legislation designating this week as a National Week of Concern for American Prisoners of War/Missing in Action. This is a week when the American people speak as one voice in behalf of our men who are prisoners of war or missing in action in Southeast Asia.

Relating the story of just one brave young wife of an American fighting man who was captured perhaps best explains my deep concern for this cause and why I am so grateful to the Members of the House and the Senate for making this legislation possible.

Mrs. Wayne Fullam is the wife of Air Force Maj. Wayne Fullam, whose plane was shot down over North Vietnam in October 1967. His parachute was seen opening and hopefully he descended safely. Yet, no word as to what has happened to him since has ever been heard.

During those 3 years, Boony Fullam has been both mother and father to their three sons, trying to live a normal life, knowing only that her husband parachuted into enemy territory and nothing more. She has exhibited a courage and faith that both inspires and humbles, while working tirelessly to secure a scrap of information about her husband.

For several years, on advice from her Government, she and 1,600 other families of POW's and MIA's did not speak to the public of their plight. When this tactic was found to achieve no results, a change in approach was made.

World opinion, it seemed, was the only weapon that might influence the North Vietnamese to abide by the terms of the Geneva Convention regarding prisoners of war or those missing in action.

Accepting her new task, she made hundreds of speeches, solicited thousands of letters to Hanoi and traveled countless miles in her efforts to aid her husband and secure for him better treatment and early release.

She has been counting so much on this week of concern—praying for an opportunity to enlist the aid of this entire Nation in a united effort to focus attention on the needless misery and suffering of the families of these 1,600 fighting men, who know so very little about the welfare of their loved ones held captive in a foreign land.

And so it is for the Booncy Fullams, their children and the other wives, children, and parents of the POW's and MIA's that Congress has taken this action in the hope that during this "Week of Concern," a great message will be beamed to the world—expressing our concern for those who served this country, wear her uniform, and are held in the land of the enemy.

Let us unite in common cause for this effort, for this could well be the message that will arouse world opinion to the extent that it will become impossible for Hanoi to continue to violate every tenet of human decency in their treatment of our prisoners.

And so again, I want to express my deep gratitude for your help in making possible the "Week of Concern." Let us hope that, to quote from Jeremiah:

Thus saith the Lord: Refrain thy voice from weeping and thine eyes from tears: for thy work shall be rewarded and they shall come again from the land of the enemy.

May that day come soon.

Mr. President, I ask uanimous consent that the remarks of the Senator from Kansas (Mr. DOLE) be included in the RECORD at this point following my own.

There being no objection, the statement was ordered to be printed in the RECORD, as follows:

ONE THOUSAND SIX HUNDRED WHO WILL NOT BE FORGOTTEN

Mr. DOLE. Mr. President, this is a solemn week for America as we pause to remember approximately 1,600 of our fellow citizens who are held prisoner of war or are listed as missing in action in Southeast Asia.

This is a time of war; it is a time of anxiety and apprehension for the families and friends of all those brave men who go off to fight in a distant land. It is a time of deep national sorrow and profound personal grief as the flag-draped caskets are returned home and the last call of taps rings out for the fallen. It is a time of untold suffering and shock as the wounded and the disabled fill the Medivac centers, the hospitals and the rehabilitation centers. Death and agony and shattered lives are all around us in this time of war, yet there is another agony, another dimension of suffering.

Somewhere in North Vietnam, in the Viet Cong hideaways of South Vietnam, in Laos and in Cambodia, American men are being held. We do not know who all of them are; we do not know how many. But we do know that they are there. We also know they are being subjected to inhumane living conditions. They are being denied proper medical attention. They are not allowed to communicate with their families.

We know all of this, and we know the rights which are due these men in international law. We have told the enemy—in Paris, via diplomatic channels and through the world press—that we demand proper treatment for these men. And still they remain.

And in their homes across the Nation the doubt remains about their safety and their health. The uncertainty lingers about their very lives. But still in those 1,600 homes and in millions of others in every part of America, a determination burns on that these brave Americans shall not be forgotten. The wives and mothers and fathers, the children, aunts and uncles, just friends and even strangers to these men have aroused the compassion, the interest and the anger of the American people. They have raised a great, united voice in every city, in every State. This voice cries out not only to the enemy but to men of conscience and good will in every country. The message is simple; the plea is sincere: Give our men the humane treatment they deserve. Give them their due under the law of nations. Release their names. Allow them to communicate. Give them adequate food and proper medical care. Treat them as human beings, not as pawns in an international propaganda assault.

The enemy's response to our private pleas and public declarations has been adamant and inflexible. The question of prisoners and missing men is repeatedly treated with callous hostility and an insensitive disregard for the humanitarian principles which have been established to govern this aspect of war. The President has repeatedly emphasized this Nation's desire to secure release of all prisoners of war on both sides. He has also firmly set forth our commitment to the release of every American prisoner—whether in North Vietnam, South Vietnam, Laos or Cambodia—before United States forces are withdrawn from South Vietnam. As commander in chief of our Armed Forces, he feels very heavily the responsibility for the safety and well-being of all the men under his command. By issuing his proclamation to designate this week of concern for prisoners of war/missing in action the President has again demonstrated his personal commitment and that of the American people to these 1,600 brave and heroic men.

This week marks seven years since the first American was taken prisoner in Indochina. It is an unfortunate anniversary. But those of us in public life and our fellow citizens throughout the Nation face the coming year with firm resolve and renewed dedication that more and more Americans and increased numbers of those in other nations will join our cause and that we will not forget those 1,600 who have given so much for us and our way of life.

Mr. BROCK. Mr. President, I ask unanimous consent that the remarks of the Senator from Florida (Mr. GURNEY) be inserted in the RECORD at this point.

There being no objection, the statement was ordered to be printed in the RECORD, as follows:

Mr. GURNEY. Mr. President. This past Friday the President signed into law a resolution declaring the week of March 21–27, 1971 national week of concern for prisoners of war/missing in action. It is particularly fitting to express our concern at this time, since March 26th marks the seventh year that an American serviceman has been held in captivity in Southeast Asia. The number of POWs/Mias in Southeast Asia has now risen to more than 1,600.

This is a tragic situation, Mr. President. The families of our Vietnam POW's know that even though hostilities in Korea were ended through an Armistice signed at Panmunjom, in 1953, North Koreans failed to account for 389 Americans who had been known to be prisoners of war. The families of those prisoners of an earlier communist foe in Asia still have heard nothing of their men.

Whatever our views on the war, we all deplore the suffering and the inhuman treatment visited on our men by North Vietnam, and we extend our sympathy and our support to the families of the POW's here at home who have suffered too much. For our part, let us continue to focus attention on the problem of men who are either prisoners of war or missing in action. May I suggest that newspapers and magazines throughout the country, in addition to those in my home state, make it a point to regularly print this appeal or appeals like it.

It has been 6 years and 363 days since the first U.S. serviceman was imprisoned in Southeast Asia.

Let us do our part to free our POW's now!

Mr. BROCK. Mr. President, I ask unanimous consent that the statement by the Senator from Indiana (Mr. BAYH) be inserted in the RECORD at this point.

There being no objection, the statement was ordered to be printed in the RECORD, as follows:

Mr. BAYH. Mr. President, this week is a time of great significance for Congress and the nation. At this moment, though embroiled in controversy over a tragic American involvement in the Southeast Asian war, Americans of all political persuasions have put aside their differences and focused the strength of their concern in an effort to insure the safety of American servicemen held prisoner or missing in action in Vietnam.

Though many of us in Congress and within this nation have honestly expressed our disagreement with the objectives and tactics of this terrible war, let no nation mistake this divergence for the absence of a truly unified concern for innocent victims of that conflict. For the wives and families of the missing servicemen, we in Congress can do no less than express our single-minded purpose to effect the safe and swift return of their loved ones. No solution to this war can fail to take account of the lives of these men.

We appeal to the government of North Vietnam, as members of the community of nations, to afford our captured servicemen the rights due them under the Geneva Conventions. There can be no justification for treating these men with less than human decency.

I urge all Americans to join with their fellow citizens in expressing to all nations of the world our complete determination to see these men returned home. Let us not allow this suffering, inflicted upon American and Asian alike, to continue. It is my hope that the unity of spirit fostered in this resolution of concern extend beyond this week. Let us seek, together, to find a peaceful solution so that no more Americans may have to risk capture or death in Vietnam.

Mr. BROCK. Mr. President, I yield back the remainder of my time.

Mr. BYRD of West Virginia. Mr. President, the observance of this National Week of Concern for Prisoners of War/Missing in Action provides an opportunity for the expression of national feeling at every level; and I am privileged to join my voice to those of my colleagues in this body who share the concern of all our people for the plight of over 1,600 Americans now listed as prisoners of war or as missing in action in Southeast Asia. To be meaningful and effective, the concern demonstrated here today must be channeled into constructive activities which will rouse public opinion in this Nation and throughout the world.

Within the civilized community of nations, certain rules and procedures have developed over the centuries to mitigate the brutality of war and to introduce some humane element into conflict. Many of these rules center around the rights of prisoners and captives. Today we see these basic principles flagrantly violated in Southeast Asia. We are determined to do all in our power to end mistreatment of our captive servicemen and, ultimately, to effect their release.

Here is a concern which transcends all partisan prejudice or ideological passion, a concern which cries out for the wholehearted support of every American. It is a concern which should be shared by all men of good will in every nation throughout the world. At stake are the lives of helpless prisoners as well as certain basic principles of humanity honored at all times and in all places.

Let this week of concern mark a renewal of dedicated effort by all the people of this land in behalf of our men captured or missing in Southeast Asia. Above all, let us unite in prayer for a just and enduring peace founded on unshakable principles of right. The humanitarian provisions of the Geneva Convention embody the humane sentiments of man, refined through long centuries of struggle. May this week of concern inspire in us all a deeper sense of unity, not only with

our fellow Americans held captive in a foreign land, but with all who, under God, care for the cause of human decency.

Mr. PASTORE. Mr. President, "missing in action"—no more tragic or terrifying expression comes out of the field of combat in all the history of warfare.

Has a dear one perished—or is he a prisoner of war in the hands of the enemy?

Have not the nations of the world provided for these contingencies of warfare?

Of course they have—and we speak glibly of the Geneva Conventions—of the concern and care that captors must give their prisoners of war.

We have seen these conventions sabotaged by the forces of North Vietnam and the so-called National Liberation Forces of South Vietnam.

Whatever differing views of our Vietnam venture there may be, the feelings of all Americans are outraged by the callous savagery of Hanoi toward the prisoners—and the savagery of silence toward the distraught families of the missing.

Hanoi refuses clearly to identify the Americans it holds prisoner. It prohibits the International Red Cross or other worldwide humanitarian organizations to inspect the prisons.

The evidence we have been able to elicit—the documented stories of brutality—are not merely wrongs against fellow Americans—they are crimes against humanity.

Humiliation, isolation, and abject cruelty describes the lot of the Americans in the hands of Hanoi—more than 300 that we know about—and some 1,500 missing altogether.

Prisoners not only may not communicate with home—they cannot communicate with one another.

True—in the past few years some nine prisoners have been released. They confirm the tales of torture.

Hanoi defies the accepted humane conventions of sovereign nations. Conventional diplomacy gets us nowhere. We cannot even secure the names of the prisoners to identify them and give this meager solace to their families.

Some of these families have suffered 5 years of this savage silence—but the families do not fail their loved ones.

Hoping against hope—week after week—month after month—year after year—packages, letters, photographs are mailed.

We hope that sometimes they get through.

And there leaks through to us the tragic tale of torture, brainwashing, medical neglect that makes a mockery of our so-called Paris peace talks.

Now—in a special way—the American people—all the American people—are going to concentrate their concern for the prisoners of war.

By resolution of the Congress and by proclamation of the President, the heart of America—this week—will turn in concert to the plight of our missing heroes.

Throughout this week, especially, let the pressure of our prayers be felt.

Let our minds and our wills vault the miles to North Vietnam.

Let us try to imagine the difficult day of the prisoner—the skimpy meal at 10 in the morning—the equally skimpy meal at 4 in the afternoon—the consequent hunger of the body and the utter isolation of the soul.

Let us then each day of this week of special concern—at the hour of 10 in the morning and 4 in the afternoon—give our special time and thought—and prayer for our missing men.

And let us add to our prayer our solemn promise that their safe return shall have top priority in our plans.

Then let us persevere in our purpose until families are reunited as a pact of any negotiations for peace.

No American home can feel secure as long as a single American home must bear the agony of silence.

Mr. PEARSON. Mr. President, in my estimation, there has never been a situation more frustrating to all Americans than the situation which exists with regard to our prisoners of war held by the North Vietnamese and the Vietcong.

Many hundreds of American soldiers, airmen, marines, and naval personnel are at present missing or captured in Vietnam. How many of these men, and which ones, are in captivity is a secret closely guarded by the North Vietnamese authorities. For each of these men there is a wife, a child, a parent, who is concerned with his fate. They are subjected to uncertainty and despair which grows as each day passes. At least 54 of these men have relatives in the State of Kansas.

On the shoddy pretext that U.S. captives are not prisoners of war but "criminals," North Vietnam will not allow neutral inspections of its prisons. Yet, such inspections are required under the Geneva Conventions, signed by North Vietnam in 1957 and by 119 other governments. Using the "criminal" charge to mask its defiance, Hanoi not only has rejected inspection of its camps, but has also refused to identify the prisoners it holds; release the sick and wounded; allow proper flow of letters and packages; or protect U.S. prisoners from public abuse.

As can be readily seen, the Communists have no respect for international law or basic standards or human decency.

There is one thing the North Vietnamese do have some respect for, however, and that is world public opinion. Their policies have always been calculated to evoke sympathy abroad. Parading downed U.S. pilots before shouting civilians in Hanoi, the great publicity surrounding the release of a few American prisoners—all of this was designed to create the greatest amount of pressure on the United States to unilaterally withdraw from Vietnam. Their strategy failed, but we have learned something about the realities of world public opinion.

In the spring of 1969, the Nixon administration's efforts on behalf of prisoners shifted from the behind-the-scenes diplomatic approach, and we began to publicly protest the illegal and inhumane treatment of our prisoners.

The Nixon administration has instituted numerous programs to focus national attention on the plight of the POW's, and is working diligently in diplomatic circles and at the "peace" negotiations in Paris.

Both the 91st Congress and the present Congress have been equally active and to their credit have considered the prisoner issue on a nonpartisan basis. The passage of legislation protecting POW's and their families; approval of resolutions protesting the treatment of our prisoners; congressional hearings designed to keep the public informed; an historic joint session last September to hear Col. Frank Borman, Special Representative of the President on Prisoners of War; and many thoughtful speeches by Members of both Houses—all represent some of our actions to encourage public pressure on North Vietnam.

Most important, Americans have expressed their distress loudly. Many State legislatures have unanimously passed resolutions condemning the actions of the North Vietnamese. On March 11, I placed in the CONGRESSIONAL RECORD such a resolution recently passed by the Kansas State Legislature which reflects the most solemn judgment of all the people of Kansas.

In early December 1970, the United Nations General Assembly recognized that the treatment accorded to prisoners of war was properly its concern and adopted a resolution which calls upon all parties to any armed conflict to comply with terms and provisions of the 1949 Geneva Convention relative to the treatment of prisoners of war in order to insure humane treatment of all persons entitled to the protection of the convention and to permit regular inspection in accordance with the convention of all places of detention of prisoners of war by a protecting power or humanitarian organization such as the International Committee of the Red Cross.

The families of men who may be prisoners have even organized as the National League of Families of American Prisoners and Missing in Southeast Asia, to insure that the plight of their men is not forgotten and that all possible efforts to resolve the prisoner-of-war problem are vigorously pursued.

This week has been designated by the Congress and the President as "National Week of Concern for Prisoners of War/Missing in Action." Observances are taking place throughout the whole country, in cities and hamlets alike.

As David Lawrence said in his syndicated column in the Evening Star of last night, "World opinion could be mobilized and have an impact on the Governments of the Soviet Union and Red China, which exert a big influence on the policies of the North Vietnamese Government."

Mr. President, I ask unanimous consent that the entire column from the March 22 Evening Star be printed in the RECORD at this point in my remarks.

There being no objection, the article was ordered to be printed in the RECORD, as follows:

NIXON POW PLEA HOLDS PROMISE

(By David Lawrence)

This could be an important week in the Vietnam war. World opinion could be mobilized and have an impact on the governments of the Soviet Union and Red China, which exert a big influence on the policies of the North Vietnamese government.

For President Nixon has just issued an appeal for the release of the nearly 1,600 American servicemen and civilians captured during the last seven years in Vietnam. He hopes those missing will be identified if in captivity. He says:

"The Geneva prisoner of war convention of 1949 sets forth the minimum standards for humanitarian treatment applying to all prisoners of war. Some 125 nations, including all of those involved on both sides in the Southeast Asia hostilities, have acceded to the Geneva Convention and have pledged to observe its humane standards. And on a moral plane above and apart from these formal rules, any civilized peoples are subject to the basic humanitarian standards long established in international law and custom."

The foregoing words are contained in a proclamation by the President requested by a joint resolution of Congress. It declares March 21 through March 27 to be a "national week of concern for Americans who are prisoners of war or missing in action." He urges the people of the United States to observe the week "in heartfelt prayer, and in ceremonies and activities appropriate to voice deep concern for the prisoners and missing men, to inspire their loved ones with new courage and hope, and to hasten the day when their ordeal may end."

The President's plea is addressed really to peoples everywhere, for there seldom has been such an instance of what he terms a "barbaric attitude." Nixon points out, for example, that the North Vietnamese do not identify all the prisoners, do not allow them to correspond regularly with their families, and refuse to release the seriously sick and wounded.

Certainly it is proper for the President to tell this to the world and to emphasize the continuing disregard by North Vietnam of the Geneva Convention. Even neutral agencies like the International Red Cross have not been able to alter the adamant stand of the Hanoi government.

More than 70 members of the House of Representatives have just sent a letter to the president of North Vietnam asking that "a representative group from the United States Congress" be permitted to inspect centers of detention and meet with American prisoners of war. Republicans and Democrats joined in the move. The letter says:

"By allowing this you could allay the concern and questions of millions of people in the United States and throughout the world."

Various efforts have been made through foreign diplomats friendly with the North Vietnamese government to establish some kind of contact with the prisoners, but to no avail. An explanation heard is that the Hanoi authorities think this is one way to force the United States to accede to their demand for complete withdrawal at once.

What is so mystifying about the situation is that the Soviet Union, which has been providing billions of dollars to North Vietnam for military supplies, has not seen the wisdom of intervening in a matter of such international importance. The argument usually made in defense of the Soviet reluctance is that Moscow doesn't want to see Red China strengthen its hand in Indochina. The rivalry is well known and could, of course, have a part in the hesitation of Moscow to apply pressure.

But sooner or later the time for decisive steps will come. For it is obvious that completion of the "Vietnamization" program is not going to make things easier for North Vietnam. Even with the withdrawal of almost all American combat troops, enough supplies will be furnished and residual units of air forces will still remain to assist South Vietnam.

World opinion will continue to be dismayed by the indifference of both Peking and Moscow to the inhumanity of their ally—North Vietnam. Little do the Communist leaders realize that an action which would demonstrate humane concern would help toward making peace between the United States and North Vietnam.

President Nixon rightly has publicized the prisoner-of-war issue throughout the world. It certainly could afford an opportunity for a constructive step—the assurance of humane treatment of all the prisoners of war and the release of sick and wounded—which could be the basis of a new approach to the negotiation of peace in Vietnam.

Mr. JACKSON. Mr. President, pursuant to a resolution passed by Congress, the President has designated this week as a "National Week of Concern for Prisoners of War/Missing in Action."

It is fitting that we use this week as a time to again express our concern over the plight of these brave Americans and rededicate ourselves to efforts that will help improve their condition and soon win their release.

It is apropriate that we take this opportunity to remind the world that the abuse of these men is a calculated policy of the North Vietnamese Government, violating not only the Geneva Convention but also the values of all civilized nations.

Over the past 2 years, I have joined in a number of efforts to focus attention on the prisoner of war problem and stimulate action by our Government and the United Nations. I believe that these efforts in Congress have had a significant impact. They have helped mobilize public opinion and served notice that this issue has the highest priority in Congress. As part of a broader campaign, congressional action has contributed to arousing world opinion against North Vietnam's indifference to human life.

We must continue these attempts to spotlight the tragic situation of our prisoners of war. If they improve the lot of even a handful of these men, they will have served a worthwhile purpose.

At the same time, we are concerned not only with the treatment of these men but also with their return to freedom. And while we mobilize public opinion, hoping to improve their treatment by the North Vietnamese, we should also pursue a full program of diplomatic efforts and sustained inducements and pressures in support of a negotiated cease-fire and an end to the war. I am convinced, Mr. President, that negotiating the terms of a cease-fire—which would provide for the release of prisoners by both sides—is the best, if not the only, way to get our prisoners of war back home.

It has been over 6 months since I initiated the bipartisan letter, signed by Senator SCOTT and 28 other Senators of both parties, suggesting that the President propose at the Paris negotiations an internationally supervised cease-fire in Vietnam, prompt free elections open to all parties, with safeguards to assure freedom of speech, assembly and the press throughout South Vietnam, release of prisoners of war and political prisoners by both sides and massive relief and aid for both North and South Vietnam.

A month after this the President proposed a standstill cease-fire in Indochina, but the followthrough since then leaves much to be desired.

I believe we must pursue the concept of a negotiated cease-fire relentlessly and aggressively in the weeks ahead. The harder we pound away at this idea, the better chance there is that Hanoi will respond with serious counterproposals. The sooner we can negotiate a realistic agreement, the sooner our prisoners of war can come home.

Mr. CHILES. Mr. President, I am deeply disturbed by a recent development regarding our American prisoners of war in North Vietnam—a development which greatly intensifies the already heavy emotional burden being borne by the wives and families of these men.

Last week I learned that letters had just been returned to four wives in the Fort Walton Beach, Fla., area, letters they had written to their POW husbands. While POW wives seldom know if their letters are being received by their husbands, this was the first incidence of them being returned, and their reaction was, of course, deep dread of what this might indicate.

I immediately reported this development to the Air Force and State Department. They checked further and reported back that the same thing had happened in other areas of the country. It may well be that other wives and families in Florida had the same thing happen and I just have not learned of it yet.

Thus far there is no explanation for this mystifying situation. We can only assume that the apparent widespread nature of the situation indicates only that government leadership in Hanoi, for some self-serving and cruel reason, has chosen to initiate a new policy relative to handling of POW mail.

These wives and families, already overburdened emotionally, must have some explanation. I have asked the State Department and the military to do everything possible. In turn I have been told by the State Department that they need the envelopes in which the letters were returned to assist their investigation. I am therefore urging anyone who has had a letter returned to contact the casualty assistance office at the nearest military installation and provide information and envelopes which will then be forwarded to Washington for use in the investigation.

It is tragic that this new problem should develop on the eve of our "National Week of Concern for Americans Who Are Prisoners of War on Missing in Action," but it certainly serves to focus our attention of this special March 21 through 27 observance which seeks to inspire loved ones of these men with new courage and hope and to hasten the day when their ordeal may end.

Mr. HARRIS. Mr. President, there are today more than 1,400 American boys either being held as prisoners of war or missing in action as a result of the Vietnam war. The actions of the Government of North Vietnam regarding these men has been in direct conflict with the provisions of the Geneva Convention Accords on Prisoners of War, which the North Vietnam Government signed in 1957.

The Geneva accords call for the following humanitarian actions with relation to prisoners of war:

First. Identification of all prisoners of war within a week of capture.

Second. Inspection of POW camps by impartial parties periodically.

Third. Release of prisoners who are seriously ill or injured.

Fourth. Allowing a free flow of mail between prisoners and their families.

The above requirements have been blatantly ignored by the Government of North Vietnam. No complete lists of prisoners have been released. The International Red Cross and other impartial agencies have been refused access for inspection of prison camps. Sick and injured prisoners have not been released in accord with international requirements, nor has a free flow of mail been permitted.

During this National Week of Concern for Prisoners of War/Missing in Action, I call upon the Government of North Vietnam to live up to their own agreement under the Geneva accords.

The inhumane treatment of these American men cannot be tolerated. The uncertainty and grief experienced by those families who have been without news of their sons, husbands, and brothers must come to an end. The united voice of the President, the Congress, and millions of American citizens cannot go unheeded.

Mr. YOUNG. Mr. President, I am pleased that so many of my colleagues are joining in this nationwide effort to express our concern over the welfare of our prisoners of war and missing in action in Vietnam.

It is appropriate that Members of Congress, as we have innumerable times in the past, take any step within our authority to support all these efforts. I was pleased that President Nixon saw fit to make an official, Executive declaration toward this end.

The many organizations around the country who have been most active in mustering and coordinating expressions of concern over this agonizing problem deserve great credit. No one of us can fully appreciate the terrible uncertainty, grief, and frustration experienced by those parents, wives and relatives of the men who are held captive by the enemy or listed as missing. Theirs is the greatest burden.

Mr. President, just this week I received a letter from a clergyman from my State of North Dakota, in which he advised me that a letter he had written to Minister Xuan Thuy, head of the North Vietnamese delegation to the Paris talks, had been returned unopened. This clergyman had, in good faith and in a reasonable, humble tone, attempted to express his strong feelings on this problem to Minister Xuan. The cruel and inhumane handling of this letter indicates just how difficult our problem is.

I am one of those who strongly supports President Nixon in his vow that until all of our prisoners and missing in action are returned safely, there can be no total and complete withdrawal of our forces from that area. My conscience and the pleas of those anxious parents, wives, sons, and daughters in behalf of their loved ones tell me their safety is one thing, if the only thing, that must be accomplished by our involvement in that tragic war.

Mr. PELL. Mr. President, the very thought of men living imprisoned, without freedom, is a haunting one, particularly so when they are men who lost their freedom in the service of their country. To say, as we are saying today, that we are concerned about the American men missing in action or held prisoner in Southeast Asia is to state the obvious. Our hearts and our thoughts are with them and with the members of their families.

As of March 20, 1971, according to the Defense Department, 1,027 men were missing in action in Southeast Asia; 462 men are listed as prisoners. We have particular reason today to be concerned, for as this war is being wound down, the number of men possibly held prisoner is increasing.

The Defense Department informs me that they do not maintain statistics on the number of men missing due to hostile action in the Laos operation. I think it sufficient, however, to note that the number of men missing in action in South Vietnam and Laos has increased during the past 5 weeks from 991 on February 20 to 1,030 on March 20—an increase of 39 Americans missing in action. I pray that these men may soon be accounted for in the most favorable of circumstances.

I think also, as we express our concern over the fate of these 1,489 American men, we should be cognizant of the fact that the longer we are engaged in combat in Southeast Asia, the more men we can expect to be added to that list, and the more American families will face the anguish of uncertainty.

I speak as one who has opposed our military involvement in Southeast Asia. But I think it should be made clear to the Government of North Vietnam that there is no division among Americans on the prisoner-of-war question. I opposed the unrestrained, wholesale bombing of North Vietnam, and it was in the course of those bombing operations that many of our men became prisoners. But just as I opposed the bombing, so do I abhor the failure of North Vietnam to accord those prisoners the protection and fair treatment guaranteed by the Geneva Convention.

At the 25th General Assembly of the United Nations last fall, I presented for the United States an appeal to the world community on behalf of our men held prisoners in North Vietnam. I said at that time that the failure of the North Vietnamese to live up to the requirements of the Geneva Convention has unified within this country supporters and opponents of the war and has encouraged only those who would prolong and even enlarge the war. And I asked all nations to inform Hanoi that those of us who opposed the policies which produced the capture of the prisoners are as passionately concerned that their rights be respected as any others.

I urged then, at the United Nations, and I urge now the Government of North Vietnam, as a minimal step, to permit international inspection of its prisoner-of-war camps. North Vietnam contends that its prisoners are treated humanely; if so, then Hanoi has nothing to hide, and nothing to fear from international inspection. Indeed, such an action could only increase the standing of the North Vietnamese Government among the nations of the world.

Mr. FANNIN. Mr. President, cruel uncertainty is one of the horrible costs of war; and the war in Southeast Asia has brought our Nation an abundance of uncertainty and anxiety.

For almost 7 years the enemy has held American prisoners of war in Southeast Asia. Now more than 1,600 American servicemen are listed as prisoners of war or missing in action.

North Vietnam has identified less than one-third of these servicemen as prisoners. Families and friends of the other missing American servicemen have been waiting for years to receive word on the fate of their loved ones.

North Vietnam is flagrantly violating international treaties on the treatment of prisoners of war. It has neither identified all the prisoners it holds nor has it provided humane treatment for these prisoners. North Vietnam has failed to live up to even the barest standards expected of civilized nations.

It is incredible that the North Vietnamese have so little concern for people they will not even identify those they hold prisoner. They will not perform a simple act of human decency to quiet the anguish of wives, children, and parents who are the innocent victims of the war.

The mail flow into and out of North Vietnam has been agonizingly slow and restricted. The world has no way of monitoring how the prisoners are being treated. The only time the world is allowed a glimpse inside North Vietnam is when it serves the propaganda purposes of the enemy.

I am deeply concerned about these Americans who have suffered so much and for so long in the prisons of Southeast Asia. I am concerned about their loved ones who have been so courageous through all this ordeal.

It is time for those critics of the American role in the war, both inside our country and throughout the world, to take a good look at the inhumane policy the North Vietnamese have followed regarding prisoners of war.

If there is to be any hope of ending the costly struggle in Southeast Asia, the North Vietnamese must show some signs that they would live up to the terms of a negotiated settlement. They would take a giant step in this direction if they would start observing the Geneva Convention on prisoners of war.

North Vietnam must be convinced that Americans have a very deep commitment to those men now being held captive in Southeast Asia. The Sontay raid was a demonstration of our commitment.

Mr. President, this week has been designated by Congress as the week when all Americans should do what they can to demonstrate their concern for the prisoners of war and missing in action. Through our letters, speeches, and prayers we seek humanitarian treatment for these men and reasurrance for their families.

Mr. McINTYRE. Mr. President, I join wholeheartedly in the spirit of this National Week of Concern for Prisoners of War and the Missing in Action.

It is fitting that the Congress passed

House Joint Resolution 16 and that the President signed it and declared this week of March 21 to 27, 1971 as the week in which we would express our deep concern for those who are missing or being held captive in Southeast Asia.

The people of this Nation are outraged at the persistent, callous attitude manifested toward the inhumane treatment of U.S. POW's in Southeast Asia. In blatant disregard of basic humanitarian obligations, the Democratic Republic of Vietnam has simply refused to adhere to established norms of international law.

The frustrations that we feel in dealing with this problem grow daily. I think that at few times in our history has the Nation been more united in trying to find the solution to a pressing problem.

I have joined, as nearly every Member of the Senate has, in resolutions and actions designed to try to bring the North Vietnamese, the Vietcong and the others who hold prisoners back into the family of man so that we can deal with them in the spirit of the 1949 Geneva Convention to which they are signatories.

These resolutions have called upon all nations of the world to join in condemning the action of those who hold our POW's.

These resolutions call upon the President to request the United Nations to bring about compliance with the Geneva Convention by the North Vietnamese.

I have personally set up a system for those in New Hampshire to write directly to Hanoi protesting POW treatment. I have set up this system not to compete with the many worthy efforts undertaken by veterans' organizations, organizations representing POW's and MIA's but to supplement what these groups are doing. Already several hundred communications have been sent to the President of the Democratic Republic of North Vietnam through my offices in Manchester and Portsmouth, New Hampshire and my office here in Washington.

Several members of the Senate have joined with me in asking President Nixon to consider the so-called proportional repatriation or operation release plan for POW release. This would call for negotiations with the North Vietnamese to agree to releasing a set proportion of our POW's in return for our removing a comparable proportion of our troops from Southeast Asia. I am pleased that this proposal has had bipartisan support in the Senate as it has had in the House.

In fact, Mr. President, I believe that one of the major positive factors in this long struggle for our POW's has been that regardless of party affiliation, regardless of differences over our policies in Southeast Asia, we have been of one mind on this vital issue. This one mindedness is again revealed here in the Senate today. We will stand firm in our resolve in the future.

Nothing less can we or will be do for those who are among the most terrible victims of the war in Southeast Asia.

I pledge, as I know each of us pledges, my continued, my wholehearted, my deep personal committment to our POW's and our MIA's.



Mr. PERCY. Mr. President, I wish to commend all the groups and individuals in this country who have made the effort to inform the North Vietnamese leaders of our strong national unity on the question of the treatment of prisoners of war. There is no issue on which the citizens of the United States are more united, more concerned, or more determined. We want prisoners of war treated humanely. We want sick and wounded prisoners released now. We want the early release of all prisoners.

Mr. ALLEN. Mr. President, it gives me great pleasure to join Members of the Senate in participating in this observance of National Week of Concern for Prisoners of War and Missing in Action.

Although there have been other special expressions of concern in Congress about these problems, now, with the designation by the President of this special week beginning March 21, 1971, as a special week of observance, the entire Nation will have an opportunity to speak out in a single voice. It is my hope that we can convey a message of hope and determination to prisoners and their families and assure them that they do not wait alone or hope alone.

I think that in a larger sense, each month, each week, each day of the year should be a time for concern for our prisoners of war. Nevertheless, by setting aside this particular week for expressing our national concern, we place special emphasis on the plight of these men and their families while never for a moment forgetting, at any time of the year, our abiding and ever present concern for the plight of prisoners of war, those missing in action, and their families and loved ones.

Mr. President, the wives and children and parents of these men have waited in vain and have literally begged for some word of their loved ones.

But the North Vietnamese and the Vietcong arrogantly turn aside every effort of our Government and of other governments seeking to discuss the prisoners of war problem or simply to get a listing of those Americans being held in the filthy Communist jails and bamboo cages. In doing so, the Communist enemy violates solemn covenants of civilized nations. More specifically, in 1954 the North Vietnamese government signed the 1949 Geneva Convention which provided for humane treatment of prisoners of war. This international treaty provides for neutral inspection of prisoners of war camps by the International Red Cross and for regular exchange of letters between prisoners and their families.

Not only has Hanoi refused to provide proper food and care for prisoners of war, but it also has refused to identify them and permit them the right to send letters to their families or to receive mail and packages in return. And the enemy continues to hold men who are seriously ill and wounded and in need of medical treatment.

Today more than 1,600 of our soldiers, sailors, marines, and airmen are missing in action or listed as prisoners of the enemy in Southeast Asia. About 150 of these men have been missing or captured for almost 5 years and more than 300 of them have been missing for almost 4 years. This is longer than any U.S. serviceman was held prisoner during World War II.

According to latest estimates, approximately 50 of these men are from Alabama. Families of these men along with the families of other U.S. servicemen listed as prisoners of war or missing in action have shown great spirit and hope despite their sorrow and worry about the safety of their loved ones.

I want to commend the President for having stated that as long as the prisoners of war issue is unresolved, as long as the North Vietnamese have as prisoners any American soldiers, we will continue to keep a residual force in South Vietnam. I hope the President will stick to this position.

Mr. President, I am convinced that the enemy must be made to realize that while this prisoners of war issue is unresolved there will never be a complete withdrawal of American troops from South Vietnam. Let the enemy know in words as hard as cannon balls that we mean business on this issue.

Mr. HRUSKA. Mr. President, this week has been designated as a National Week of Concern for Prisoners of War/Missing in Action. It is hoped that during this week, all Americans will dedicate their voices and efforts to show our deep concern for American GI's who are prisoners of war in North Vietnam or who are listed as missing in action.

Rarely in the history of this Nation have so many Americans tried so hard to achieve a goal. It is to be regretted that we have realized so little success.

The shortage of results is not caused by a lack of devotion to our efforts or to a lack of skill. Rather, it can be laid to the implacability of the Communist enemies whose callousness is not softened by the most heartfelt appeals for compassion.

However, some progress has been made. Some mail is going through, and we now have the identification of some prisoners who a short time ago were still in the terrible state of limbo—missing in action.

So the Nation's outcry for decent treatment has had some results. But, we can take scant consolation in them.

It is heartening to witness the range of sacrifices, projects, and promotions which Americans are undertaking daily in the name of fair treatment of our men who are prisoners. For example, one could not help but be tremendously proud of the schoolchildren who, as recently reported by the press, have eaten luncheons—meals of pig fat and pumpkin soup—the same diet which our prisoners are said to be existing upon.

There are many other equally moving examples of concern, all the more impressive for the sacrifices which their sponsors have volunteered to make.

Now we must intensify our efforts, public and private. We must try harder to arouse world opinion to such heights that it will penetrate the iron curtain of North Vietnam indifference, that it will induce humane consideration both for imprisoned men and for their loved ones at home.

We recently saw an example of how

an outraged free world can dent the armor of the Communist puppet governments. I remind my colleagues of several statements I made in this Chamber about the practice of the Czechoslovakian puppet government condoning—if not sponsoring outright—clumsy efforts to blackmail Czechs and Slovaks who have reached the free world. The outrage at this blackmail effort swept through the European emigrant communities of the free world. In short order, the Czech puppet government announced that it was calling upon the blackmailers to desist.

Only time will tell whether they actually have stopped completely, but the important lesson to be learned from the incident is that the Communist satellites are responsive to world opinion.

We must conclude that the Communist puppets in North Vietnam also are not completely immune from world opinion.

It is our job as a nation to bring that world opinion to bear so heavily upon the Communist rulers in North Vietnam that they will be forced to provide humane consideration of prisoners and their families.

In my opinion, Mr. President, this is a very important week for Americans. It has been designated as the time during which we are to convey our joint concern for the deplorable POW situation. I hope and trust everyone will partake in the many observances which will be sponsored this week and redouble his efforts to do whatever he can do personally to bring this unhappy chapter in our Nation's history to a rapid conclusion.

Mr. COTTON. Mr. President, the Department of Defense will not report publicly on the number of men from New Hampshire who are among the 1,500 servicemen who have been captured or who are missing in action in Vietnam, but I have been told, and can report, that there are seven persons in my State who are listed as primary or secondary next of kind of these men.

As long as there is one American fighting man who is suffering detention by the enemy and as long as there is one next of kin who must bear the pangs of uncertainty and loneliness, our duty is clear.

We must use every legitimate form of diplomatic bargaining and international pressure to guarantee the proper treatment of our men and to obtain their prompt release.

To the seven next of kin in New Hampshire and to the thousands of others who share their deep personal distress, I can say only that the senior Senator from New Hampshire is still pledged, as he always has been and as he was, too, when he cosponsored a resolution to authorize this National Week of Concern, to the principle that our entire Nation wears chains as long as some of our sons do.

I pray for the freedom which will reunite us all.

Mr. BUCKLEY. Mr. President, it is my privilege to join the Senator from Tennessee (Mr. BROCK), the Senator from Kansas (Mr. DOLE), and the Senator from Indiana (Mr. BAYH) in recognizing National Week of Concern for Prisoners of War/Missing in Action. President Nixon's purpose, in proclaiming the National Week of Concern pursuant to a joint resolution of Congress, is to reaffirm our national support for the men of our armed services who are missing or held captive in North and South Vietnam, Laos, and Cambodia. Today we underscore our determination that these prisoners of war will be accorded the elemental rights provided for under the Geneva accords, and that any final settlement of the war in Southeast Asia will include the return of these men. We must continue to focus the attention of decent men everywhere on the refusal of enemy forces in Southeast Asia to account for Americans missing in action who are, in fact, being held prisoner.

Mr. President, all of us are aware of the plight of our prisoners of war, but we in Congress can utilize this week to focus increased national attention on the fate of those men and inspire a more urgent sense of national awareness. There are about 100 families in New York State which have husbands or sons who are prisoners of war or missing in action. No congressional resolution alone can return these men to their families, but it can make it clear to the world that this Nation, however varied its views on the war in Southeast Asia, will back every effort to achieve the decent treatment and ultimate release of our prisoners of war.

Mr. David Lawrence, the editor of U.S. News & World Report and among America's most distinguished and respected journalists, has written an excellent summary of the POW's plight. The editorial, published in U.S. News for March 8, quotes President Nixon at length. I ask unanimous consent that the editorial be printed in the RECORD.

There being no objection, the editorial was ordered to be printed in the RECORD, as follows:

THE CRUELTY OF NORTH VIETNAM

(By David Lawrence)

Senators who want to tie the hands of the President and force the withdrawal of all American troops from Vietnam by a certain date never seem to put any conditions upon North Vietnam as a first requirement. Yet the handling of prisoners of war by North Vietnam is a story of cruelty rarely matched in history. President Nixon, in his comprehensive report to Congress on February 25 on U. S. foreign policy, said:

"We have the deepest concern for the plight of our prisoners of war in Indo-China. Some 1,600 Americans, including pilots and soldiers and some 40 civilians, are missing or held in North Vietnam, South Vietnam, Laos and Cambodia. Some have been held as long as six years, longer than for any other prisoners of war in our history.

"The enemy violates specific requirements of the Geneva Prisoner of War Convention, by which they are bound. They violate common standards of decency as well.

"They have not permitted impartial inspection of prison camps despite constant attempts to arrange such visits. They have refused to repatriate seriously sick and wounded prisoners. They have failed to identify all prisoners and to allow many of them to correspond with their families.

"We and the South Vietnamese have made intensive efforts this past year to secure better treatment and the release of allied prisoners—through global diplomacy, through proposals in Paris and through the courageous raid at Son Tay. Congressional expressions have been valuable in underlining American public concern. The world increasingly condemned the other side's practices, and the UN General Assembly passed a resolution this fall which underscored the international obligation to treat prisoners humanely.

"I repeat my October 7 proposal for the immediate and unconditional release of all prisoners of war held by both sides. All prisoners, journalists and other civilian captives should be released now to return to the place of their choice. Such action would not only meet humanitarian concerns; it might also lead to progress on other aspects of a peace settlement.

"As first steps, the Republic of Vietnam, with our support, has offered to repatriate all sick and wounded prisoners of war. It has unilaterally returned groups of such prisoners, despite North Vietnam's refusal to make orderly arrangements for their repatriation. And it has proposed the release of all North Vietnamese prisoners of war in return for all U. S. and allied prisoners in Indo-China and any South Vietnamese prisoners held outside South Vietnam. We profoundly regret the other side's refusal to respond to these initiatives.

"The treatment of prisoners of war anywhere is not a political or military issue, but a matter of simple humanity. As I said on October 7:

" 'War and imprisonment should be over for all these prisoners. They and their families have already suffered too much.'

"This government will continue to take all possible measures to secure the end of imprisonment as well as the end of the war."

The President has declared that American forces will not be completely withdrawn from Vietnam until every American held prisoner by North Vietnam is released. But the Hanoi Government has refused to discuss the subject, even though such a move could help in the making of a peace settlement.

The cruelty shown in this instance is one that is rare in all history. The International Red Cross, which for many years has served as a neutral agency to see that prisoners are humanely treated, has not been permitted to visit the camps in which these persons are held. American organizations—some of them unsympathetic to the Vietnam war itself—have sent representatives to Hanoi and Paris, but have gained little information. The Hanoi Government has consistently declined to reveal the names of captives, and families do not know whether their missing relatives are alive or dead.

The North Vietnamese show no signs of relenting and apparently intend to continue their policy until the American forces are out of Indo-China. Meanwhile, the question remains: How many of the missing men are prisoners and what is their condition?

It is surprising that the Soviet Government, which has a great deal of influence with the North Vietnamese, could not have persuaded them to respect humanitarian principles and let the relatives of the prisoners at least know who is alive. Moscow has been giving aid to North Vietnam—a government which is guilty of a cruelty in the handling of American prisoners of war which has been condemned worldwide. This ought to have made an impression on the Kremlin.

For these prisoners are mostly Americans, and the Soviet Union professes to be friendly to us.

It would not be difficult for the Soviets to prevail upon Hanoi at least to disclose the identity of the prisoners and to start to arrange for their release. This is something that could be undertaken immediately at the Paris peace conference.

Mr. BYRD of Virginia. Mr. President, on the plight of Americans held prisoner of war by the North Vietnamese.

We must not permit our men, who are held captive by Hanoi, to become the forgotten men of the war in Vietnam.

The demands of the United States with regard to the prisoners of war are simple and wholly reasonable. We ask only that North Vietnam abide by the Geneva Convention.

Specifically, we ask for the release of a list of prisoners, inspection of POW facilities by an impartial body, free flow of communications between the prisoners and their families, repatriation of the sick and wounded, and eventual release of all captives.

I know of nothing more inhumane than the cruel treatment which Hanoi has given to those Americans it holds prisoner.

Every effort must be exerted to secure just treatment for our prisoners of war.

Mr. BURDICK. Mr. President, this week has been designated "National Week of Concern for Prisoners of War/Missing in Action."

The North Vietnamese Government's treatment of our American POW's is without compassion or human decency. Not only are the prisoners of war being denied human treatment, but the wives, children, parents, and friends of American POW's are going through continual untold sufferings from being denied the most basic information regarding their loved ones.

Let us all rededicate our support for our 1,600 U.S. military captured or missing in Southeast Asia. Our Americans in this foreign land should be one of our most constant and unswerving commitments, not just this week, but continually until the North Vietnamese abide by the provisions of the Geneva accords.

I am hopeful that this week of concern will mark the beginning of a renewed effort on behalf of these American men.

NATION UNITED ON BEHALF OF AMERICAN SERVICEMEN

Mr. SYMINGTON. Mr. President, the 1,072 American servicemen missing in action in Southeast Asia and the 462 held captive in North and South Vietnam, Laos, and Cambodia are of deepest concern to all American citizens.

Whatever differences exist in America on the long and bitter conflict in Southeast Asia, all of us are united in our support of both the missing men and their families. We are also united in efforts to obtain the North Vietnamese Government's compliance with the Geneva Convention regarding prisoners of war.

North Vietnam has ratified the convention, but has not complied with the basic human standards agreed upon: Prisoners should be identified; the sick and wounded should be released; prisons should be open to impartial inspections; and prisoners and their families should be permitted to exchange letters freely. The failure of North Vietnam to comply is a failure in minimum human decency. The grief and anxiety of the immediate families of Americans missing in action and held prisoners is the grief and anxiety of the Nation as a whole.

With the concurrence of the Congress and the American people, our President has declared this week of March 21–27 a "National Week of Concern for Prisoners of War/Missing in Action."

Our concern will not stop when this week ends. It will continue as one of our most serious problems until we have made all nations aware of the inhumane treatment accorded American prisoners of war. It will continue until our Nation succeeds in obtaining the release of our American servicemen.

AMERICAN PRISONERS OF WAR AND THE POWER OF PUBLIC OPINION

Mr. BENNETT. Mr. President, there is nothing more painful or distressing to Americans today than the plight of our prisoners of war in North Vietnam.

I am pleased that the Senate has taken this opportunity during these days of concern to organize and set aside time for a colloquy memorializing those who are held captive by our insidious and inhumane enemy. I was honored to be a cosponsor of the resolution establishing this week and am gratified to lend my full support to the widespread effort to bring the pressure of public opinion upon Hanoi so as to accord American prisoners their rights under the Geneva Convention.

Since the North Vietnamese have refused openly to resolve the prisoners of war issue under rules of international law, American public opinion has possibly become a last recourse. I fervently hope that our joint efforts will soon have an impact on the intransigence of that government.

Throughout history men have engaged in wars, and have attempted to mitigate the resultant pain of conflict. We achieved a landmark in the pursuit of civilization through both the Hague and Geneva Conventions—where civilized men, realizing the neverending imminence of conflict, prescribed basic laws in behalf of its victims. Nations of the world have attempted to follow those basic guidelines and until this point, when we face an enemy who denies the simple rights of life which belong to any human being—those of food, shelter, and freedom from pain and discomfort. These rights are callously ignored by the Communist Government of North Vietnam. Today, I call upon the inhumane leadership of that nation to meet its responsibilities under the Geneva Convention to:

First. Make known immediately the names of all American captives.

Second. Grant American prisoners the equivalent of humane treatment which their men have received at the hands of the allies.

Today, I also call upon our President, Congress, and all Americans to pursue relentlessly the quest for fair treatment of our prisoners. The American public must force a change in Hanoi's attitudes.

We are all aware that many Americans have now spent as long as 7 years of their lives in the most degrading of human circumstances. How much longer will we be satisfied to ignore the agony of those who have served while the rest of us have remained safely at home? The pressure of public opinion can be a powerful tool—and can act as a catalyst to arouse the indignation of all the world's people, but only if Americans—all Americans become aware and act in accordance.

Perhaps one would say that we have begun a crusade with the initiation of this week—a crusade to rescue those of our countrymen who remain victims in a desperate fight to insure a small nation the right of its existence. We cannot forget these men. I join my colleagues, the President, and all who are concerned today in a promise that no stone will remain unturned until we have guaranteed a minimum of the full rights of existence for the Americans who suffer as the prisoners of this war.

Mr. McGOVERN. Mr. President, I wholeheartedly concur with today's effort to indicate that the American people, regardless of their views on the Indochina war, are united in urging humane treatment for all prisoners of war.

The North Vietnamese have contended that they are not bound by the Geneva Convention of 1949 relative to the treatment of prisoners of war. They argue that although they adhered to the convention in June of 1957, they are not bound in the present case because of their reservation stating that—

> The Democratic Republic of Vietnam declares that prisoners of war prosecuted and convicted for war crimes or for crimes against humanity, in accordance with principles laid down by the Nuremberg Court of Justice, shall not benefit from the present Convention, as specified in Article 85.

In line with this principle, they maintain that U.S. pilots are war criminals who are not entitled to protection.

There is no final arbiter of that issue. I submit, however, that it need not be resolved in order to urge that the terms of the 1949 convention be respected by all parties to the conflict in Indochina. Those who have agreed to respect it must certainly recognize that it is more than a narrow statement of legal obligations. It is instead an expression that the existence of an armed dispute between nations is no justification for inhumane treatment of those who are removed from the conflict, who pose no threat, and who have no means of defending themselves. It merely codifies rules of conduct which should be honored by any decent society, regardless of whether it considers itself legally bound.

There is evidence that the North Vietnamese have responded to some extent to such arguments. They do maintain that prisoners receive adequate food and medical treatment, and that they are not physically and medically mistreated. Names have been released through the Committee of Liaison with Families of Servicemen Detained in North Vietnam, and that organization has also been allowed to carry mail back to the United States.

If such steps are evidence of humanitarian concern on the part of the North Vietnamese, then there is little justification for a continued failure to live up to the remaining Geneva standards, including the regular flow of mail, the inspection of detention facilities by neutral parties, and the prompt release of

sick and wounded prisoners. There is nothing at all to be gained by putting the prisoners and their families through continued agony.

Mr. President, along with such admonitions to the North Vietnamese, I think concern for the prisoners also requires a plea to our own Government to pursue actions which can bring their release and repatriation.

In my view that goal, along with the safety of our forces remaining in Vietnam, deserves priority over any other objective we might pursue in Indochina. And it is clear that we cannot achieve those objectives without a negotiated settlement. Indeed, except in the case of seriously sick and wounded men, the Geneva Convention whose application we urge in Vietnam creates no obligation for the return of prisoners until after the cessation of hostilities. We can expect that they will continue to languish in prison camps just as long as the war itself continues, regardless of the level of American involvement. The early release of our prisoners is a major reason why I have pressed for passage of the McGovern-Hatfield amendment which would end U.S. involvement in Indochina before the end of this year.

Mr. President, the junior Senator from Massachusetts (Mr. BROOKE) has proposed a resolution calling for a full investigation of the prisoners-of-war issue. I ask unanimous consent that my name be added as a cosponsor of this measure.

SACRIFICES OF AMERICAN PRISONERS OF WAR

Mr. PROXMIRE. Mr. President, I want to take this opportunity to express my wholehearted support and concern for prisoners of war and men missing in action in Southeast Asia. The extraordinary sacrifices and suffering they have borne for this Nation, as well as the sacrifices of their loved ones in this country deserves the utmost attention, concern, and an effort to share this burden by all Americans.

We must all continue to work hard and diligently to bring the pressures of world opinion to bear on those Communist forces who continue to defile and degrade the human spirit. Through our efforts and our prayers, let us speed their return and let them know we are grateful and have not forgotten them.

These men deserve the highest honors we can bestow on them as well as our untiring efforts in their behalf. They have done their duty. We must do ours.

After 7 years of struggle since the first man was taken prisoner of war, we still do not know how many men are actually being held by the North Vietnamese or known to be dead; how many of them receive proper food and medical care, and what the actual conditions are under which prisoners are held and treated. The North Vietnamese do not accept Red Cross or other international inspection of prison facilities. They are unwilling to release those who are seriously ill.

Not only have the North Vietnamese not lived up to the basic principles of humanity of the Geneva Convention of August 12, 1949, relating to the treatment of prisoners of war, they have attempted to use these men as instruments to blackmail America.

The negative response of the North Vietnamese to the urgent cries, pleas, and the outrage of the world should not be tolerated. The tragedy and disgrace of what is happening to our men imprisoned by the Communists; the cruelty of treatment and the violation of every international convention and every humanitarian principle should be condemned by all civilized nations. These acts are acts against all humanity not just against the United States. Civilized nations should join together in concerted action to try to stop these practices.

We must continue our efforts to let the world know what is really going on and to let our men in their lonely isolation and their families know we care, and that their suffering and courage is not in vain. To this end, I pledge my support.

I would hope that all citizens, as well as all nations, will voluntarily and individually join others to work for the return of our POW's and MIA's. These men have given courageously of themselves; we should do no less.

## TRANSACTION OF ROUTINE MORNING BUSINESS

Mr. BYRD of West Virginia. Mr. President, I ask unanimous consent that there be a brief period for the transaction of routine morning business at this time, with statements therein limited to 3 minutes, and without prejudice to the order for the recognition of the Senator from New York (Mr. JAVITS) and the Senator from Washington (Mr. JACKSON) as previously entered.

The ACTING PRESIDENT pro tempore. Without objection, it is so ordered.

## COLLEGE CAMPUS DISORDERS—REPORT OF THE COMMITTEE ON GOVERNMENT OPERATIONS

Mr. McCLELLAN. Mr. President, I am filing with the Senate today, a report by the Permanent Subcommittee on Investigations of the Government Operations Committee on the subject of campus disorders. The subcommittee undertook this investigation as a part of the overall study of "Riots, Civil and Criminal Disorders." The subcommittee has reached some conclusions with respect to these disorders and has made recommendations which we hope will be helpful to college administrators.

It seems clear that the learning process, the most important legitimate occupation of young people in college, is severely impeded when the atmosphere is chaotic. A vital task is for the school administration to maintain an orderly climate.

This is not to say that legitimate grievances of students or faculty members should be overlooked or disregarded. The subcommittee has concluded that at any institution where mechanics do not exist for easy communication of grievances to persons competent to act on these grievances, the establishment of such a mechanism should be given a high priority. The complainant not only should have easy access to the complaint authority but should be informed of the decision reached by the proper authority and the reasons for the decision.

A tendency was noted in instances in which there were a number of arrests, that a significant portion of those persons were not students of the institution where the disturbance took place, and many of them were not students anywhere. This suggests the possibility of the involvement of agitators from outside the campus borders.

The subcommittee has noted that although there is a local flavor to each major disorder that has occurred, there also exist similarities in character from one campus to the next. This, too, suggests that the disorders are not spontaneous. It is frequently not productive to look for the same organization in all schools—although some do go from school to school—primarily because the names of organizations change with the local character of the disorder. The subcommittee concluded that the injunctive process is probably the most effective remedy used so far in containing disorders that have already started.

The subcommittee hopes that the educational institutions in this country will see the wisdom of maintaining a reasonable grievance machinery, while at the same time preserving proper decorum.

Mr. President, this concludes what I intended to say about this report, but in the light of some comments made in the individual views of the subcommittee members, I feel I should make additional observations.

At the outset of the subcommittee's investigation of the civil disturbances, it seemed apparent that an acceptable approach to this subject, as to any complex study, would be to investigate a number of riots in some detail and to report separately on them. It was felt that by considering the similarities and the differences in one disturbance, as compared to the next, then some conclusions might reasonably be drawn. This subcommittee has tried always to secure facts and draw conclusions from them and to avoid the temptation to make a decision and then try to find facts to fit it. Accordingly, staff teams were sent to a number of cities where disturbances occurred.

As a result of these preliminary inquiries, hearings were conducted. Reports concerning a number of these hearings were prepared on a staff level and submitted in due course of time to subcommittee members. These reports assembled in a compendium related to riots in Newark, N.J.; Detroit, Mich.; Houston, Tex.; Nashville, Tenn.; and Plainfield, N.J. This report was distributed to the subcommittee members on January 6, 1970. In the past when individual members of the subcommittee differed with the report submitted, these differences were enumerated but the report was filed with the Senate and the differing views included. In the instance of the report I mention, one member only suggested revisions and individual views. Two members approved the report as written, no response was received from the other members. Certainly a major portion of any blame for a timelag in

this report lies with the subcommittee members.

After several hearings had already been held, subcommittee members suggested that the campus disorders of a year or two ago be considered as a part of the general study of disorders. A seprate study was made and hearings were conducted. A separate report was prepared, the report I submit today. I do not believe that human nature has changed so much in 2 years as to make this report obsolete. Since the study was made of disorders, we heard testimony from those persons who could provide information about disorders. Since disorder is not a chronic condition on any campus, these same persons are capable of providing testimony about their periods of tranquillity also.

I wish to address myself to one other thought expressed in some of these individual views; namely, that studies conducted by other groups were not considered in this report. As a matter of practice, nothing is reported in the report which is not contained in the hearings themselves. The results of the deliberations of other groups were not unknown. However, if there was any testimony taken under oath in connection with the campus disorders or in connection with any other disorder, I am not familiar with it. Our testimony was elicited under oath from persons familiar with the subject under study and a report was prepared from their testimony and from conclusions drawn from the testimony. I know of no other sound method of approach.

## QUORUM CALL

The ACTING PRESIDENT pro tempore. Is there further morning business?

Mr. BYRD of West Virginia. Mr. President, I suggest the absence of a quorum.

The ACTING PRESIDENT pro tempore. The clerk will call the roll.

The second assistant legislative clerk proceeded to call the roll.

Mr. BYRD of West Virginia. Mr. President, I ask unanimous consent that the order for the quorum call be rescinded.

The ACTING PRESIDENT pro tempore. Without objection, it is so ordered.

## ORDER RESCINDING ORDER FOR RECESS UNTIL 9:40 A.M. TOMORROW

Mr. BYRD of West Virginia. Mr. President, I ask unanimous consent that the order previously entered for the recess of the Senate from the close of business today until 9:40 a.m. tomorrow be vacated.

The ACTING PRESIDENT pro tempore. Without objection, it is so ordered.

## ORDER RESCINDING ORDER FOR RECOGNITION OF SENATOR MUSKIE TOMORROW

Mr. BYRD of West Virginia. I ask unanimous consent that the previous order for recognition of the able Senator from Maine (Mr. MUSKIE) tomorrow morning be vacated.

The ACTING PRESIDENT pro tempore. Without objection, it is so ordered.

## QUORUM CALL

Mr. BYRD of West Virginia. Mr. President, I suggest the absence of a quorum.

The ACTING PRESIDENT pro tempore. The clerk will call the roll.

The second assistant legislative clerk proceeded to call the roll.

Mr. BYRD of West Virginia. Mr. President, I ask unanimous consent that the order for the quorum call be rescinded.

The ACTING PRESIDENT pro tempore. Without objection, it is so ordered.

## ORDER FOR RECOGNITION OF SENATOR McGOVERN TOMORROW

Mr. BYRD of West Virginia. Mr. President, I ask unanimous consent that on tomorrow, following the approval of the Journal, if there is no objection, and the recognition of the two leaders under the standing order, the able Senator from South Dakota (Mr. McGOVERN) be recognized for not to exceed 15 minutes.

The ACTING PRESIDENT pro tempore. Without objection, it is so ordered.

## ORDER OF BUSINESS

Mr. BYRD of West Virginia. Mr. President, I ask unanimous consent that the time which is about to end for morning business be without prejudice to the morning business period which has been ordered to begin at 12 o'clock meridian today.

The ACTING PRESIDENT pro tempore. Without objection, it is so ordered.

Mr. BYRD of West Virginia. Mr. President, I ask unanimous consent that the remaining minutes before 11 o'clock a.m. today be added to the hour for the colloquy under the order which has already been entered and under which the able Senator from Washington (Mr. JACKSON) and the able Senator from New York (Mr. JAVITS) will be recognized, and which is to end at 12 o'clock meridian.

The PRESIDING OFFICER (Mr. HOLLINGS). Without objection, it is so ordered.

The Senator from Washington is recognized.

## ISRAEL'S SECURITY AND OUR OWN

Mr. JACKSON. Mr. President, it is essential, if we are to act prudently and in the interests of peace in the Middle East, that we clearly identify the sources of instability and the requirements for a stable and lasting peace.

I

The central problem in our Middle East diplomacy has been a preoccupation with the notion that the conflict between Israel and the Arab States lies at the core of the instability we seek to alleviate. One result is that we have been far too sanguine in our hopes that the Soviet Union would cooperate in resolving that tragic conflict.

The Soviets realize that a Middle East of peace and harmony, with stable and cooperative Arab-Israeli relations, would impede their access to the continuing penetration of the Arab world. A genuine peace in the Middle East would diminish the importance of Soviet military support to Egypt; Syria and Iraq would not require large numbers of Soviet tanks any more than Egypt would require the presence of the Russian Air Force if a secure negotiated settlement could be obtained. The truth is that the Soviets, far from urging the radical Arab States to seek a genuine and stable peace with Israel, are determined to keep tensions high.

In the context of the current diplomatic activity, the Soviets have acted to impair the chances for a lasting settlement by encouraging the belief that Israel will be forced against her will to accept the imposition of indefensible borders. The Soviets would doubtless welcome an insecure settlement that imposed on Israel the vulnerability that encouraged war in the past and could be counted upon to do so again.

American policy in the Middle East has been insensitive to these considerations. We have often acted on the assumption that because the Soviets do not want all-out war in the Middle East, they must desire all-out peace. It is time we came to appreciate that between the desire to avert war and the desire for stable peace there is an enormous range of Soviet policy objectives.

Nothing is so likely to facilitate Soviet policy in the Middle East as a settlement that leaves Israel in the exposed and vulnerable position that existed prior to the 6-day war. Such a settlement would guarantee that the tensions and insecurity on which Soviet policy is based would continue to be exploited with tragic consequences for Arabs and Israelis alike. We must not be a party to such a settlement.

II

It is my belief that the hope for lasting peace in the Middle East lies in American support for a map of Israel with secure and recognized borders whose defense can be assured by the Israelis themselves. Such a map would surely provide first for the continued control of Sharm el Sheik by Israel, and for provision of land access to it, under Israeli control, along the eastern edge of the Sinai.

The importance of Sharm el Sheik lies in the fact that possession of it controls the Gulf of Aqaba which, in turn, controls access to Elat, Israel's major port. The fuel vital to Israel's economy and to her national security must flow through Elat. The closure of the Gulf of Aqaba thus puts Israel's security at grave and immediate risk. For this reason the question of war or peace in the Middle East has in the past, and could in the future, turn on possession of a piece of remote and unpopulated desert at Sharm el Sheik.

In addition, a secure territorial settlement would provide for the total demilitarization of the Sinai so that no Egyptian armor, aircraft, or military

personnel would be permitted to cross the Suez Canal. This would have the effect of preserving the natural barrier of the Suez Canal to the West while leaving the broad expanse of the Sinai to serve as a buffer zone between Israel and Egypt.

The total demilitarization of the Sinai would enable Israel to cope with crises without precipitate action and without resort to full scale mobilization. In contrast, if Egyptian military forces were permitted to occupy positions along the pre-June 1967 border, Israel would be forced to mobilize in response to relatively minor incidents, thereby inviting continuing instability.

Moreover, it is worth noting that the demilitarization of the Sinai would not affect the lives of the 30,000 or so nomadic Bedouins who are the sole inhabitants of that barren and inhospitable desert. Indeed, the Bedouins of the Sinai do not even enjoy Egyptian citizenship.

The notion that partial demilitarization on both sides of the border could offer adequate security is wholly unrealistic. Nothing short of the prohibition of all military personnel and equipment anywhere in the Sinai would serve the interests of a stable peace.

Finally, Mr. President, a secure and stabilizing settlement would call for the phased withdrawal of Russian military personnel from Egypt. This, perhaps more than any other arrangement, would bring a measure of stability to the Middle East. I believe that Israeli withdrawal to defensible borders should proceed in parallel with Soviet withdrawal from Egypt.

A substantial Soviet withdrawal from Egypt would immediately benefit Western security not only in the Middle East, but in the eastern Mediterranean and the Persian Gulf. The Soviet presence in Egypt is a direct threat to the U.S. Sixth Fleet and to our NATO allies. We would do well to keep in mind the long history of Russian imperial interest in the Middle East—an interest that dates back to Catherine the Great. It would be a profound mistake to promote an agreement that gave the appearance of settling differences between Israel and the Arabs while ignoring the chief source of instability in the Middle East: the large and uncontrolled Russian military presence.

I am convinced that the Soviet Union, and not the United States, would be the beneficiary of a settlement based on Israeli withdrawal to the vulnerable borders of June 1967. It would be seen not as the result of American diplomacy, but as the result of American retreat under Soviet pressure. The American position in the world would be seriously impaired, and confidence in American assurances generally would be badly shaken, if we were to abandon our long established pledge to the security of Israel. The effort to promote a settlement that adversely affects Israel's physical security would be seen as the abandonment of that pledge.

III

Against this background, Mr. President, I was surprised at the suggestion by our State Department that we ought to consider Soviet participation in a force designed to guarantee the integrity of an inherently insecure border. It is difficult to imagine a more shortsighted and dangerous arrangement for the Middle East than one that forces Israel back to vulnerable borders and then installs along these borders the military forces of the Soviet Union.

In my view, the administration is courting disaster by considering a plan that would have the effect of legitimizing the Russian military presence in Egypt. We should be trying to get the Russians out of the Middle East, not designing plans to dig them in. The presence of 15,000 Russian personnel in Egypt seriously complicates the task of finding a lasting solution to the conflict in the Middle East. When such a solution is found it is more likely to require the departure of Russian personnel than to welcome their presence.

Moreover, Mr. President, the presence of American troops alongside Russian troops would merely compound the problem by adding new elements of tension to an already precarious arrangement. It would create a condition in which minor border incidents could escalate into great power crises threatening both the stability of the Middle East and the peace of the world.

Presumably under some version of our State Department's proposal, an international force including Soviet and American troops could be stationed at Sharm el Sheik, the strategic location that controls access to the Gulf of Aqaba and the vital Israeli port of Elat. The likelihood that such a detachment would escape attack from terrorists is exceedingly remote. In truth, such a force would be an ideal target for every movement, large or small, that wished to promote tension in the area.

More important, it would be of doubtful reliability in precisely the situations where it would have to function in order to guarantee Israeli access to Elat. If, for example, Egypt were to order the force to vacate Sharm el Sheik, is there any doubt as to whether the Soviet Union could be relied upon to side with Israel and remain in defiance of the United Arab Republic? And in the event of a crisis similar to that of May 1967, do we really want to be in the position of holding contested territory with American troops against an Egyptian offensive?

The notion that the vulnerability inherent in total Israeli withdrawal from Sinai can be diminished by internationalizing local insecurity is shortsighted. World peace has too often been threatened by the precarious geography of West Berlin for us to disregard the lesson that insecure borders are an invitation to conflict and hostility. To promote a Berlin-type solution in the Middle East would be a clear abdication of our responsibility to the future and a guarantee of tension and instability in the present.

IV

The role of the great powers in guaranteeing a settlement of the Middle East conflict has been the subject of much discussion. In my view the proper role of the great powers lies in supplementing a secure agreement with appropriate guarantees, not in a futile effort to compensate for an otherwise insecure settlement.

I believe the Israeli Government has properly rejected the view that external guarantees can substitute for defensible borders. They cannot be expected to relinquish a geographical position on which their survival depends.

Mr. President, it has become increasingly clear that insistence on total Israeli withdrawal from Sinai has become a major obstacle to the process of negotiation. It is time to concede that the effort to get Israel to agree to relinquish the whole of Sinai as a precondition for negotiation has failed. The time has come to call upon the parties to enter into serious negotiations without preconditions on either side. Such negotiations are essential to the conclusion of a durable peace. Only Israel and her neighbors are in a position to establish security arrangements with which they feel they can build a lasting stability.

Mr. JAVITS. Mr. President, may I be recognized in my own right?

The PRESIDING OFFICER (Mr. HOLLINGS). The Senator from New York may proceed.

Mr. JAVITS. Mr. President, I should like to comment, and invite comments from the Senator from Washington (Mr. JACKSON) on my view that the central point in his statement is that contained on the last page of his statement. I would like to express my concurrence and develop it on my own time; namely, his statement, "the time has come to call upon the parties to enter into serious negotiations without preconditions on either side."

I think that is the key to the matter. I believe there is nothing unfriendly involved, I would like to emphasize this. None of us wishes to derogate, or denigrate, the fine initiative of our Secretary of State—for a cease-fire and a standstill, and the offer of Egypt, at long last, to make a peace treaty, all of which gives us an opportunity to move toward peace in a very substantial way.

We have every right, as the Senator has so eloquently pointed out, to indicate why we do not agree with the preconditions which have been aired. Incidentally, the Prime Minister of Israel offered preconditions, just as Secretary Rogers did.

I think the essential point is to bring the parties to a negotiation without preconditions. For myself, I certainly welcome the Senator's view on this.

My feeling is that in pointing out why preconditions are invalid, I shall do essentially the same thing that the Senator has done in that regard. We are not being critical of anyone. We are only pointing out how this is important.

Mr. JACKSON. Mr. President, I associate myself with the remarks of my good friend, the Senator from New York. It makes little sense to me to talk about a free and open negotiation when preconditions are laid down prior to the negotiations. Everything should be on the table. I know that the Secretary of State is desirous of reaching a settlement—surely he wishes to achieve a lasting one.

Neither of us envies the task that he has undertaken. It is a difficult task. He conscientiously has taken a certain position regarding these negotiations. We, on our side, have taken a position that attempts to identify some of the fundamental problems that must be faced if we are going to reach a settlement. I would hope that we could all work together so that we can achieve a settlement that will provide for lasting peace in the Middle East.

I believe very deeply that the central issue that we must face up to is the Soviet drive for hegemony in the Middle East. As the Senator knows, this is an ancient Russian objective that goes back many centuries. Unless we face up to that central issue, we will not resolve the problem.

If the dispute were only between the Israelis and the Egyptians, I think this matter could be settled—and could have been settled before now.

We must face up to the fact that the Russians are deeply involved. Certainly any kind of a settlement that involves the withdrawal of forces should include a phased withdrawal of the Russian forces from Egypt. As long as the Russian forces are there, the threat to Israel is real. The Russian forces can be augmented at any time; and they have the power and ability to destroy the Israeli Air Force—which is essential to the defense of Israel—if they decide to do so.

If the Russians are removed from the area I think we will see a basis for a lasting peace. I feel quite strongly that the Egyptians would also like to see the Russians out of the Middle East. I think the Arabs generally would want them out.

I hope that we will encourage negotiations in which the Egyptians and the Israelis can really sit down, with the two powers working out a settlement that will lay the foundation for what we all want—a lasting peace in the Mideast.

Mr. JAVITS. Mr. President, may I say to my colleague on this matter of the Russian troops that there is no question in my mind that that situation exists in Egypt and that it includes aircraft. It has very materially changed the strategic situation in that part of the world, to the disadvantage of Israel's security and in a way which could prejudice the energy resources on which Europe depends from the Mideast; and to the disadvantage of American security, including potential jeopardy of our fleet in the Mediterranean.

I would like to ask the Senator if he is not saying that he, too, is writing a prescription that Russian troops have to get out of Egypt in a phased withdrawal before there can be a peace settlement; and suggest that we may not be able to accomplish that. The Senator is saying that this has a very real bearing on what kind of a peace settlement Israel is required to make and upon the desirability of a four-power guarantee which might emphasize the Secretary's desire—he did not propose that—and might allow us that possibility, to include United States and Russian troops. This is so directly and importantly affected by the fact that the Russians are in Egypt in a major way. If they get out it could simplify the problem of securing peace.

Mr. JACKSON. The Senator is correct. If the Israelis are to pull back, then I think that the Russians should pull back. This is central to a settlement of the whole problem.

Mr. AIKEN. Mr. President, will the Senator yield?

Mr. JAVITS. I yield to the Senator from Vermont.

Mr. AIKEN. Mr. President, I have one question to ask. Assuming that fighting does break out and the Russian air force takes the part of Egypt and in considerable force, would the Senator then advise or favor committing U.S. Armed Forces to the support of Israel in order to create a more equal situation?

Mr. JAVITS. Mr. President, if I might be permitted to answer that question, I think the issue depends entirely on the security of the United States and the forces of the United States. The United States did have a commitment with respect to Israel in regard to the 1957 settlement. Three powers were involved. The United States, the United Kingdom, and France, who gave assurance that the borders would not be changed. That may have been even earlier. However, since that time it has been said authoritatively and generally that those assurances given have become obsolescent, because of the passage of time.

I do not believe that the Israelis would invoke any such assurances. I think there is grave doubt that it is viable in terms of diplomatic agreement. Thus, I think that we can leave out the question of obligation based on a commitment or assurance of old standing.

The question becomes a matter of the security and the interest of this country. In my judgment that simply cannot be decided until one sees the capability of Israel to defend itself, until one sees the jeopardy, if any, to the U.S. fleet in the Mediterranean and the thrust, extent and intent of any Soviet effort.

I do not believe we can lay down any such prescription in advance. I believe if we tried to do that, it would only make more difficult the settlement of the conflict in the Mideast and commit the United States to a job to which it should not be committed.

This is a suggestion that the fine amendment of the Senator from Washington has certainly implemented, to give Israel—a very heroic people who have shown every effort to defend themselves—an opportunity. If any effort is made to snuff out the life of Israel, the United States will have to determine its policy based on the situation in the light of the facts at that time—In my judgment it cannot be done in advance. It may very well also involve action by the United Nations, which would include Israel, in view of the fact that Israel is really a creature of the United Nations. Again, under the United Nations Charter and under our other treaty obligations, we have, according to our constitutional process, the right to decide what we will do about using Armed Forces of the United States.

In summary, I might say to my colleague from Vermont (Mr. AIKEN) that I do not believe it is desirable or necessary to make any commitment with respect to the reaction of the United States in advance.

Mr. AIKEN. If the Senator will yield further, I simply want to ask again if either of the Senator on the floor now believes that if it appeared that Israel would be defeated in a military conflict would the security of the United States be jeopardized? Would Western Europe be interested at all or would they look solely to the United States for balancing the military strength against that of the Arabs and their Russia allies?

Mr. JAVITS. I will answer that question in due course. I yield now to the Senator from Washington.

Mr. JACKSON. I wish to supplement the very fine comment of the Senator from New York in response to the question posed by the distinguished ranking minority member of the Committee on Foreign Relations.

The Senator from New York alluded to section 501 of the Defense Procurement Act of last year in which, by a vote of 87 to 7, the Senate made clear its opposition on the Soviet involvement in the Middle East.

Section 501 provided that the Congress viewed "with grave concern the deepening involvement of the Soviet Union in the Middle East, and the clear and present danger to world peace resulting from such involvement, which cannot be ignored by the United States." That was a preamble to the aid provision that the Senate approved.

I am sure it is the view of the Senate that involvement of the Soviet Union in the Middle East does affect the vital national security interests of the United States and NATO; it poses a direct threat to the the U.S. Sixth Fleet and to the soft underbelly of Western Europe.

I must say that what is really needed, so far as our own policy is concerned, is for the United States to be absolutely clear in its determination to protect our vital national interest in this area. We cannot be equivocal. If we are equivocal the Russians are going to be tempted to intimidate politically and to make military moves directly against Israel.

I am convinced that as long as we maintain a credible nuclear deterrent—and this is what we are ultimately talking about, a credible nuclear deterrent—the Russians are not about to get involved in a direct confrontation with the United States over this issue; but if we equivocate, and if we are unsure, uncertain, and convey to the Russians that this area of the world is not vital to NATO or our vital national security interests, they will take risks they would not otherwise take.

So I think it is vital in all of our negotiations and discussions with the Russians that we make this point abundantly clear; we will not permit the Soviet Union to obtain hegemony over an area that is so vital to NATO and our national security interests.

Mr. JAVITS. I thank the Senator for that fine statement. I only supplement what I heretofore have said in answer to

the Senator from Vermont (Mr. AIKEN), when he posed his question, by stating that certainly our national interest and our security interest are directly involved in this entire situation in the eastern Mediterranean. That does not mean we have to commit in advance how we would react in any given set of circumstances in order to meet a danger to our national interests. I think it would be unwise to do so.

It has been proper to state it also would be a threat to Europe and NATO, that it involves Greece and Turkey, and nations like Iran to the east, and it involves Japan, which draws an enormous amount of energy resources, even more than Europe, from the Middle East.

It is one thing to say our national interests are heavily involved and another to make prior commitments of armed activity in advance of knowing what is going to happen.

The whole thrust of what I have to say and what I have heard from the Senator from Washington (Mr. JACKSON) is that we want to be sure of Israel's viability to maintain itself is upheld as an important element in the security interest and national interest of many countries, including the United States, and that it is not diluted, blunted, or destroyed by some prior conditions written for a peace settlement, before there is any real opportunity to have the parties work one out.

I wish to turn now to my prepared remarks.

THE MIDEAST DIPLOMATIC IMPASSE

As a result of Secretary Rogers' March 17 press conference, differences between Israel and the State Department regarding Mideast peace negotiations have become front page news around the world. The mere fact of differences need not surprise us nor even necessarily alarm us, for the policies of the two nations are formulated naturally from different national interests. The United States views the Mideast from a global perspective. In the eyes of the United States, the UAR's guns and missiles along the Suez and the presence of Soviet military personnel there are important in terms of a possible U.S.-Soviet confrontation and as a threat to Europe's energy reserves. At the same time, from Washington, the U.N. negotiating table is close and familiar. From Israel's perspective, the UAR weapons and Soviet personnel are a direct threat to its survival, while the U.N. Secretariat in New York is remote and unfriendly.

Preliminarily, let me say it is most unfortunate that both Secretary Rogers and Mrs. Meir have had to state their positions through the world press unilaterally; consultation first would have been much better. For, nothing fundamental between the United States and Israel has changed, so why change the climate?

Second, I think, too, the time seems to be ripe for a peace settlement which could be permanent, but this does not mean a time defined in days as Secretary Rogers' statement would imply. There is still room and some time to negotiate.

The key question today for Americans is whether the approach outlined by Secretary Rogers in his March 17 press conference is really a good policy for the United States. The policy is epitomized in the following statement by Secretary Rogers:

> There is a thought that geography is the sole consideration when you are thinking about security. Now, we don't think that geography is solely responsible for security, or even to a large extent responsible for security. Certainly in modern-day world situations, geography is ordinarily not important. What is important is the political arrangement that is made; the agreement itself, whether the parties are belligerent and hostile, or whether the powers of the world are willing to take part in guaranteeing that the agreement will be kept.

I have grave doubts that this policy has been as yet adequately thought through with enough weight in relation to Israel's urgent national interest, as well as our own. I have the impression that Secretary Rogers is talking about concluding a Kellogg-Briand type pact to outlaw war in the Mideast. His motivation is unexceptionable but the relevance and efficacy of this approach is questionable.

The essence of this approach is contained in Secretary Rogers' words:

> Certainly in modern-day world situations, geography is ordinarily not important. What is important is the political arrangement that is made; the agreement itself, whether the parties are belligerent and hostile, or whether they have made an agreement that is understood by the world community....

But this contradicts Israel's experience since early 1957 when at the request of then President Eisenhower supported by then, Vice President Nixon, Israel gave up the Sinai exactly as Israel is asked to do now. Israel accepted promises backed by the United States in lieu of geography and found itself frustrated, the promises broken, under siege from guerrillas and ultimately at war because of occupation by the United Arab Republic of precisely the very geography surrendered in 1957 at our behest.

It is the reality, not the illusion, of security which Israel is seeking—and who can blame Israel?

Secretary Rogers, recognizing this, sought to distinguish between the current approach and the tragically ill-starred diplomacy of 1957. In this regard, he said:

> In 1957—it was a continuation of the armistice. The parties still were in a state of belligerency....Now...we are talking about a contractual agreement entered into by the parties with reciprocally binding commitments, signed, sealed and delivered; with full agreement of all concerned that belligerency will cease; that they will live in peace with each other;...

These are fine verbal concepts and distinctions—drawn from formal 19th century European diplomacy—but I am very skeptical that they are applicable to the situation in the Mideast where concepts and traditions of diplomacy, statehood, and warfare are so different from those of 19th century Europe. Certainly Israel considers them out of date, and if implemented, endangering its very survival.

The trump card in Secretary Rogers' approach to a Mideast peace pact is a Big Four peacekeeping force located in areas that were critical. He described the proposed peacekeeping force as the most adequate possible guarantee that you can conceive of in modern life. And he pledged that the United States is perfectly prepared to play a leading role in that guarantee.

Israel has made it very clear that it does not want to entrust its security—and its survival—to a Big-Four peacekeeping force. Israel's reluctance to invoke a Big Power guarantee may only be exceeded by the reluctance or inability of the Big Four to make good on such a guarantee.

The two central points which seem clear to me are: First, Israel does not want to invoke a guarantee which would call for U.S. or Soviet forces to be activated on its borders; and, second, it does not want to be the theater of confrontation between the forces of the two superpowers in an area already likely to be explosive for a long time to come. It would leave little of Israel's independence if it did; and it could easily become a ward or a scapegoat.

Moreover, I detect in the Congress and in our Nation a great reluctance to see U.S. forces stationed in the Mideast flashpoints with the responsibility for keeping the peace. And the experience of 1957 to 1967 has shown how inadequate it is to rely on small-power units for Mideast peacekeeping responsibilities; when President Nasser blew the whistle in mid-1967, U Thant pulled them out.

Therefore, it seems to me that there are at least two major deficiencies in the policy approach outlined by Secretary Rogers.

First, there is serious question whether a treaty based on the juridical concept of 19th century diplomacy is sufficiently relevant to the Mideast situation to justify the contention that "* * * in modern-day world situations geography is ordinarily not important." Certainly the continual postwar struggle over Berlin would belie the relevance of that assertion to Europe itself.

The Mideast is an area of "soft states" in the sense Gunnar Myrdal has used those words. Governments in the Arab World have proven to be of doubtful permanence and continuity. Coup d'etat has followed coup d'etat, and the domestic writ of any government of the moment is likely to be contested by dissident, irregular forces which follow policies of their own. The next 20 years is not likely to see any appreciable abatement of the rapid flux and political and social upheaval which has characterized the Arab world—asleep for so long—over the past 20 years.

In such a situation, geography is of very great relevance in terms of peace prospects. Israel's 1967 borders were a constant and standing inducement to Arabs to try a military thrust—of the guerrilla or of an all-out nature. What is needed now—and what Israel so rightly emphasizes—are secure and recognized boundaries based, indeed, on geography which reinforces, rather than undermines, the terms and pledges of a peace treaty.

Second, I think it is wrong to assume

that the pieces of a fragile peace pact—reflecting an indifference to geographical principles—can be held in place by a Big Four peace-keeping force. There are too many pieces which are too apt to fly apart in Secretary Rogers' plan. And if the peace arrangements do break down, United States and Soviet forces will be engaged immediately in the resulting hostilities.

Supposing the United States and Soviet forces held differing views as to which side attacked the other first—a situation which might not be hard to judge in the Mideast, where irregular warfare, sabotage, and terrorism—which Arab States as such have countenanced—have become accepted practice.

In presenting these observations on Secretary Rogers' latest plan, I do not suggest that the task of peacemaking in the Mideast is an easy one. On the contrary, I suggest that it is even more difficult, laborious, and time consuming than the State Department seems to think at this time.

But I see a danger in rushing ahead too fast, without thinking through all the implications of what is being proposed. Above all, I wish to warn against the illusion of security—that a new sort of Kellogg-Briand Pact to outlaw war in the Mideast can achieve peace there in a lasting sense. Such an approach, in my judgment, could pose even graver dangers to world peace prospects.

This is not in any way to gainsay the extraordinarily gifted initiative of the Secretary of State in proposing the cease-fire and standstill last year, which so far remains in effect and which we have every reason to hope will continue in effect, even if only defacto. This is already an historic achievement. It should not be marred, as it leads to a peace settlement, by unnecessary differences between the United States and Israel.

I am not unmindful of the critical need for steady diplomatic effort and progress. The present moment appears to be perhaps the most auspicious since November 1967, for achieving a real peace breakthrough. Moreover, it is quite clear that the present hopeful situation of cease-fire and negotiations is one which has little chance to remain static. It must continue either to advance toward a peace agreement or deteriorate back toward renewal of fighting.

I hope and trust that the U.S. and Israel Foreign Offices will refrain from further mutual public recriminations. President Nixon has clearly laid down the policy in his State of the World message. The time has come to lay aside present differences and to move to other aspects of the Mideast peace problem which offer better hope of progress under present circumstances. The diversion of energies into mutual recriminations needs to be placed by a partnership of effort to hammer out the pieces of a viable peace settlement as soon as possible and within the groundrules President Nixon has established for United States-Israel relations.

Every avenue and alternative must be explored—the "faceless" Jarring negotiation needs to be succeeded by direct negotiations between the UAR and Israel or at least by a mediator-type Rhodes talks such as produced the 1949 armistice under Ralph Bunche. We have heard discussions of some interim agreement on say the reopening of Suez with Israel having equal rights of transit; or, of going ahead with the negotiations for peace with Jordan while the parties mull over the UAR-Israel proposals. The important thing is to keep the peace initiative going but not to try to wrap it up immediately; for such precipitate a wrapping up is full of danger and new troubles.

Secretary Rogers, in all good faith, might try to implement his own suggestions with the idea that, if necessary and if desired, the four powers could give a guarantee; that this guarantee could even be safeguarded by a most unusual presence or participation of both U.S. and Soviet troops in a peacekeeping force.

I think the Secretary made that strictly as a suggestion. He did not offer it as "the" answer. I do not think it is a proposal made on an all or nothing basis or anything like that. But I think we have a right to comment on the kind of thinking it represents because it is in the public domain. That is what I have tried to do.

I give the Secretary the utmost credit for good faith in presenting his idea, but I do not think it is a substitute, considering the conditions, for some arrangement on the ground which, whether it is in terms of demilitarization or some arrangement with respect to an area like Sharm el Sheikh, would give physical assurances which can be availed of by the parties themselves, in this case Israel. The guarantees of peace on mere good faith, shown by the offer to participate directly in a peacekeeping force, are no substitute for necessary arrangements on the ground.

Mr. FULBRIGHT. Mr. President, will the Senator yield?

Mr. JAVITS. I yield.

Mr. FULBRIGHT. Do I understand that the Senator is, in effect, saying that the agreement which I believe Israel accepted, on withdrawing to the 1967 line, is no longer acceptable to the Israelis or to the Senator from New York?

Mr. JAVITS. The Senator from New York has no right to and does not say anything about being acceptable to him. That is quite immaterial. The Senator from New York does not say it is unacceptable to Israel. He does not know. The only thing the Senator from New York says is that the U.N. resolution, to which the Senator refers, says no such thing. That resolution, No. 242, was completely evenly balanced as between the parts. One part of it leaned on the other. The part relating to withdrawal leaned on secured and recognized boundaries. The part bearing on secured and recognized boundaries leaned on withdrawal. Neither could stand alone.

I think the great difficulty we are having with these negotiations is inherent in the fact that on one side the Soviet Union and the Arab States would have us believe that withdrawal was an absolute commitment with no reference to secured and recognized boundaries. And they may do this because they cannot guarantee delivery of secured and recognized boundaries if there is withdrawal. They say in the UAR message to Ambassador Jarring that the most that they can offer is that they will use their "best efforts."

On the other hand, Israel says that if they cannot guarantee secured and recognized boundaries, she cannot withdraw until that question is settled, too. If settlemen has many parts that lean on each other, settlement is impossible to achieve results if each side demands prior fulfillment of those clauses most to its liking, while reserving its position on the clauses it does not like so much.

Mr. FULBRIGHT. Mr. President, will the Senator yield further?

Mr. JAVITS. I yield.

Mr. FULBRIGHT. The Secretary of State came to the Foreign Relations Committee before he held his press conference. He went into great detail as to the purposes of the administration with regard to its proposal, which was to reach a negotiated settlement rather than to rely upon, as the Senator says, "geography" and the force of arms. He felt in the long run that a negotiated settlement was in the interest of Israel.

I personally feel the Secretary's opinion is exactly correct. I think the only hope for survival of Israel over a long period of time is a negotiated settlement. I also feel that the principal reason there has been no progress on negotiations for the settlement of this question is the belief on the part of Israel that the Unied States and the Senate will back it, no matter what position it takes.

I believe that attitude is most unfortunate, because I do not see any possibility of negotiation so long as Israel believes we are completely at its disposal.

I was not privileged to be at the meeting when the Senator from New York had the Foreign Minister of Israel here in the Senate, with a great many Senators. Perhaps there was a different view which would be persuasive against the administration's position, but I see nothing that would so indicate.

I though the inference of the Prime Minister of Israel in her statement that "even if the Secretary was sincere" was a most unusual statement to be made by any Prime Minister with regard to a Secretary of State. I have no doubt that the Secretary of State is sincere, and the President is, too.

I think it is in the interest of Israel that we have a negotiated settlement, and I very much regret that the Senator from New York seems to take the position that Israel is now giving notice that they do not intend to withdraw from the territories they took in the last war.

That was the essence of the 1967 agreement, regardless of the technical details. Certainly everyone understood the agreement to mean that the acquisition of territory by conquest is not acceptable to the great majority of the nations of the United Nations, including Israel. It is my understanding that Israel agreed to that general principle at the time of the 1967 cease-fire, and I believe the Secretary believes it as well.

I think we have here an honest difference of opinion as to what is in the interest of Israel's long-term survival. Is it force of arms, backed by the United States, or is it a negotiated diplomatic settlement?

I honestly believe the second is the only hope, over the long term, because I do not think Israel should take the United States so much for granted. At the moment, they do have the influence in Congress to support them, as evidenced by several actions within the last 2 or 3 years. But if they create the impression of being too determined not to negotiate, I think they run a great risk of losing the support that they have heretofore had in this whole affair.

I do ask the Senator from New York to give the administration and the Secretary greater credit for an honest desire to bring about a settlement that is in the interest of Israel. The administration's policy is in the interest of the United States of course; but I believe it also to be in Israel's interest. I do not believe Israel can have security simply by the continued occupation of the Sinai. I do not think, with modern weapons, that territory constitutes the kind of security it did 200 or 300 years ago. I think this is the essence of the matter.

I think we ought to promote negotiated settlements in this area, just as I have thought all along that the only hope for peace in Indochina is a negotiated political settlement. I think that remains true. In these days of modern weapons, the idea that you can maintain security by occupying a certain piece of real estate is an illusion.

It is a matter of judgment: What is the best, over the long period, for the security of the State of Israel? I submit that the Secretary is not only in good faith, but he is also wise in his statement of his political judgment as to what is in the interest of Israel as well as those of the United States and, I might say, of peace in general.

Mr. JAVITS. I thank my chairman. If it were not for my enormous respect for him, I would have interrupted him on a number of occasions, for this reason: The central theme of my own speech today is negotiation. The central theme of my speech is that we should not write a ticket for negotiation either in favor of Israel or in favor of Egypt. And yet the thrust, the feeling, the climate created by the airing of the Secretary's ideas, unhappily, unfortunately, perhaps even unintentionally and unwittingly, did set such a climate, that it was a sine qua non that Israel had to get out, then we could go on to negotiate.

She cannot do that, any more than the Arab States can accept her possession and control of all these territories before they begin to negotiate. Of course, the parties should insist, but no effort should be made in advance of that negotiation to lay down ground rules which mean preacceptance one or the other's interpretation of the United Nations resolution of 1967. That is what I am saying.

But I am saying more than that. I am saying we must proceed with an eye single to the interest of U.S. security and to the peace of the world, and whether Israel does or does not make out under this situation is something Israel will have to watch.

In answer to Senator AIKEN's question, I made it clear that before we could think of using the Armed Forces of the United States, it was only jeopardy to the interest of the United States, the national interest and the national security of the United States, which was the question, and the only question, involved.

Finally, I also made it clear—and the Senator is at liberty to read what I have said—that I applaud the Secretary of State for his initiative in bringing about the standstill and the cease-fire, in bringing about a condition in which, at long last, Egypt has agreed that it will make a juridical document out of the peace settlement. I think that is all to the good. I am trying to avoid its being marred now by ideas aired abroad, either by the Secretary or by the Israeli Prime Minister, which endeavor to write a ticket in advance of the negotiations.

Incidentally, the Senator was very much invited to our meeting the other day. I was very much disappointed that he did not attend, and I think it would have been most fruitful and useful if he had been able to do so. I know he had other reasons for not being present.

Mr. FULBRIGHT. Mr. President, will the Senator yield at that point?

Mr. JAVITS. Let me just finish my thought.

Surely, it is a risk to say they have got to negotiate, whether it is a Rhodes-type of negotiation or direct negotiation, but I think it is the only way to get a viable agreement.

There will be a great deal of withdrawal. Obviously, Israel is not going to stay on all these territories; everybody knows it. She knows it and we know it. It is just an illusion. But the use of the words "insubstantial border adjustments," the question of absolute assurance of transit through the Suez, command of Sharm el Sheik, the demilitarization question—these are subjects for intense negotiation.

It would be much easier if we could write the ticket and the parties could sign it; then we would know the negotiation would succeed because we would have made all the decisions. But these are human beings, with deep interests and concerns of their own, and we simply have to run the risk that now the climate is such that a peace is possible. We have got to, in my judgment, reduce the rhetoric, reduce the heat, and reduce the profile of everything but the insistence on negotiations.

I yield to the Senator from Arkansas.

Mr. FULBRIGHT. Mr. President, if I understand correctly, it is not the position of the Secretary of State that before anything whatever is done, Israel must physically withdraw from every inch of territory. What he is proposing, as a preliminary to the intense, as the Senator says, negotiating of the details, such as whether Sharm el Sheik is returned, or how much demilitarization is possible, is that Israel accept in principle withdrawal from the occupied territories, except for insubstantial changes on the borders.

But this is what, in my understanding, Israel adamantly refuses to do, leaving the impression that so long as we support her, she will not withdraw from anything, even an insubstantial withdrawal.

That is very vague, but it is a refusal to accept the principle, in its broad sense, as a condition for negotiation of the details.

We cannot know whether this opportunity if missed now, will ever return. I thought the Secretary's presentation was unanswerable, that this is the critical time to proceed to negotiations.

As to these absolute guarantees which the Senator mentions, obviously there is nothing absolutely certain in this world about anything, or any country. But when the Egyptians say in good faith they will do everything they possibly can to carry out these principles, which we ourselves requested and which Mr. Jarring has submitted, it strikes me as most unusual that the Israelis will not even accept the principle of the 1967 U.N. resolution, which they at that time, I understand, did accept.

There has been a very clear hardening of their position, which, while none of us can prove it absolutely, leaves the impression that the Israel Government at the moment has no intention of withdrawing even in an insubstantial way from the conquered territory.

I do not know how you can proceed to a negotiation unless you first agree to the preliminary proposition that you accept these principles. What would then become of the idea of the 1967 cease-fire? If these principles are accepted then you could get to details such as control of Sharm el Sheik and the other particular spots that will have to be negotiated.

I confess that I am very puzzled with the Senator from New York, other than that, simply, his judgment is that there is no substitute for geography, no substitute for geographical occupation. If that is true, I do not think there will be any negotiation. I do not believe that the Arabs, backed by the Russians, as they are, can be forced to accept that kind of complete abdication, complete surrender.

I submit that if this opportunity is lost, we will share the blame for not having brought about a negotiation, and I think that the great majority of the nations will feel that we are to a great extent responsible for the failure of a good faith negotiating effort proposed by this administration. I regret very much that the Senator is not able to support the administration in this instance.

Mr. JAVITS. Mr. President, I have listened with the greatest care to the Senator from Arkansas and find his statement to be very one sided. The Senator said not a single word about the other central provision of the agreement, of the United Nations resolution, which deals with secure and recognized borders. This was written and phrased and developed exactly to be a counterpart and counterbalance to the withdrawal clause. The Egyptian game backed by Russia is to get Israel to withdraw "and then we will negotiate." The instability and anarchy in that area of the world,

and the history of 1957–67, make this an unreasonable requirement.

I believe that the United States can properly take the position that, sure, they will get out; they will substantially get out of almost all of it. We understand that. But the question of secure and recognized borders, which cannot otherwise be secured, is also important. So, accept both. The Senator accepts the principle that the Israelis have to have secure and recognized borders, at least half—they accept the other principle that, in essence, there has to be withdrawal from what was occupied in the 1967 war. Both parties accept both principles, and then go ahead and negotiate. As the Senator puts it—I do not think he does it wittingly—he says to the Israelis, "Get out, and then you will negotiate." Why should they be the only one to accept the one principle instead of both, when the other side will not accept both?

I think that is most unfair, and on the part of the United States it would represent loading the negotiations in advance on a pro-Arab basis, and therefore a pro-Soviet basis. We have no right to do that to the Israelis when they feel their survival is at stake. There we are dealing with a nation of two and a half million people which is living literally by miracles, and they are facing a hundred million Arab people, and an enormous country. The Arab survival is not at stake. This is not a matter of equal weighting on both sides. We have to be human enough to realize that.

The Senator has made the point crystal clear. The effort is to interpret this United Nations resolution one way, and that is not fair. That is all I am saying. If there is going to be a negotiation, let us lay off the interpretation; leave the interpretation to the parties, to fight it out.

Finally, may I say this: The Senator says, "You will never get the Russians to agree." I say to the Senator, "Do you think you will ever get the Israelis to agree?" It is their throat that is at stake. The Russian nation will go on very nicely, no matter what happens in the Mideast, and we will do extremely well, but not the Israelis. Let us not talk about who is going to make whom do what.

Mr. FULBRIGHT. Mr. President, will the Senator yield?

Mr. JAVITS. I yield.

Mr. FULBRIGHT. I hope I do not get too emotional about it.

Mr. JAVITS. If I may interrupt the Senator, I am not a bit emotional. I am speaking strongly. But I made it very clear that my first interest is the security and the interest of the United States of America, and very publicly.

Mr. FULBRIGHT. In the first place, it is a complete distortion to say that I, or the Secretary of State, say, "Get out before we do anything." That is not what the Secretary said. I was not undertaking to relate here in detail all that the Secretary of State presented both to the committee and in his public statement. The Senator is familiar with the details. There is not time for me to reiterate all of it. Neither he, nor I, nor anyone else says, "Get out before we do anything." That is not the position of the administration nor is it mine. It is simply the acceptance in principle of withdrawal as a basis for further negotiation toward the establishment of defensible borders.

Of course, that is assumed. This is what the Secretary said. The difference lies in what constitutes a defensible border. The Secretary took note of and described in detail the question of Sharm el Sheik—that is, the access to the Gulf of Aqaba and the transit of the Suez Canal, and the giving up the idea of a state of belligerency.

I did not think it was necessary to reiterate all the conditions the Secretary laid down. I submit that the program he did lay down is a reasonable program for the beginning of negotiations. One of those is the acceptance of withdrawal. Of course, the Egyptians have to accept also the other principle of these adjustments which are designed to give defensible borders, insofar as they can be given, other than simply the occupation of a great desert territory.

But the key points with regard to the access to their own ports and to the Straits of Tiran and through the Suez Canal were all covered by the Secretary. But the reason why we talk about withdrawal is that this is one key point on which there has been no give whatever. All the other points in a sense have been agreed to in principle, in advance, subject to further negotiation as to the details. I do not know of any other way to proceed to the negotiations. All of this is preliminary to negotiation.

If one rejects the central and specific undertaking of the 1967 cease-fire and says, "No, we won't even agree in principle," then obviously no negotiations can proceed. That is the only reason we emphasize that.

It is a distortion for the Senator to say that the Secretary is saying that before anything can be done, they have to get out physically. That is not my understanding of what the Secretary said, and it leaves a false impression of what he said or what I am trying to say. I am not trying to set down new principles or conditions. My position is to support the very well thought out, in my opinion, program for proceeding to negotiations as outlined by the Secretary of State, speaking for the President.

Mr. JAVITS. Mr. President, a reiteration of reasonableness does not make a statement reasonable. In short, what the Senator is saying—and I do not even accuse the Secretary of State of saying what the Senator is saying—is that the Israelis have to accept the principle that they will withdraw from all the occupied areas before they go into negotiation.

What I am saying is that Egypt has to accept the principle with respect to secure and recognized borders and that may be, to some extent, inconsistent with total withdrawal—just as Israel has to agree that its view of secure and recognized borders may prove to be inconsistent with the withdrawal clause. I do not think it is fair to say to one of the parties, "You take one principle as a condition precedent to negotiation," and then negotiate about the other from that point.

I end with this plea: I hope and trust that the United States and Israeli foreign offices will refrain from further mutual public recriminations. Whatever the case is, it is. The Senator has stated it, I have stated it, Secretary Rogers has stated it, and Mrs. Meir has stated it. Let us get on with the business of negotiation.

That is my plea. Obviously, he and I are not going to see eye to eye on this. But that is my plea, that we get on with the business that way.

Mr. AIKEN. Mr. President, I want to be as fair as possible in this matter. To the best of my recollection, Secretary Rogers has not at any time undertaken to dictate the terms of any settlement which might be reached by the parties in disagreement in the Middle East. He has strongly hoped that they would get together. There have been rather persistent rumors that he has insisted on a complete settlement over there. That is not true because he has told our committee, and he has told me, that he is perfectly willing to take the step-by-step approach to ultimate peace.

The United Nations may have adopted a one-sided version and given it to Ambassador Jarring. I am not sure about that. But if the United Nations is unfair, then it is time that we took issue with the United Nations. There would be no further purpose in our belonging to an unfair organization.

Thus, Mr. President, I merely wish to say this on behalf of Secretary Rogers, that I believe he is doing the very best he can to encourage the conflicting parties in the Middle East to get together and see if they cannot go just a little way toward restoring peace. I do not expect it is going to be done overnight or all in one meeting, either.

The PRESIDING OFFICER (Mr. STEVENSON). The time for the colloquy on the Middle East has now expired.

Mr. BYRD of West Virginia. Mr. President, I ask unanimous consent, in view of the fact that there has already been a period for the transaction of routine morning business today, and the additional fact that there are several Senators who still wish to be heard on this subject, that the order for a period for the transaction of routine morning business previously entered, to begin at 12 o'clock meridian, be delayed for an additional 15 minutes, and that the colloquy on the Middle East may proceed during that period of time.

The PRESIDING OFFICER. Is there objection to the request of the Senator from West Virginia? The Chair hears none, and it is so ordered.

Mr. SCOTT. Mr. President, I think, in order to keep in focus at least my own reactions, it should be said that I heard the Israeli Foreign Minister and I did not hear any criticism from him of the Secretary of State, or any complaint that the United States was exerting any undue pressure. No one is more aware than I of the concern of the Israel Government and of their right to secure and recognized frontiers. I think it essential that it be pointed out a considerable part of the progress we have made so far in the Middle East, in regard to the cease-fire and the continuance of negotiations,

has been due to the skill of the Secretary of State. I am certainly the last one who would want to see his effectiveness undercut in any way.

Mr. President, I believe that the best solution, of course, would be to have the Israelis and the Egyptians meet in face-to-face negotiations. I do not think that the United States should or indeed in any way intend to force any particular formula or compromise settlement on the parties.

I should like to throw in something I did not hear discussed in this colloquy because what the Egyptians have been demanding is a return of sovereignty and what the Israelis have been demanding is security and a presence particularly a presence in the settlement in the area.

I do suggest that if it can be accomplished and if the parties will consider it carefully, that a lease, a 99-year lease over that part of the Sharm el Sheik area be made which would assure to the Israelis a presence at this geographical point which is of such critical importance to them, and yet would still recognize the sovereignty of Egypt.

I thought this out as one possibility for compromise.

I have heard the Secretary of State say many times that the United States will not take a position that any given solution is an American solution, that they are willing to consider any solution which appeals to the parties. I know that such a solution must involve recognition of the concerns of both sides and of the necessity for the Israeli presence at those ulcer points where a new war might break out. At the same time, there must be at least considerable withdrawal from occupied territories.

Therefore, I hope that the participants will consider this matter of a long term lease in the Sharm el Sheik area, and will also consider any other possible solution that could be brought to bear on the problem.

Mr. JACKSON. Mr. President, I yield 5 minutes to the distinguished Senator from Connecticut.

The PRESIDING OFFICER. The Senator from Connecticut is recognized for 5 minutes.

Mr. RIBICOFF. Mr. President, first, may I say that among those in the Chamber at the present time, are the distinguished Senators from New York (Mr. JAVITS), Minnesota (Mr. HUMPHREY), and the distinguished Senator from Washington (Mr. JACKSON). They are all men who have a deep understanding of the current Middle East situation and America's role and interests there.

I want to pay special tribute to the Senator from Washington (Mr. JACKSON), because no one understands the relationship of the Middle East to the security of the United States more than the distinguished Senator from Washington (Mr. JACKSON). I commend him, as well as the Senator from New York (Mr. JAVITS), for this colloquy today, which I have followed with great interest.

I do not wish to repeat what my distinguished colleagues have already said. What puzzles me, however, are the glaring differences in the statements that Egyptian President Sadat issues for foreign consumption, and those pronouncements he makes to his own people. I have closely followed his statements since he assumed power, and, frankly, I have yet to find a single instance where Sadat has told his own people that at some point they would have to live in peace with Israel.

Mr. President, there is now even more direct and ominous evidence of Egypt's lack of genuine peaceful intentions. This has come out in the current diplomatic exchanges being conducted through Ambassador Jarring in New York. I have learned that the Egyptian representative at the U.N., Muhammed el-Zayyat, acting on behalf of his government, refused to accept the Israeli proposals of February 26 from Ambassador Jarring. To my knowledge, this is not generally known. The reason for Egypt's refusal to accept this important document was that it was headed as a communication "from the Government of Israel to the Government of the United Arab Republic."

At the insistence of Egypt, and in order not to delay his peace mission any further, Ambassador Jarring removed this "offensive" title referring to the Government of Israel. Then, and only then, did the Egyptian representative see fit to touch this now decontaminated document. If Egypt is really prepared to recognize Israel's right to exist as it proclaims, why will its representative not accept even an indirect communication described as coming from the Government of Israel?

Mr. President, what this revealing episode demonstrates about the desire of the Egyptian leadership for peace and their good faith is obvious. It should be equally obvious that current American policies in the Middle East should be based on reality rather than wishful thinking. This demonstration of Egypt's real attitude toward the Jarring talks is but one indication of the folly of endangering Israel's security by forcing her return to vulnerable borders, in exchange for vague Arab and Soviet assurances.

During his visit here last week, Israel Foreign Minister Abba Eban explained in an extremely lucid and frank manner the views of his government on the current stalemate. I am pleased that so many of my colleagues had the opportunity to discuss these vital issues with Minister Eban personally. But to me, what is of more long-term significance than the persuasive arguments Mr. Eban made with regard to Israel's need for defensible borders, was his strong and unequivocal statements that the people of Israel want to live in peace and harmony with their Arab neighbors.

Until there is some reciprocal expression of peaceful intent by the Arab States, the United States must not seek the imposition of the same kind of patchwork peace arrangement that failed so dismally in the past, and which could only produce a greater disaster in the future.

Mr. President, there is a great burden of responsibility on the shoulders of the present leadership in the United States with regard to peace in the Middle East. I believe that President Nixon has attempted to try to resolve these deep problems with the security interests of our country in mind.

I cannot fault the President on his desire to bring about a peaceful solution to the conflict there. I believe that the President more than the State Department is in a position to realize what is involved in the Mideast, and that both the security of Israel and vital American interests are at stake in concluding any peace arrangements.

As the Senator from Washington so clearly stated, should Israel be denied the right to negotiate for defensible borders, then the Soviet Union will be in a position to dominate the Middle East. U.S. interests in the Mediterranean, in NATO, in the Persian Gulf, and in the Indian Ocean would immediately be threatened.

The Senator from Washington and the Senator from New York have done a signal service to the United States in stating their views so eloquently during this colloquy.

Mr. JACKSON. Mr. President, I commend the distinguished Senator from Connecticut for his well reasoned statement on the floor of the Senate. He has addressed himself to the central issue—the Soviet drive for hegemony in this part of the world. This is the central issue that all Americans have to face up to if we are going to get a solution.

I commend the Senator from Connecticut and the Senator from New York for such an able articulation of the fundamental issues that go to the heart of a long term solution in that area of the world.

Mr. JAVITS. Mr. President, I thank very much my colleagues for their very kind references and for articulating so clearly and eloquently on the central points involved.

Mr. JACKSON. Mr. President, I yield 5 minutes to the Senator from Minnesota who has long been concerned with the grave problem we have had to face in that part of the world.

The PRESIDING OFFICER. Four minutes remain.

Mr. BYRD of West Virginia. Mr. President, I ask unanimous consent that the time for the colloquy be closed at the end of the next 4 minutes, as scheduled, but that the able Senator from Minnesota (Mr. HUMPHREY) be also recognized for the first 3 minutes under the period for the transaction of routine morning business.

The PRESIDING OFFICER. Without objection, it is so ordered.

Mr. HUMPHREY. Mr. President, I join with the distinguished Senators from New York, Washington, and Connecticut, particularly in their dialog this morning and discussion of one of the most vital, if not the most sensitive, issues facing this country—the critical situation in the Mideast.

It is my view that the Mideast is a powder keg with a very short fuse and ready to explode if any one of the participants strikes the match of renewed hostility.

It is, therefore, imperative that every effort be made by this Government and hopefully by the Soviet Union to restrain any action on the part of the Arab States or Israel that might create

a situation of war and hostilities again.

I deeply regret that there has not been a renewal of the cease-fire. Even though the situation exists in which there has been no combat. The renewal of the cease-fire, would be much more reassuring.

I would note in this instance that the State of Israel was prepared for that renewal under the terms of the United Nations resolution, but the United Arab Republic rejected it.

The Senator from Washington clearly defined the interests of this Nation in the Mideast. It is not just Israel and the Arab States. It is the United States and her relations with the Soviet Union. It is a matter of our own national security as well as whatever our interests may be in the neighboring countries of that area.

The Senator has made it very clear that the Soviet Union, while not wanting an all-out war, does not want an all-out peace. He has pointed out the importance to the Soviets of a policy of maintaining a degree of tension in the Mideast.

Let me say as one who has had the opportunity of studying this question both in and out of this body and as one who has had the opportunity of visiting on this matter with the Chairman of the Secretariat Council of the Soviet Union that the Soviet Union does want Israel to withdraw back to the armistice line, a situation which existed prior to the 6-Day War in 1967. That is their policy. That is what they are talking about now.

I am afraid that the Government of the United States is going to be a party to that policy which will make it very difficult, if not impossible, to arrive at what the other part of the United Nations resolution provides—secure and recognized boundaries.

It would be the height of folly on the part of this Nation if we did not insist upon negotiations, and I mean negotiations that would be in an atmosphere containing the possibility of some results.

If Israel withdraws prior to those negotiations, she will have lost any bargaining power she may have. To accept withdrawal as a matter of principle is not the problem. That has been accepted in the United Nations resolution. And all arguments to the contrary, what is now accepted in all chanceries of the world as the U.S. position is that Israel should withdraw and that after that we will do our level best to make sure that she have protection and guarantees. Those protections and guarantees to Israel are a matter of history.

I was in the United Nations as a delegate from this body in 1966. I heard Golda Meir, Foreign Minister at that time, speak to the United Nations. Under pressure of the United States for total withdrawal, Israel withdrew. We gave guarantees. There was a United Nations peace force. In 1967 Nasser told the peace force to get out. The United Nations Secretary General withdrew the peace force and war was inevitable.

What Israel is asking for today is in our national interest. If we let this situation of 1966–67 develop again, her boundaries will not be secure and recognized. It will precipitate a horrible possibility of confrontation in the Mideast once again between the United States and the Soviet Union.

Our foreign policy should be one of trying to readjust Israel's frontiers so that there should not be any need for American forces.

The argument has been made here by the Senators from New York, Washington, and Connecticut that it is in the national interest of this country. It is not related directly to only the well-being of Israel. Above all, every Member of the Senate knows that the Mediterranean is part of the underbelly of NATO, to which we have commitments. The Soviet Union has penetrated into that area, primarily the Middle East, far beyond its wildest dreams. What Catherine the Great failed to do, Kosygin and Brezhnev will have succeeded in doing.

If we permit Soviet forces to remain in Egypt, we will have a situation in which we have Soviet forces legitimatized under the United Nations resolution. It will only increase the tension and provide an excuse for the Soviet presence far beyond the United Nations force.

I thank the Senators for this debate on what needs to be done.

The PRESIDING OFFICER. The time of the Senator has expired.

Mr. BYRD of West Virginia. Mr. President, has the Senator from Minnesota been given his 3 minutes?

The PRESIDING OFFICER. The Senator has used his 3 minutes.

Mr. BYRD of West Virginia. Mr. President, I would be glad to yield 1 minute of my time to the Senator from Minnesota.

The PRESIDING OFFICER. The Senator from Minnesota is recognized for 1 additional minute.

Mr. HUMPHREY. Mr. President, I want to add this word about the President. Every decision relating to the Mideast has ultimately been made by the President. For some reason the State Department gets befuddled and confused on this issue. President Nixon has kept the options open. He has been eminently fair. He has done many good things. We owe him a great deal of respect and, indeed, of praise for what he has done this far.

I urge upon the President not to permit other officers of Government to bind his hands. The President can use the force of his office and the prestige of his office, not to dominate but to encourage negotiations, and that is what is needed.

The United States and the Soviet Union must recognize their international obligations by exercising restraint on those countries party to the present conflict in the Middle East.

We should keep our sights on diplomacy and negotiation, the only way to peaceful settlement.

I propose that the United States make a supreme effort so that the parties to the conflict will:

First, renew the cease-fire.

Second, continue active support of and participation in the work of the Jarring mission.

Third, present their respective proposals for a peaceful settlement to Ambassador Jarring.

Fourth, negotiate without preconditions but within the framework and spirit of the United Nations cease-fire resolution of December 1967.

Fifth, require the phased withdrawal of Soviet military manpower along with any Israel troop withdrawal.

The only way any settlement can possibly be reached is by an agreement between Israel and her neighbors. What the United States and the Soviet Union must do is convince these countries of the urgency and importance of reaching an agreement.

It is essential to world peace and security that the match not be lit—we must look to Israel, the United Arab Republic and its allies and to the Soviet Union to be sensible and recognize the responsibility they each have to arrive at a settlement.

The elements of a lasting peace must include:

First, an end of the state of belligerency by the Arab States.

Second, the acceptance and recognition of Israel by her Arab neighbors.

Third, secure and recognized borders.

Fourth, free and safeguarded access to the Suez Canal and international waters, including the Gulf of Aqaba and the Persian Gulf.

Fifth, international guarantees of borders in the peace settlement.

Sixth, the stationing of U.N. peacekeeping forces at critical and sensitive border areas.

It has been suggested that the United States and Soviet troops should constitute the peace force. On this we should be most cautious and skeptical.

In considering such a possibility we ought to appreciate that this could well mean the presence of Soviet troops in the United Arab Republic for the foreseeable future. It could also more directly involve the United States and the Soviet Union in the Middle East. It would provide the Soviet Union with an argument for legitimatizing Soviet military presence in the United Arab Republic.

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## NATIONAL NUTRITION SURVEY

Mr. HOLLINGS. Mr. President, today, I am introducing new information on the national nutrition survey. I hope it will be of interest to Members of the Congress, as well as the scientific community and the public at large.

I mention only as brief background that the nutrition survey was mandated by Congress in an act passed in December 1967 to determine the extent of malnutrition and health-related problems among the population of the United States.

The fact of the matter is that it followed on the heels of one of the programs now in issue entitled "Hunger in America" by the CBS network. The Vice President has said there were some inaccuracies about hunger in America. The fact is that we have had now 3 years of studies, of accuracies. We have been in 10 States at a cost of $5 million. The Vice President and his administration, when talking about the accuracy of a matter 4 years hence, are now sitting on, obscuring, and secreting the accurate findings of an expert team that has been in 10 States in America and given complete physical examinations to over 70,000 Americans.

That survey has been completed. All the data is now in. The scientists who conducted the survey were able to take numerous measurements. They knew that malnutrition is indicated by three basic symptoms. These include growth retardation, lower serum and urinary excretion levels of various nutrients, and less efficient performance at work or in school or other physical or mental tasks.

It should also be mentioned that of the 70,000 Americans surveyed, most were poor. In fact, the design of the survey was to focus on low-income people because they stand the most risk of suffering from hunger and malnutrition. In general, the State-by-State surveys examined a higher proportion of poor people in South Carolina, Louisiana, Texas, Kentucky, and West Virginia. The median income was higher in California, New York, Massachusetts, Michigan and Washington State.

Mr. President, I ask unanimous consent to have printed in the RECORD a national nutrition survey table which shows the percent distribution of interviewed families by poverty income ratio and an annual family dollar income.

There being no objection, the table was ordered to be printed in the RECORD as follows:

TABLE 1.—NATIONAL NUTRITION SURVEY: PERCENT DISTRIBUTION OF INTERVIEWED FAMILIES BY POVERTY INCOME RATION AND ANNUAL FAMILY DOLLAR INCOME, NNS, FIRST 5 SURVEYS, 1968–69 (PRELIMINARY)

| Poverty income ratio | Annual family income (urban family of 4) | Percent distribution of families | | | | | Poverty income ratio | Annual family income (urban family of 4) | Percent distribution of families | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Texas | Louisiana | New York | Kentucky | Michigan | | | N.Y. City | California | South Carolina | West Virginia | Massachusetts | Washington |
| $0 to $0.49 | $0 to $1,668 | 19.0 | 16.1 | 4.3 | 23.7 | 13.8 | $0 to $.49 | $0 to $1,668 | 2.3 | 3.9 | 37.8 | 16.0 | 3.7 | 6.7 |
| $.50 to $0.99 | $1,668 to $3,334 | 41.8 | 30.3 | 13.7 | 34.1 | 18.6 | $0.50 to $0.99 | $1,668 to $3,334 | 28.2 | 20.8 | 75.7 | 43.0 | 21.1 | 26.8 |
| $1.00 to $1.49 | $3,335 to $5,002 | 18.6 | 15.5 | 14.8 | 19.5 | 17.6 | $1.00 to $1.49 | $3,335 to $5,002 | 28.5 | 22.4 | 13.9 | 20.1 | 21.7 | 16.7 |
| $1.50 to $1.99 | $5,003 to $6,669 | 10.6 | 11.7 | 13.7 | 7.9 | 13.5 | $1.50 to $1.99 | $5,003 to $6,669 | 14.8 | 15.5 | 5.1 | 12.7 | 13.3 | 14.3 |
| $2.00 and over | $6,670 and over | 10.0 | 26.4 | 53.5 | 14.8 | 36.9 | $2.00 to $2.50 | $6,670 to $8,334 | 10.3 | 10.1 | 2.6 | 8.7 | 12.0 | 11.3 |
| | | | | | | 2 | $2.50 and over | $8,335 and over | 18.2 | 31.2 | 2.7 | 15.5 | 31.9 | 30.9 |

Mr. HOLLINGS. Mr. President, the significance of the findings of the survey can be shown in the following table—table 2—which outlines the percentage of unacceptable levels of six key nutrients in the human body. I ask unanimous consent to have printed in the RECORD a table which outlines the percentages of unacceptable levels of six key nutrients in the human body.

There being no objection, the table was ordered to be printed in the RECORD, as follows:

TABLE II.—NATIONAL NUTRITION SURVEY

[Percent of unacceptable levels]

| State | Hemoglobin | Vitamin A [1] | Riboflavin | Vitamin C | Thiamine | Serum albumin |
|---|---|---|---|---|---|---|
| Texas | 20 | 17(0) | 21 | 12 | 10 | 16 |
| South Carolina | 38 | 10(22) | 30 | 3 | 9 | 7 |
| Louisiana | 42 | 3(0) | 15 | 14 | 11 | 14 |
| Kentucky | 18 | 9(19) | 10 | 8 | 6 | 3 |
| West Virginia | 13 | 8(18) | 10 | 8 | 12 | 1 |
| Michigan | 19 | 4(16) | 13 | 0 | 6 | 4 |
| Massachusetts | 9 | 10(17) | 7 | 6 | 4 | 8 |
| New York | 10 | 1 (3) | 4 | 2 | 4 | 4 |
| New York City | 16 | 3 (9) | 9 | 1 | 11 | 1 |
| Washington | 10 | 23(36) | 11 | 2 | 6 | 5 |
| California | 10 | 1 (3) | 7 | 3 | 5 | 2 |

[1] Vitamin A levels (in parentheses) less than 25 mcg—borderline.

Mr. HOLLINGS. I wish to comment with respect to the table as follows:

HEMOGLOBIN

As we see from the table, 9 to 42 percent of those sampled around the Nation had unacceptable levels of hemoglobin, which is an index of anemia. Anemia is influenced largely by a deficiency of iron. We get iron from liver, green leafy vegetables, dried fruits, enriched cereals and cereal products, molasses, and raisins. Anemia results in weakness and fatigue, listlessness, and inability to perform optimally either mentally or physically.

For comparison purposes, nutrition surveys conducted from 1965 through 1967 showed hemoglobin deficiencies reached a high of 5 percent in Honduras.

Some shocking factors are revealed. For example, the rate of anemia was eight times greater in Louisiana than in Honduras. We all refer to the Latin American countries and hunger and we refer to our neighbors to the south, but we have this situation here in America.

VITAMIN A

Unacceptable levels of vitamin A ranged from a low of 1 percent in California and New York State to a high of 23 percent in Washington State. Here, although the chart does not show it, the greatest problems were found among children. Vitamin A deficiency causes night blindness and, in severe cases, permanent blindness. Vitamin A is essential for the formation of cells, particularly in the skin, as well as for normal vision. It helps the body resist infection. Deficiencies can result in Bitot spots on the eyes and dry, rough skin. We get Vitamin A from whole milk, whole milk products, dark green, leafy, and yellow vegetables, and liver. The problem was more acute with children than with any other group surveyed. For example, in South Carolina, 26 percent of those children from age 1 to 6 were deficient in Vitamin A. In Michigan, among 7- to 9-year-olds, 17 percent had serious problems. Eleven percent had levels of less than 10 micrograms of vitamin A per 100 milliter of blood, an extremely serious deficiency. In Massachusetts, 17 percent of those in the 7–15 age bracket needed treatment. For that same age group in West Virginia, 16 percent were unacceptable. In New York City, 8 percent of those 13 to 15 were unacceptable. In some cases, the levels of vitamin A unacceptability among children were two and three times that of the population as a whole. Again, these overall levels of vitamin A deficiency are similar to those found in surveys of underdeveloped nations. These previous studies have indicated that, where 5 percent or more of the sample population has unacceptable levels of vitamin A, this amounts to evidence that there is a deficiency within the entire population.

VITAMIN B COMPLEX (RIBOFLAVIN AND THIAMINE)

Unacceptable levels of riboflavin exist in 30 percent of the population of South Carolina, which was the high, to a low of 4 percent in New York State. Riboflavin is essential for utilization of protein and other metabolic processes. Too little of this nutrient can cause skin changes, tongue changes, and growth retardation. Riboflavin comes from dairy products, meats, and green, leafy vegetables. Unacceptable levels of thiamine ranged from a high of 12 percent in West Virginia to a low of 4 percent in New York and Massachusetts. Thiamine affects physical growth, the function of the nervous system, and normal metabolism. Without enough of it in the human body, growth retardation, edema, and changes in the nervous system can result. Advanced cases cause beriberi. Thiamine comes from liver, eggs, whole grain or enriched cereal; and lean meat.

VITAMIN C

From zero to 14 percent of the population surveyed, depending upon State, had less than acceptable levels of vitamin C. This again, is similar to cases of malnutrition in poorly nourished countries. Vitamin C, as most know, comes from citrus fruits, tomatoes, and several other vegetables such as cabbage or potatoes. This vitamin is essential to formation and growth of bones and teeth and the healing of wounds and resistance to infection. In advanced state, it causes scurvy.

SERUM ALBUMIN

Some of the samples taken by the nutrition survey teams showed values considerably below observations in underdeveloped countries where lack of protein is a known problem. The States of Texas and Louisiana showed the highest concentrations of unacceptable levels of serum albumin, with 16 and 14 percent,

respectively, and again the findings were much higher among children from birth to 5 years, due primarily to lack of eating good protein. Protein is essential for growth and development of the body. Severe protein malnutrition, of which 11 cases were found in Texas requiring hospitalization, is known as kwashiorkor and marasmus. Such cases were not expected to have been found in the United States. As one expert stated, "These severe cases of malnutrition only rarely are found (in backward nations); they either are hospitalized or have died."

GROWTH RETARDATION

As many as one-third of the children from infancy to 6 years examined in the survey have shown that growth retardation. This is one of the most serious effects of malnutrition. Results of the survey have shown that growth retardation among the poor in the United States is little different from that of problem areas in Africa, Asia, and Latin America. Two methods were used to test for growth retardation: Wrist bone X-ray and height and weight measurements for age. Wrist bone examinations showed, for example:

Texas—A 30-percent retardation among Mexican-American children. This meant that children who were 5 years of age actually had skeletal maturation of only 3.9 years. Comparatively, there was a 16-percent delay for Negro girls.

Louisiana—After age 3, there was a delay of 10 percent, or 9 months, for Negro children, compared to more than 30 percent, or 1.5 years, for white children from bottom socioeconomic levels.

New York State—After age 3, a 15-percent or 8-month delay in growth.

Michigan—A 5-percent or 1.2-month retardation among Negro children from infancy to 2 years. Among white male children from the same age group, the retardation was 18 percent or 4.3 months. Over 2 years of age, the retardation was less but continued to persist.

Kentucky—A delay of 7 to 24 percent or 1.2 months to 13 months.

The study of height and weight measurements to age showed a definite correlation between growth retardation and poverty among children up to 6 years old. In three of the five States the percentage of retardation suffered by children beneath the poverty level was about double that of children living in families with incomes of slightly above poverty to $8,000 a year.

Mr. President, I ask unanimous consent to have printed in the RECORD a table showing growth retardation based on height-weight to age.

There being no objection, the table was ordered to be printed in the RECORD, as follows:

TABLE 3.—NATIONAL NUTRITION SURVEY, GROWTH RETARDATION BASED ON HEIGHT-WEIGHT TO AGE

[In percent]

| State | Children in families with income under $3,335 | Children in families with income over $3,335 |
|---|---|---|
| Texas | 24.0 | 14.0 |
| Louisiana | 5.5 | 2.5 |
| New York | .5 | 7.75 |
| AKentucky | 3.5 | 10.0 |
| Michigan | 16.5 | 10.5 |
| Il 5 States combined | 15.0 | 8.75 |

Mr. HOLLINGS. In almost every case, the summary of malnutrition in the United States compares with the results of surveys conducted in other nations by the U.S. Public Health Service.

Mr. President, I ask unanimous consent to have printed in the RECORD a table showing a comparison of malnutrition among foreign countries.

There being no objection, the table was ordered to be printed in the RECORD, as follows:

TABLE 4.—COMPARISON OF MALNUTRITION BETWEEN FOREIGN COUNTRIES[1]

| | Hemoglobin | Plasma vitamin A | Serum vitamin C | Serum protein | Serum albumin | Urinary thiamine | Urinary riboflavin |
|---|---|---|---|---|---|---|---|
| Cenrral America: | | | | | | | |
| Guatemala, 1965 | 3.0 | 10.5 | 5.0 | 3.0 | 3.0 | 25.0 | 33.0 |
| Honduras, 1966 | 5.0 | 22.0 | 2.0 | 10.0 | 3.4 | 11.0 | 11.0 |
| El Salvador, 1965 | 4.0 | 23.0 | 8.0 | 4.0 | 5.1 | 2.0 | 12.0 |
| Nicaragua, 1966 | 2.0 | 8.0 | 1.0 | 3.0 | 4.8 | 14.0 | 4.0 |
| Costa Rica, 1966 | 4.0 | 17.0 | 2.0 | 8.0 | 17.1 | 49.0 | 4.0 |
| Panama, 1967 | 5.0 | 6.0 | 6.0 | 7.0 | 12.3 | 48.0 | 24.0 |
| Far East: | | | | | | | |
| Malaya, 1962 | | 9.4 | 9.4 | 3.1 | 15.3 | 24.5 | 43.5 |
| Thailand, 1960 | | 36.5 | 2.8 | .9 | 29.0 | 43.5 | 87.9 |
| South America: | | | | | | | |
| Northeast Brazil, 1963 | | 41.8 | 8.6 | 7.5 | 3.4 | 22.3 | 53.2 |
| Chile, 1960 | | 32.8 | 14.6 | 5.5 | | 1.3 | 4.5 |
| Venezuela, 1963 | | 4.9 | 8.6 | .5 | 33.8 | 28.9 | 38.1 |

[1] Percent participants with "unacceptable" biochemistry levels.

Mr. HOLLINGS. Mr. President, to summarize, the national nutrition survey has shown definite evidence of malnutrition in the United States. Anemia is an across-the-board problem in every State surveyed, and, therefore, every State in the country can be projected to have a problem within the dimensions found by the survey.

Dietary studies indicate that a large segment of the American population is not even eating half of what it should. And when I say this I am talking about less than half of the desirable levels of vitamin A and iron. And less than a fourth of what they should be consuming in the way of thiamine and riboflavin.

The survey has proof of growth retardation, with the highest concentrations among Mexican-American children in Texas. The population most in danger are infants and preschoolers. Blacks and Appalachian whites are in high-risk categories.

Goiter, believed eliminated from this country, is back again. At a rate of 5 percent in Texas, West Virginia, and Kentucky, it is considered endemic. Cases of enlarged thyroid were found in these States, as well as certain counties in the other States.

The survey found additional evidence of high prevalence of low-birth weight—less than 5 pounds—infants, ranging to an incidence of 20 percent among poor groups. Statistics in some areas showed that infant mortality was as high as 40, 60, and even 80 per 1,000 live births compared to 17 per 1,000 on the national average.

Mr. President, I now ask unanimous consent that at the conclusion of my remarks be printed, in its entirety, a previously unpublicized and unpublished report by Dr. Arnold E. Schaefer, head of the national nutrition survey, delivered last year at a symposium on nutrition at Vanderbilt University, Nashville, Tenn.

The PRESIDING OFFICER. Without objection, it is so ordered.

EXHIBIT 1

SUMMARY OF FIRST FIVE STATES

(By Arnold E. Schaefer)

A nutrition survey is a fairly complicated epidemiological study which also involves obtaining socio-economic, educational and health data which are important in determining potential causes and for developing practical recommendations.

I won't go into the detailed history that prompted the National Nutrition Survey. For many years we were most desirous of obtaining baseline data on the nutritional status of the United States population. We were unable to stimulate any sort of Federal support to do this until the politics dealing with "the war on hunger", or "Hunger, U.S.A." highlighted the needs. From the studies that had been reported by isolated researchers who were interested in anemia, or niacin or thiamine metabolism, one certainly had a forewarning that there were problems of malnutrition in the U.S.A.

The data from three surveys of Indian reservations that we were able to conduct under the auspices of the ICNND utilizing Defense and NIAMD funds (Navajo Indians in 1954, the Alaska Eskimos and Indians in 1957, and Blackfeet Indian reservation in 1961–62), indicated that the findings were similar to what we are seeing today.

In December 1967, Congress passed the Health Amendment Act of 1967 which included the following directive to the Secretary of Health, Education, and Welfare: "to conduct a survey to determine the location cause and prevalence of hunger and malnutrition in the U.S.A. and report the findings within six months." It also stated, "but there will be no new funding."

Our goal was to complete the field studies within a two-year period.

The selection was made of ten states; actually, our advisory committee had said sixteen. Then we went through the usual haggle, "Why can't you do just five, then two?" After prolonged argument as to how and what sample would be structured, I became discouraged and said, "You political epidemiologists find me the one family that is truly representative of the U.S. population and we

can get the survey done real quickly and cheaply."

SAMPLE SELECTION

The National Nutrition Survey is not a random sample of the entire population of the United States. The ten states selected were: Texas, Louisiana, West Virginia, Kentucky, Michigan, South Carolina, New York (with New York City separate), Massachusetts, Washintgon and California. They were subjectively selected to achieve geographic spread and to include areas and population groups in which problems of malnutrition or hunger were suspected. Within each state, probability sampling was from a frame consisting of the lowest 25% of 1960 Census Enumeration Districts (E.D.) with respect to percentage of households with income recorded as below a poverty index scaled to size of household and whether urban or rural. Within this frame approximately 100 E.D.'s per state were randomly selected. Sampling within the E.D.'s was from a highly clustered set of approximately 60 occupied housing units, with 20 being drawn.

There are constraints, of course, to the interpretation of the findings. The findings pertain only to the sample population studied. It is relevant, however, to remember that, for decision making and action towards resolution and prevention of problems, generalizations that provide a range statement of magnitude of specific nutritional problems are important.

CHARACTERISTICS OF THE SAMPLE POPULATION

From 18% to 61% of the survey households (who agreed to report income) were living on incomes below the poverty income ratio, which is approximately $3,334.00 for an urban family of 4 with a male as head of the household. The range in income was tremendous: from less than $100.00 per year to over $130,000. The survey did include judges, teachers, lawyers and even a few *politicians.*

*Only 18% of the* households studied in our sample in New York State were below the poverty income level. As Dr. Browe, Head of the Nutrition Department, New York State Health Department, stated: "In our 'Welfare State' if the (welfare) program is effective, we should have a small percentage below the poverty level."

In general the families that formed the bulk of the sample in these 5 states surveyed were working poor, with incomes near the poverty level, lived in crowded housing conditions, had limited education, were frequently members of minority groups—Negro and Spanish-speaking—and the majority did not participate in food programs and in 3 of the states (exception: New York and Michigan) received limited medical and dental care.

SUMMARY OF FINDINGS

In general, the methodology included the kinds of information collection that have been widely used in nutrition surveys and in the 33 international surveys conducted by the ICNND. Guidelines for interpretation of the biochemical and dietary data are likewise similar to those used by the ICNND. A special subcommittee of the *American Academy of Pediatrics Committee on Nutrition* expanded the guidelines to accommodate the significant physiological differences in children due to sex and age through 16 years of age. (Reference: Ped. Res. 4: 103–106 (1970). R. M. O'Neal, O. C. Johnson and A. E. Schaefer.)

These guidelines are applicable to the specific biochemical methods referred to in *Pediatric Research.*

The biochemical data provide the most definitive estimate of nutritional status. Again it must be remembered that analyzing only one blood sample does not provide a definitive diagnosis. However, the biochemical data does provides a means for estimating the proportion of the population with suboptimal nutrition or at a "nutritional risk" state. This does not mean that they are ready to die of malnutrition. It places them in a "suspect category" and warrants attention so as to prevent further deterioration. The consumption of a diet that is marginal in protective nutrients as well as calories or protein may permit survival for indefinite periods. However, such populations usually have a lowered life expectancy, increased disease rates, lowered physical and mental efficiency, growth retardation in children and other manifestations of ill health.

The primary change in the ICNND interpretive guidelines is for Vitamin A, for the age group 6 months to 16 years. The unacceptable level was increased from 20 to 30 mcg per 100 ml serum. This was done in view of recent Vitamin A depletion studies which indicated cellular changes as well as reduced dark adaptation in some individuals with serum Vitamin A values near or above the 30 mcg level.

BIOCHEMICAL

*Anemia:* The data on both hemoglobin and hematocrit value indicate the presence of an appreciable number of undesirably low values within the populations studied (Tables A and B). Based on nearly 14,000 individual hemoglobin determinations, one out of every four had "unacceptable levels." The lowest prevalence in New York still implicates one out of 10 classified as at least mildly anemic. However, the Negro population studied in New York has a 20.5% prevalence. The percentage of unacceptable hemoglobin values is similar in all age groups. The identification of a high percent of adult males as mildly anemic is surprising and requires further examination. Are the employed criteria for anemia for males too high or for females too low? (Less than 14 gms for males, age 16 and over, and 12 gms for females).

The majority of blood samples found to be below acceptable values were further analyzed by the U.S. Army Medical Research and Nutrition Laboratory at Denver for serum iron, iron binding capacity, total serum folate and red blood cell folate. A preliminary evaluation of data from New York and Kentucky reveals that some 40% of the blood samples with unacceptable hematocrit values had low transferrin saturation. Likewise data on serum and erythrocyte folate levels strongly suggest that the lack of this nutrient may contribute to the problem of anemia in our population studied. Unacceptable red blood cell folates were found in 13 to 15% of subjects with unacceptable hematocrits. What a dilemma we find ourselves in! What is the folic acid content of our food supply? What other nutrients such as vitamin $B_{12}$, trace minerals, etc., may be limiting nutrients for optimum hemoglobin values?

*Vitamin A*

The first laboratory reports we received on serum vitamin A values, I must confess, came as a shock. Twenty percent of the values were less than 20 mcg and up to 40%, and higher in some children, less than 30 mcg. When we compared these findings of values less than 20 mcg with our survey data from Jordan, Pakistan, Brazil and Central America we were concerned.

The rate of unacceptable vitamin A levels ranges from 4% for New York to 41% for Texas, with the other states ranging between 15% and 25%. Our control vitamin A serum sample analysis indicates that the New York laboratory determined higher vitamin A levels (i.e., 70 vs. 60 mcg per 100 ml) than the other laboratories. This may be a partial explanation and indicates that the unacceptable vitamin A values for New York (upstate) were underestimated.

Low vitamin A levels are related to specific age groups with the problem being particularly severe in the age group from 0 to 16 (Table C).

Even though the overall prevalence is low in New York, nearly 20% of children less than 10 years of age had less than 30 mcg vitamin A per 100 ml serum. Negros and Spanish-speaking subjects of Texas had the highest rates.

Severe physical lesions of vitamin A deficiency were not observed (that is, xerophthalmia). However, follicular hyperkeratosis, suggestive of vitamin A deficiency, was noted in 1% of all children under six years of age examined with 3.6% being recorded for Michigan. Likewise, it was observed in 2.9% of all subjects over six years of age.

Bitot spots were observed in 22 subjects of which 20 (under six years of age) were from Texas. Again, Bitot spots, per se, are not always specifically diagnostic of vitamin A deficiency. In all sincerity we did not expect to see any.

With regard to the meaning of the high prevalence of unacceptable vitamin A serum levels, we are bombarded with the question—"So what? You didn't see a blind child due to vitamin A deficiency or a case of xerophthalmia."

Our goal is prevention of disease and insurance of optimal nutrition. If your child had a vitamin A serum level of 20 or 25 or 28 mcg per 100 ml, what would you do? We urgently need follow-up evaluation of these children to determine potential effects on "dark adaptation" and epithelial cell structure changes.

*Vitamin C*

Approximately 10% of all blood samples analyzed for vitamin C were below 0.20 mg per 100 ml or considered as "unacceptable." (Table C) There is considerable variation among states, with less than 1% found in Michigan, 3% in New York, and 14% in Louisiana. Currently, it appears that vitamin C nutriture is a regional problem related to food supplies and habits. In the Texas survey, we had the opportunity of studying migrants during two seasons. There obviously is a seasonal variation, as reported by Dr. McGanity. The Vitamin C problem, when it does occur, appears not to be related to any specific age group. In the population groups having the highest prevalence of unacceptable vitamin C levels, the dentists reported a 3 to 5% prevalence of bleeding, spongy "scorbutic type" gums.

*Serum albumin*

Serum albumin levels have been relatively acceptable in 3 of the 5 states, with only 3% to 4% of the values in the unacceptable range, and these values were noted primarily in the aged group. (Table D) In Texas and Louisiana where 14% to 16% of the total sample had low values, the highest occurrence was in the age group 50 and older. However, in these 2 states unacceptable serum albumin values were found in 2% to 16% of the one (1) to 16 year age group.

Clinical evidence of protein malnutrition was noted by the several cases of kwashiorkor discovered during the survey. Likewise, 7 cases of marasmus, calorie-protein malnutrition, were diagnosed, hospitalized and treated. Other physical lesions, such as dry hair, easily pluckable hair, and winged scapula, were observed in a number of children.

That in the U.S. such cases were discovered in a random sample (albeit a biased one as regards the lower quartile of income areas) is surprising. All of us would prefer to think that these cases would normally have been recognized by the family or the neighbors and brought into the medical care system. We too often ignore the fact that health delivery services are *non-existent* for many in our population. If they do exist, they are too few and too far between. It is easy to say that we need to get nutrition into our health delivery system, but if there is no delivery system, then what?

*Thiamine and riboflavin*

The percent of subjects excreting unacceptable levels of thiamine varied among

states from 4% to 11% with the greatest problem in Texas and Louisiana. Riboflavin presented a pattern similar to that found with vitamin A. Although the rates of unacceptable urinary excretion are lower, 4% to 21% of the under 16 years of age had rates 2 to 3 times greater than in the adult population (Table E).

*Growth retardation in children 0–6 years of age*

Our anthropometric data have not been completely analyzed to date. Preliminary analysis indicates poor growth achievement. For example, in Texas 50 percent of the Spanish-American children and 30 percent of the Negro children fell more than one standard deviation below the mean for height. The median height for age curve falls on the 16th percentile level of the Iowa growth curve.

X-rays of the hand and wrist were analyzed by Dr. Stan Garn. Instances of delayed skeletal maturation were found in every ethnic group in each of the 5 states. It was most severe in the Spanish-American children who showed a delay of more than 30%.

*Vitamin D—rickets*

In children under six years of age from 0.4% to 5% had clinical signs associated with previous vitamin D deficiency, i.e. bowed legs, frontal bossing of the skull, and beading of the ribs. Need I remind you that vitamin D rickets were virtually eradicated 30 years ago with the advent of vitamin D enriched whole fluid milk.

We were successful in 1965 in getting vitamins A and D added to all dried skim milk shipped overseas through our A.I.D program. It was not until November 1968 that dried skim milk distributed by USDA in the Food Commodity Distribution program required enrichment with vitamins A and D. Is Rickets reappearing? What is the cause? Could it be the *fad* to shift from full fat milk to skim milk? Could it be the lack of education of the consumer regarding the necessity of insuring an optimum intake of vitamin D for children? Who teaches nutrition in our school system?

Personally I am convinced that skim milk for *poor children* is a mighty poor investment. As one of my bureaucratic friends asked, "Isn't it better than nothing?" In that sense, I must admit to a feeble "yes," but with little enthusiasm. For children showing evidence of caloric insufficiency, vitmain A and D problems, the food of choice is still whole milk enriched with vitamin D.

*Goiter*

Again this is a disease we supposedly eradicated 40 years ago. In fact it was 48 years ago that the Michigan Goiter study was initiated. Our findings that in 2 states the overall prevalence of enlarged thyroid was 5% indicate that we have failed to eradicate the disease. The salt industry once thought that I had inadvertently taken a crack at them by stating that apparently less iodized salt was consumed today than 20 years ago. For example, in Michigan in 1951, 62% of all table salt sold was iodized. This past year only 51% was iodized. Three years ago we made a quick check of 52 vendors of prepared-prepackaged meals and found only 2 using iodized salt. The enrichment of salt with iodine was based on an average consumption of 10 grams per day (added salt). What is the table salt consumption today? Current dietary surveys do not supply us with this information.

*Nutrition in preventive medicine*

I become a little discouraged when I hear people talk about the delivery of health and dental care, and what is really needed is to stress prevention, since there aren't enough horses to deliver the care.

Delivery of care may be possible if you have a child and maternal health clinic, or a medical school and a hospital available to all. In many of the areas where we noted the problems—in the rural poor areas, on the Indian reservations, in migrant workers' camps—the health delivery services are a figment of someone's imagination. If you have to go 50 to 100 miles to a hospital, and if you have a chance to have your child visit the hospital once in five years, is this delivering health services?

I am convinced that nutrition is a health problem. It is in this vein that we need to have it recognized, assisted, talked about and taught by the health profession. Likewise, we hope that some of the recommendations coming out of the White House Conference will be implemented.

The problems of malnutrition in the United States are due to a number of causes. One is inadequate income. You can take any viewpoint you wish about guaranteed income. As far as I am concerned, there are people who do not have sufficient food nor money to buy food, and we need to develop a system to deliver it. Current systems are ineffective.

Another thing the White House Conference came up with was a series of recommendations dealing with education—education of the teachers, the medical profession, and the consumer (the public). This again takes people trained in how to reach people. We don't necessarily need the Ph. D. biochemist and nutritionist working in the field, but we do need teachers to teach teachers to teach workers.

I don't know of a better system through which to reach our population than our current school system. Preventive medicine should start with the teenage girl who next year or the year after is going to be a mother, and we could, at least, start preventing the kinds of malnutrition we have observed.

What about the mother who buys imitation milk without knowing that it is exactly what it says—imitation? Or, the one who will buy skim milk (without vitamin D added) because it is a little cheaper? There is no reason for a price differential for vitamin D milk. I hope the Dairy Industry will correct this situation.

And probably the most effective way of preventing many of the problems of malnutrition is through the assistance of the scientific community in looking at the findings and determining how we can update our food enrichment standards.

There is no reason we should not be able to prevent much of the anemia we found. At the same time we need to have more research to determine if these anemias are complicated by problems of folic acid, vitamin $B_{12}$ and other nutrients.

In the United States I challenge you to find a chicken or a pig that isn't fed iodized salt; nor can you find poultry or swine farms not feeding a well balanced nutritionally sound ration. If the animal nutritionists can do this job to prevent malnutrition, certainly it behooves us now to take advantage of the sociologists, nutritionists, economists and politicians to insure that every child in the United States receives an adequate, nutritious diet. For adults, sometimes I give up, but for children I won't give up.

Thank you.

TABLE A.—SUMMARY: UNACCEPTABLE BIOCHEMICAL VALUES, PRELIMINARY DATA, 5 STATES

[Percent unacceptable]

| | Total | New York | Michigan | Kentucky | Texas | Louisiana |
|---|---|---|---|---|---|---|
| Hemoglobin | 24 | 10 | 19 | 18 | 20 | 42 |
| Hematocrit | 22 | 18 | 26 | 22 | 24 | 28 |
| Vitamin A | 24 | ---------- | 4 | 9 | 17 | 3 |
| Vitamin C | 10 | 3 | 0.4 | 8 | 12 | 14 |
| Riboflavin | 15 | 4 | 13 | 10 | 21 | 15 |
| Thiamine | 8 | 4 | 6 | 6 | 10 | 11 |
| Serum albumin | 10 | 4 | 4 | 3 | 16 | 14 |

TABLE B

NATIONAL NUTRITION SURVEY—5-STATE BIOCHEMISTRY SUMMARY

| Characteristic | Hemoglobin | | Hematocrit | |
|---|---|---|---|---|
| | Total known | Percent unacceptable | Total known | Percent unacceptable |
| Total known | 13,418 | 24 | 13,582 | 22 |
| Male | 5,793 | 27 | 5,844 | 28 |
| Female | 7,625 | 22 | 7,738 | 19 |
| Poverty income ratio [1]: | | | | |
| <0.50 | 1,553 | 26 | 1,566 | 25 |
| 0.50 to 0.99 | 3,057 | 24 | 3,064 | 24 |
| 1.00 to 1.49 | 1,446 | 16 | 1,462 | 22 |
| 1.50 to 1.99 | 1,056 | 15 | 1,076 | 22 |
| 2.00 and over | 2,642 | 13 | 2,701 | 19 |
| Ethnic groups [1]: | | | | |
| Negro | 5,691 | 34 | 6,060 | 27 |
| White | 5,597 | 15 | 5,706 | 19 |

TABLE B

NATIONAL NUTRITION SURVEY—5-STATE BIOCHEMISTRY SUMMARY

| Characteristic | Hemoglobin | | Hematocrit | |
|---|---|---|---|---|
| | Total known | Percent unacceptable | Total known | Percent unacceptable |
| Sex and age: [1] | | | | |
| Male: | | | | |
| <6 years | 835 | 26 | 941 | 17 |
| 6 to 9 years | 973 | 24 | 983 | 22 |
| 10 to 16 years | 1,548 | 26 | 1,548 | 22 |
| 17 to 49 years | 1,298 | 23 | 1,292 | 32 |
| 50 to 59 years | 417 | 31 | 414 | 41 |
| 60 years and over | 722 | 41 | 716 | 40 |
| Female: | | | | |
| <6 years | 705 | 23 | 801 | 15 |
| 6 to 9 years | 970 | 23 | 987 | 20 |
| 10 to 16 years | 1,550 | 18 | 1,553 | 14 |
| 17 to 49 years | 2,771 | 26 | 2,765 | 24 |
| 50 to 59 years | 676 | 14 | 677 | 12 |
| 60 years and over | 953 | 20 | 957 | 19 |

[1] Unknowns excluded.

TABLE C

NATIONAL NUTRITION SURVEY—5-STATE BIOCHEMISTRY SUMMARY

| Characteristic | Vitamin A | | Vitamin C | |
|---|---|---|---|---|
| | Total known | Percent unacceptable | Total known | Percent unacceptable |
| Total known | 9,328 | 24 | 8,978 | 10 |
| Male | 3,977 | 28 | 3,790 | 11 |
| Female | 5,351 | 21 | 5,188 | 10 |

| Characteristic | Vitamin A | | Vitamin C | |
|---|---|---|---|---|
| | Total known | Percent unacceptable | Total known | Percent unacceptable |
| Poverty income ratio: [1] | | | | |
| <0.50 | 1,145 | 34 | 1,035 | 16 |
| 0.50 to 0.99 | 2,209 | 32 | 2,020 | 9 |
| 1.00 to 1.49 | 920 | 26 | 879 | 6 |
| 1.50 to 1.99 | 617 | 19 | 545 | 9 |
| 2.00 and over | 1,392 | 11 | 1,332 | 5 |
| Ethnic groups: [1] | | | | |
| Negro | 4,424 | 23 | 4,249 | 12 |
| White | 3,294 | 15 | 3,260 | 9 |
| Sex and age: [1] | | | | |
| Male: | | | | |
| <6 years | 482 | 51 | 448 | 8 |
| 6 to 9 years | 644 | 55 | 563 | 8 |
| 10 to 16 years | 1,176 | 38 | 1,115 | 9 |
| 17 to 49 years | 769 | 4 | 771 | 15 |
| 50 to 59 years | 268 | 1 | 263 | 14 |
| 60 years and over | 638 | 2 | 630 | 13 |
| Female: | | | | |
| <6 years | 372 | 56 | 357 | 10 |
| 6 to 9 years | 631 | 51 | 566 | 8 |
| 10 to 16 years | 1,168 | 36 | 1,153 | 9 |
| 17 to 49 years | 1,891 | 6 | 1,842 | 12 |
| 50 to 59 years | 461 | 2 | 454 | 10 |
| 60 years and over | 828 | 1 | 816 | 7 |

[1] Unknowns excluded.

TABLE D.—NATIONAL NUTRITION SURVEY—5-STATE BIOCHEMISTRY SUMMARY

| Characteristic | Serum albumin | | Serum protein | |
|---|---|---|---|---|
| | Total known | Percent unacceptable | Total known | Percent unacceptable |
| Total known | 7,069 | 10 | 7,358 | 8 |
| Male | 3,056 | 8 | 3,186 | 7 |
| Female | 4,013 | 12 | 4,172 | 8 |
| Poverty income ratio: [1] | | | | |
| <0.50 | 927 | 13 | 963 | 7 |
| 0.50 to 0.99 | 1,792 | 10 | 1,831 | 6 |
| 1.00 to 1.49 | 887 | 9 | 912 | 6 |
| 1.50 to 1.99 | 573 | 8 | 591 | 7 |
| 2.00 and over | 1,202 | 4 | 1,247 | 6 |
| Ethnic groups: [1] | | | | |
| Negro | 2,608 | 16 | 2,756 | 10 |
| White | 2,907 | 5 | 3,031 | 6 |
| Sex and age: [1] | | | | |
| Male: | | | | |
| <6 years | 305 | 2 | 365 | 3 |
| 6 to 9 years | 451 | 10 | 464 | 5 |
| 10 to 16 years | 937 | 7 | 967 | 4 |
| 17 to 49 years | 619 | 6 | 629 | 8 |
| 50 to 59 years | 217 | 11 | 220 | 12 |
| 60 years and over | 527 | 12 | 540 | 13 |
| Female: | | | | |
| <6 years | 234 | 3 | 290 | 3 |
| 6 to 9 years | 409 | 7 | 431 | 3 |
| 10 to 16 years | 959 | 10 | 986 | 4 |
| 17 to 49 years | 1,422 | 15 | 1,446 | 12 |
| 50 to 59 years | 332 | 14 | 342 | 11 |
| 60 years and over | 657 | 14 | 677 | 12 |

[1] Unknowns excluded.

TABLE E

NATIONAL NUTRITION SURVEY—5-STATE BIOCHEMISTRY SUMMARY

| Characteristic | Riboflavin | | Thiamin | |
|---|---|---|---|---|
| | Total known | Percent unacceptable | Total known | Percent unacceptable |
| Total known | 6,702 | 15 | 6,453 | 8 |
| Male | 2,947 | 15 | 2,820 | 9 |
| Female | 3,755 | 15 | 3,633 | 8 |
| Poverty income ratio: [1] | | | | |
| <0.50 | 808 | 21 | 819 | 11 |
| 0.50 to 0.99 | 1,696 | 16 | 1,687 | 12 |
| 1.00 to 1.49 | 904 | 15 | 888 | 9 |
| 1.50 to 1.99 | 506 | 13 | 510 | 7 |
| 2.00 and over | 1,106 | 8 | 1,065 | 8 |
| Ethnic groups: [1] | | | | |
| Negro | 2,358 | 21 | 2,268 | 13 |
| White | 2,656 | 7 | 2,514 | 5 |
| Sex and age: [1] | | | | |
| Male: | | | | |
| <6 years | 376 | 21 | 349 | 5 |
| 6 to 9 years | 454 | 18 | 421 | 8 |
| 10 to 16 years | 880 | 19 | 856 | 16 |
| 17 to 49 years | 544 | 8 | 519 | 6 |
| 50 to 59 years | 179 | 11 | 181 | 4 |
| 60 years and over | 514 | 8 | 494 | 6 |
| Female: | | | | |
| <6 years | 286 | 27 | 269 | 4 |
| 6 to 9 years | 393 | 22 | 371 | 9 |
| 10 to 16 years | 890 | 23 | 851 | 13 |
| 17 to 49 years | 1,243 | 10 | 1,220 | 5 |
| 50 to 59 years | 290 | 7 | 287 | 6 |
| 60 years and over | 653 | 8 | 635 | 6 |

[1] Unknowns excluded.

## ORDER FOR UNFINISHED BUSINESS TO BE LAID BEFORE SENATE AT 12:35 P.M.

Mr. BYRD of West Virginia. Mr. President, I ask unanimous consent that the unfinished business not be laid before the Senate until 12:35 p.m. today, and that morning business be continued until that time.

The PRESIDING OFFICER. Without objection, it is so ordered.

## COMMUNICATIONS FROM EXECUTIVE DEPARTMENTS, ETC.

The ACTING PRESIDENT pro tempore (Mr. McGOVERN) laid before the Senate the following letters, which were referred as indicated:

REPORT ON USE MADE OF FUNDS APPROPRIATED UNDER THE DEPARTMENT OF DEFENSE APPROPRIATION ACT, 1971 AND THE MILITARY CONSTRUCTION APPROPRIATION ACT, 1971

A letter from the Assistant Secretary of Defense, reporting, pursuant to law, that no use was made of funds appropriated in the Department of Defense Appropriation Act, 1971 (P.L. 91-668) and the Military Constuction Appropriation Act, 1971 (P.L. 91-544), during the period July 1 to December 31, 1970, to make payments under contracts for any program, project, or activity in a foreign country except where, after consultation with a designee of the Secretary of the Treasury, it was determined that the use, by purchase from the Treasury, of currencies of such country acquired pursuant to law was not feasible for the reason that the Treasury Department was not holding excess foreign currencies in the country involved; to the Committee on Appropriations.

REPORT ON GRANTS TO STATE FOR PUBLIC ASSISTANCE

A letter from the Director, Office of Management and Budget, Executive Office of the President, reporting, pursuant to law, that the appropriation to the Department of Health, Education, and Welfare for "Grants to States for public assistance" for fiscal year 1971 has been apportioned on a basis which indicates the necessity for a supplemental estimate of appropriation; to the Committee on Appropriations.

REPORT ON CONCLUSION OF THE CONFEDERATED SALISH AND KOOTENAI TRIBES OF THE FLATHEAD RESERVATION, MONT., PLAINTIFF, V. THE UNITED STATES OF AMERICA, DEFENDANT

A letter from the Chairman, Indian Claims Commission, reporting, pursuant to law, on the final conclusion of judicial proceedings regarding the Confederated Salish and Kootenai Tribes of the Flathead Reservation, Mont., plaintiff, v. The United States of America, defendant (with an accompanying report); to the Committee on Appropriations.

PROPOSED LEGISLATION TO AUTHORIZE APPROPRIATIONS TO CARRY OUT THE STANDARD REFERENCE DATA ACT

A letter from the Secretary of Commerce, transmitting a draft of proposed legislation to authorize appropriations to carry out the Standard Reference Data Act (with accompanying papers); to the Committee on Commerce.

PROPOSED CONSUMER PRODUCT TEST METHODS ACT

A letter from the Secretary of Commerce, transmitting a draft of proposed legislation entitled "Consumer Product Test Methods Act" (with accompanying papers); to the Committee on Commerce.

PROPOSED LEGISLATION TO AUTHORIZE APPROPRIATIONS OF THE DEPARTMENT OF COMMERCE TO BE AVAILABLE UNTIL EXPENDED OR FOR PERIODS IN EXCESS OF 1 YEAR

A letter from the Secretary of Commerce, transmitting a draft of proposed legislation to authorize appropriations of the Department of Commerce to be available until expended or for periods in excess of 1 year (with accompanying papers); to the Committee on Commerce.

REPORT OF THE COMMISSION ON THE ORGANIZATION OF THE GOVERNMENT OF THE DISTRICT OF COLUMBIA

A letter from the Chairman of the Commission on the Organization of the Government of the District of Columbia transmit-

ting, pursuant to law, a report of the Commission concerning its activities to date (with accompanying report); to the Committee on the District of Columbia.

PROPOSED LEGISLATION PROVIDING FOR THE SALE OF FORFEITED DISTILLED SPIRITS, WINES, AND BEER

A letter from the Secretary of the Treasury transmitting proposed legislation to amend section 5688 of the Internal Revenue Code to provide for the sale of forfeited distilled spirits, wines, and beer (with accompanying papers); to the Committee on Finance.

REPORT ON THE INDONESIAN DEBT RESCHEDULING

A letter from the Chairman of the National Advisory Council on International Monetary and Financial Policies transmitting its Special Report on the Indonesian Debt Rescheduling (with accompanying report); to the Committee on Foreign Relations.

REPORT OF THE COMPTROLLER GENERAL

A letter from the Comptroller General of the United States, transmitting, pursuant to law, a report on problems in the Department of Housing and Urban Development program for rehabilitating housing to provide homes for low-income families in Philadelphia, Pa. (with an accompanying report); to the Committee on Government Operations.

PROPOSED LEGISLATION TO EXTEND THE AUTHORIZATION OF THE APPROPRIATIONS FOR THE CABINET COMMITTEE ON OPPORTUNITIES FOR SPANISH-SPEAKING PEOPLE

A letter from the Executive Director, Cabinet Committee on Opportunity for the Spanish Speaking, transmitting a draft of proposed legislation to extend the authorization of the appropriations for the Cabinet Committee on Opportunities for Spanish-Speaking People (with accompanying papers); to the Committee on Government Operations.

A letter from the Comptroller General of the United States, transmitting, pursuant to law, a report on the first review of the phasedown of U.S. military activities in Vietnam by the Department of Defense (with an accompanying report); to the Committee on Government Operations.

A letter from the Comptroller General of the United States, transmitting, pursuant to law, a report on our defense industry profit study, made pursuant to the provisions of the Armed Forces Appropriation Authorization Act for fiscal year 1970, approved November 19, 1969 (Public Law 91–121), (with an accompanying report); to the Committee on Government Operations.

A letter from the Comptroller General of the United States, transmitting, pursuant to law, a report on the acquisition of major weapon systems by the Department of Defense (with an accompanying report); to the Committee on Government Operations.

REPORT ON CERTIFICATION AS TO ADEQUACY OF SOIL SURVEY AND LAND CLASSIFICATION—TUALATON PROJECT, OREGON

A letter from the Assistant Secretary of the Interior, reporting, pursuant to law, on certification as to adequacy of soil survey and land classification as required by the 1954 Appropriation Act—Tualatin Project, Oregon (with accompany papers); to the Committee on Interior and Insular Affairs.

ENVIRONMENTAL IMPACT STATEMENTS FOR CERTAIN LEGISLATIVE PROPOSALS

A letter from the Administrator of the Environmental Protection Agency transmitting, pursuant to law, environmental impact statements for the four legislative proposals of the Environmental Protection Agency (with accompanying papers); to the Committee on Interior and Insular Affairs.

PROPOSED LEGISLATION TO AMEND THE JOINT RESOLUTION ESTABLISHING THE AMERICAN REVOLUTION BICENTENNIAL COMMISSION, AS AMENDED

A letter from the American Revolution Bicentennial Commission, transmitting a draft of proposed legislation to amend the joint resolution establishing the American Revolution Bicentennial Commission, as amended (with accompanying papers); to the Committee on the Judiciary.

REPORT OF THE AMERICAN ACADEMY OF ARTS AND LETTERS, 1970

A letter from Secretary of the American Academy of Arts and Letters transmitting, pursuant to law, the official report of the Academy for the year 1970 (with accompanying report); to the Committee on the Judiciary.

REPORTS CONCERNING VISA PETITIONS APPROVED BY THE IMMIGRATION AND THE NATURALIZATION SERVICE

A letter from the Commissioner of the Immigration and Naturalization Service transmitting, pursuant to law, reports concerning visa petitions which the Service has approved according the beneficiaries of such petitions third preference and sixth preference classification (with accompanying reports); to the Committee on the Judiciary.

REPORT OF THE VETERANS OF WORLD WAR I

A letter from the National Quartermaster, Veterans of World War I of the U.S.A., Inc., transmitting, pursuant to law, a financial report as of September 30, 1970, a recruiting pamphlet, and proceedings of the National Convention held in Salt Lake City, Utah, October 9–14, 1970 (with accompanying material); to the Committee on the Judiciary.

REPORT OF THE MILITARY ORDER OF THE PURPLE HEART

A letter from the Adjutant General, Military Order of the Purple Heart, transmitting, pursuant to law, a financial report of the Military Order of the Purple Heart of the U.S.A. for fiscal year 1970 (with an accompanying report); to the Committee on the Judiciary.

REPORT OF THE INTERIM COMPLIANCE PANEL

A letter from the Secretary of the Interior, transmitting, pursuant to law, a report of the Interim Compliance Panel for the calendar year ending December 31, 1970 (with an accompanying report); to the Committee on Labor and Public Welfare.

PROPOSED LEGISLATION FOR THE CONTINUATION OF PROGRAMS AUTHORIZED UNDER THE ECONOMIC OPPORTUNITY ACT OF 1964

A letter from the Director of the Office of Economic Opportunity, transmitting proposed legislation to provide for the continuation of programs authorized under the Economic Opportunity Act of 1964 (with accompanying papers): to the Committee on Labor and Public Welfare.

REPORT OF ECONOMIC DEVELOPMENT ADMINISTRATION

A letter from the Secretary of Commerce, transmitting, pursuant to law, a report of financial, technical, and planning assistance at the State and local levels to enable communities to overcome severe problems of high unemployment and low family incomes, implemented by the Economic Development Administration (with an accompanying report); to the Committee on Public Works.

PROPOSED LEGISLATION TO AMEND THE PUBLIC WORKS AND ECONOMIC DEVELOPMENT ACT OF 1965, TO EXTEND THE AUTHORIZATIONS FOR TITLES I THROUGH V THROUGH FISCAL YEAR 1972

A letter from the Secretary of Commerce, transmitting a draft of proposed legislation to amend the Public Works and Economic Development Act of 1965, to extend the authorizations for titles I through V through fiscal year 1972 (with accompanying papers); to the Committee on Public Works.

## PETITIONS

Petitions were laid before the Senate and referred as indicated:

By the ACTING PRESIDENT pro tempore (Mr. MCGOVERN):

A joint resolution of the Legislative Assembly of the State of Montana; to the Committee on Appropriations:

"JOINT RESOLUTION

"A joint resolution of the Senate and House of Representatives of the State of Montana urging Congress and all involved officials to implement the recommendations of the Governor's Task Force on Indian problems.

" 'Whereas, the Montana governor's task force on Indian problems has adopted the following resolution concerning the allocation of federal funds:

"Whereas, a majority of American Indians now live off reservations, and

" 'Whereas, due to budgetary limitations, the services of the Bureau of Indian Affairs and Indian Health Division of the Public Health Service of the Department of Health, Education and Welfare have been limited largely to residents of the Indian reservations, and

" 'Whereas, such limitations are gravely prejudicial to the development, security and welfare of Indians both on and off reservations,

" 'Now, therefore, be it resolved by the Montana Governor's Indian Task Force, meeting this 4th day of April, 1970, at Billings, Montana, urge the Congress to appropriate sufficient funds for the Bureau of Indian Affairs, and [for] the Indian Health Division of the Public Health Service to [provide for adequate patient] services to Indians residing off the reservations, as well as those living on the reservations, whether they be treaty or non-treaty Indians, to the end that the United States meet its responsibilities to the Indian people regardless of where they may live or work or what technical legal status they may hold", and further, that these funds be supplemental to the funds now being provided for Indian programs, and

" 'Whereas, in chapter 319, laws of 1969, the Montana legislative assembly declared it a policy of this state to assist all Indians whether they reside on reservations or not.

" 'Now, therefore, be it resolved by the Senate and House of Representatives of the State of Montana:

" 'That they fully concur in the resolutions of the Governor's Indian Task Force and urge Congress and all concerned or involved officials to initiate or support any legislative or other action necessary to accomplish the recommendations of the Governor's Task Force.

" 'Be it further resolved, that the Secretary of State send a copy of this resolution to the Montana congressional delegation, the special subcommittee on Indian education, national and area offices of the Bureau of Indian Affairs, the Secretary of the Interior, Congresswomen Julia Butler Hansen of Washington, the President and Vice-President of the United States and the National Council on Indian Opportunity.' "

A resolution of the Legislature of the State of South Dakota; to the Committee on Banking, Housing and Urban Affairs:

"HOUSE CONCURRENT RESOLUTION No. 514

"A concurrent resolution, Memorializing the Congress of the United States to instruct

and direct the Treasury Department of the United States to issue, in conjunction with the celebration of the bicentennial aniversary of the United States, a two dollar bill or some other denomination of the currency of the United States depicting the Mount Rushmore National Memorial, "The Shrine of Democracy", thereon.

"Whereas, Mount Rushmore National Memorial, located in the scenic Black Hills area of the State of South Dakota, has been officially proclaimed as 'The Shrine of Democracy' and is recognized as a national monument; and

"Whereas, the federal government has played a vital role in the recognition and financing of the Mount Rushmore National Memorial; and

"Whereas, Mount Rushmore National Memorial has been acclaimed a national and international reputation and is visited annually by hundreds of thousands of people from throughout the country and from many foreign nations; and

"Whereas, the portrayal of the Mount Rushmore National Memorial envisaged our national heritage and the religious, social and economic freedoms for which it stands; and

"Whereas, the great Americans enshrined by this Memorial, Presidents George Washington, Thomas Jefferson, Abraham Lincoln and Theodore Roosevelt, have come to be known as the founding fathers of some of the most meaningful traditions incumbent to our way of life; as inspirations to all who are concerned with the preservation and safeguarding of a democratic society, and, as courageous and faithful defenders of the basic principles underlying our form of government by having dedicated themselves to overcoming what during their respective times were considered and are now recognized as some of the greatest trials which our system of free democracy has confronted; and

"Whereas, as was true in the past and is now true during present times of national and international strife and conflict, it is necessary and proper that the symbols of freedom and democracy be emphasized and brought before the people by their governmental representatives; and

"Whereas, it has been the custom and policy of the Treasury Department of the United States to utilize the likenesses of the outstanding and immortal leaders of this country of various series and denominations of our currency; and

"Whereas, the use of a representation of the Mount Rushmore National Memorial, 'The Shrine of Democracy,' on a two dollar bill or some other denomination of our currency by the Treasury Department of the United States would serve as a daily reminder of the spirit and ideals of all Americans:

"Whereas, in 1976 the United States will be celebrating the bicentennial anniversary of its founding; and

"Whereas, the Mount Rushmore National Memorial should play a significant role in the nation's observance of its 200th anniversary:

"Now, therefore, be it resolved, by the House of Representatives of the Forty-sixth Legislature of the state of South Dakota, the Senate concurring therein, that the Congress of the United States be memorialized to take whatever action might be necessary and appropriate to the instruction and direction of the Treasury Department of the United States to issue, in conjunction with the celebration of the bicentennial anniversary of the United States, a two dollar bill or some other denomination of the currency of the United States depicting the Mount Rushmore National Memorial, "The Shrine of Democracy," thereon; and

"Be it further resolved, that if it be determined by the Treasury Department of the United States that it need no instruction or direction by the Congress of the United States to accomplish the purpose and intent of this Resolution, that it initiate and implement whatever action it might take to accomplish its objective; and

"Be it further resolved, that copies of this concurrent resolution be transmitted by the Chief Clerk of the House of Representatives of the state of South Dakota to the offices of the President and Vice President of the United States, the Speaker of the House of Representatives of the United States, the members of the Congressional delegation of the state of South Dakota, the Secretary of the Treasury Department of the United States and the Governor of the state of South Dakota.

"Adopted by the House March 10, 1971.

"Concurred in by the Senate March 12, 1971."

A resolution of the Senate of the General Assembly of the Commonwealth of Kentucky; to the Committee on Commerce:

"SENATE RESOLUTION NO. 13

"A resolution petitioning the members of the United States Congress to support a bill introduced in the House of Representatives to amend the Uniform Time Act of 1966

"Whereas, the provisions of the Federal Uniform Time Act of 1966 apply to the Commonwealth of Kentucky; and

"Whereas, daylight saving time works an unusual hardhip in some regions of Kentucky as a result of the State's geographical location; and

"Whereas, Representative Tim Lee Carter, in compliance with a request from Lieutenant Governor Wendell H. Ford, introduced H.R. 15276 in the 91st Congress to lessen the hardship of daylight saving time in Kentucky by shortening Daylight Saving Time in the United States to the period between Memorial Day and Labor Day; and

"Whereas, H.R. 15276 failed of passage in the 91st Congress; and

"Whereas, Representative Tim Lee Carter, joined by Representative Romano L. Mazzoli, introduced a similar bill in the House of Representatives of the United States Congress on March 9, 1971, to amend the Uniform Time Act of 1966 to provide that daylight saving time begin on Memorial Day and end on Labor Day of each year; and

"Whereas, the passage of Representative Carter's and Representative Mazzoli's bill will remove much of the hardship created by daylight saving time in Kentucky;

"Now, therefore, *Be it resolved by the Senate of the General Assembly of the Commonwealth of Kentucky:*

"1. That the Kentucky Senate endorses the provisions of Representative Tim Lee Carter's and Representative Romano L. Mazzoli's bill and urges the Congress of the United States to take favorable action on that bill.

"2. That attested copies of this resolution be transmitted to the Secretary of the Senate of the United States, the Clerk of the the House of Representatives of the United States and to each member of Kentucky's Congressional delegation."

A Resolution of the Legislature of the Commonwealth of Massachusetts; to the Committee on Commerce:

"RESOLUTIONS MEMORIALIZING THE CONGRESS OF THE UNITED STATES TO ENACT LEGISLATION PROVIDING FOR A FEDERAL STUDY OF AIRPORT NOISE AND OPERATIONS

"*Whereas,* The noise engendered by the operation of airports has impaired the physical, psychological and social well being of inhabitants of airport communities; now, therefore, be it

"*Resolved,* That the General Court of Massachusetts hereby respectfully urges the Congress of the United States to enact legislation providing for a federal study of the physical and social effects of such noise on the inhabitants of airport communities; and be it further

"*Resolved,* That a copy of these resolutions be transmitted forthwith by the State Secretary to the President of the United States, to the presiding officer of each branch of Congress and to members thereof from the Commonwealth.

"House of Representatives, adopted, March 4, 1971.

"Senate, adopted in concurrence, March 10, 1971."

A resolution of the Legislature of the State of South Dakota; to the Committee on Finance:

"A Concurrent Resolution, memorializing the Congress of the United States to take immediate action to adopt the President's Proposed Revenue Sharing Program now under its consideration, and citing the need for immediate financial assistance to the State and local governments for meeting the critical problems facing them

"Be it resolved by the House of Representatives of the State of South Dakota, the Senate concurring therein:

"'Whereas, the fiscal crisis at state and local levels has become the overriding problem of intergovernmental relations and of continuing a viable federal system, and the very evident solution to this problem is a meaningful sharing of federal income tax resources; and

"'Whereas, on January 22, 1971 President Nixon in his State of the Union Message proposed "that the Congress make a $16 billion investment in renewing state and local governments," calling for $5 billion in new funds for General Revenue Sharing and approximately $10 billion of existing categorical grant-in-aid monies and $1 billion of new funds for Special Revenue Sharing; and

"'Whereas, the $11 billion proposed for state and local governments as Special Revenue Sharing would be for the six broad purposes of rural development, education, law enforcement, transportation, job training and urban development and within these six broad categories the states and localities would make decisions on how funds would be spent with few strings or restrictions attached; and

"'Whereas, the President's program for General Revenue Sharing calling for an estimated $5 billion for the first full fiscal year and a permanent annual appropriation equal to 1.3 per cent of the federal individual income tax base; and

"'Whereas, the General Revenue Sharing Program would provide for:

"'(1) distribution of funds to the fifty states on a per capita basis with adjustments for revenue effort; and

"'(2) inclusion of all cities, counties and townships on the basis of a clearly defined and equitable "passthrough" formula; and

"'(3) no federal program or project restrictions or "strings" connected with their use; and

Whereas, immediate enactment of the President's Revenue Sharing Program by the Congress would mean that South Dakota would receive $19 million as its share of the General Revenue Sharing funds during the first full fiscal year of the program which would be divided on a fair and equitable basis among the state and its political subdivisions:

"'Now, therefore, be it resolved, by the House of Representatives of the Forty-sixth Legislature of the state of South Dakota, the Senate concurring therein, that the Legislature does hereby memorialize the Congress of the United States to take immediate action to adopt the President's Proposed Revenue Sharing Program now under its consideration in order to assist in meeting the immediate needs of state and local governments in solving the critical problems facing them; and

"'Be it further resolved, that adoption of

this Concurrent Resolution by the Legislature of the State of South Dakota in no way is intended to detract from or lessen the legislative intent expressed by the Legislature in its earlier enactment of House Joint Resolution No. 503 calling on Congress to call a constitutional convention for the sole and exclusive purpose of proposing constitutional revenue sharing; and

" 'Be it further resolved, that certified copies of this Resolution be forwarded forthwith to the President of the United States, the President of the Senate and the Speaker of the House of Representatives of the United States.

" 'Adopted by the House March 18, 1971.

" 'Concurred in by the Senate March 18, 1971.' "

A Joint Resolution of the Legislative Assembly of the State of Montana; to the Committee on Interior and Insular Affairs:

"A JOINT RESOLUTION OF THE SENATE AND HOUSE OF REPRESENTATIVES OF THE STATE OF MONTANA URGING CONGRESS AND ALL INVOLVED OFFICIALS TO IMPLEMENT THE RECOMMENDATIONS OF THE GOVERNOR'S TASK FORCE ON INDIAN PROBLEMS

"Whereas, the Montana governor's task force on Indian problems has adopted the following resolution concurring in certain recommendations made by the special subcommittee of the United States Senate:

" 'Whereas, Report No. 91–501 of the Special Subcommittee on Indian Education of the Committee on Labor and Public Welfare of the United States Senate made the following numbered recommendations with regard to the administration and funding of the Johnson-O'Malley Act, to wit:

" '48. That each state applying for a Johnson-O'Malley contract should be required to submit a definite plan for meeting the needs of its Indian students.

" '49. That better accountability and evaluation procedures should be instituted at state and local levels.

" '50. That Indians should be involved in the planning, executing and evaluating of Johnson-O'Malley programs. A state or district's Johnson-O'Malley plan should be subject to the approval of the Indian participants.

" '51. That technical assistants should be hired by the Bureau of Indian Affairs to work with local agencies, State departments of education and Indian participant groups in helping to identify special Indian needs and in developing programs which would meet those needs.

" '52. That Johnson-O'Malley funding should not be conditioned by the presence of tax-exempt land.

" '53. That the expanded contracting authority authorized by the Act's 1936 amendment should be utilized for the development of curriculum relevant to Indian culture and the training of teachers of Indian students.

" '54. That tribes and Indian communities should be added to the list of agencies with which the Bureau of Indian Affairs can negotiate Johnson-O'Malley contracts and that full use be made of this new contracting authority to permit tribes to develop their own education and programs, and

" 'Whereas, the Governor's Indian Task Force of the State of Montana meeting in Billings on this 4th day of April 1970 concurs in said recommendations and wishes to express its full support of the same,

" 'Now, therefore, be it resolved that recommendations numbered 48 through 54 inclusive, of said report are fully endorsed by the Governor's Indian Task Force, and the Task Force further urges all concerned units and responsible officers of the Federal and State Governments and the Congress of the United States and the Montana Legislature take appropriate action to implement said recommendations.' "

"Now, therefore, be it resolved by the Senate and House of Representatives of the State of Montana:

"That they fully concur in the resolution of the governor's task force on Indian problems and urge Congress and all concerned or involved officials to initiate or support any legislative or other action necessary to accomplish the recommendations of the governor's task force.

"Be it further resolved, that the secretary of state send a copy of this resolution to the Montana congressional delegation, the special subcommittee on Indian education, national and area offices of the bureau of Indian affairs, the secretary of the interior, congresswoman Julia Butler Hansen of Washington, the president and vice-president of the United States and the national council on Indian opportunity."

A resolution of the Legislature of the Commonwealth of Massachusetts; to the Committee on Labor and Public Welfare:

"RESOLUTIONS MEMORALIZING THE CONGRESS OF THE UNITED STATES TO ENACT LEGISLATION PROVIDING FOR A MINIMUM WAGE OF TWO DOLLARS

"*Whereas,* Every man who labors is worthy of a decent living wage; and

"*Whereas,* The cost of living has increased continually from year to year; therefore be it

"*Resolved,* That the General Court of Massachusetts respectfully urges the Congress of the United States to enact legislation providing for a minimum wage of two dollars; and be it further

"*Resolved,* That copies of these resolutions be sent forthwith by the State Secretary to the President of the United States, the presiding officer of each branch of Congress and to each member thereof from this Commonwealth.

"House of Representatives, adopted, March 4, 1971.

"Senate, adopted in concurrence, March 10, 1971."

A resolution of the Legislature of the Commonwealth of Massachusetts; to the Committee on Veterans' Affairs:

"RESOLUTIONS MEMORIALIZING THE CONGRESS OF THE UNITED STATES TO ESTABLISH A NATIONAL CEMETERY IN THE COMMONWEALTH

"*Whereas,* It is the right of every veteran to be accorded the honor of a burial in a national place of honor; and

"*Whereas,* Out of the ninety-eight national cemeteries in the United States, there is none in the New England area; and

"*Whereas,* The saturation point of these cemeteries is rapidly being reached and the need for new land is pressing; now, therefore, be it

"*Resolved,* That the General Court of Massachusetts respectfully urges the Congress of the United States to enact such legislation as may be necessary to establish a national cemetery in the Commonwealth; and be it further

"*Resolved,* That copies of these resolutions be transmitted forthwith by the State Secretary to the President of the United States, to the presiding officer of each branch of Congress and to each member thereof from the Commonwealth.

"House of Representatives, adopted March 4, 1971.

"Senate, adopted in concurrence, March 10, 1971."

A resolution of the Board of Supervisors of Milwaukee County requesting welfare legislation granting authority to counties to make limited use of vendor and voucher payments in AFDC without loss of reimbursement of Federal share of such aid; to the Committee on Finance.

## REPORTS OF COMMITTEES

The following reports of committees were submitted:

By Mr. JAVITS, from the Committee on Labor and Public Welfare, without amendment:

S. 557. A bill to amend the Wagner-O'Day Act to extend the provisions thereof to other severely handicapped individuals who are not blind, and for other purposes (Rept. No. 92–41).

By Mr. TALMADGE, from the Committee on Agriculture and Forestry, with amendments:

S. 795. A bill to authorize the Secretary of Agriculture to establish corn feed grain bases (Rep. No. 92–43).

By Mr. LONG, from the Committee on Finance, without amendment:

S. 1330. An original bill to authorize the Secretary of the Treasury to transfer to the Government of the Republic of the Philippines funds for making payments on certain pre-1934 bonds of the Philippines, and for other purposes (Rept. No. 92–44), which was read the first and second times and ordered placed on the calendar.

RIOTS, CIVIL AND CRIMINAL DISORDERS—COLLEGE CAMPUS DISORDERS—SECOND INTERIM REPORT OF THE COMMITTEE ON GOVERNMENT OPERATIONS (S. REPT. 92–42)

Mr. McCLELLAN, pursuant to Senate Resolution 150, adopted August 11, 1967, submitted a report from the Committee on Government Operations entitled "Riots, Civil and Criminal Disorders, College Campus Disorders, Second Interim Report," with additional, minority, and individual views, which was ordered to be printed.

By Mr. HARTKE, from the Committee on Commerce, without amendment:

S. Res. 81. A resolution authorizing supplemental expenditures by the Committee on Commerce for inquiries and investigations. Referred to the Committee on Rules and Administration.

## EXECUTIVE REPORT OF A COMMITTEE

Mr. BYRD of West Virginia. Mr. President, as in executive session, on behalf of the distinguished Senator from New Jersey (Mr. WILLIAMS), from the Committee on Labor and Public Welfare, I submit the favorable report of the nomination of Frank Charles Carlucci III, of Pennsylvania, to be Director of the Office of Economic Opportunity.

## BILLS AND JOINT RESOLUTIONS INTRODUCED

The following bills and joint resolutions were introduced, read the first time and, by unanimous consent, the second time, and referred as indicated:

By Mr. PEARSON:

S. 1311. A bill to provide certain privileges against disclosure of confidential information and the sources of information obtained by newsmen. Referred to the Committee on the Judiciary.

By Mr. JACKSON (for himself and Mr. GURNEY):

S. 1312. A bill to amend the act of November 26, 1969, to provide for an extension of the date on which the Commission on Government Procurement shall submit its final report. Referred to the Committee on Government Operations.

By Mr. HARRIS (for himself and Mr. BELLMON):

S. 1313. A bill to amend the act entitled "An act to provide for the disposition of judgment funds now on deposit to the credit of the Cheyenne-Arapaho Tribes of Oklahoma," approved October 31, 1967 (81 Stat.

337). Referred to the Committee on Interior and Insular Affairs.

By Mr. HARRIS:

S. 1314. A bill for the relief of Jennifer Lynn Gallimore. Referred to the Committee on the Judiciary.

By Mr. HARRIS (for himself, Mr. CHURCH, Mr. HART, Mr. INOUYE, Mr. MATHIAS, and Mr. PASTORE):

S. 1315. A bill to protect ocean mammals from being pursued, harassed, or killed; and for other purposes. Referred to the Committee on Commerce.

By Mr. CURTIS (for himself and Mr. HRUSKA):

S. 1316. A bill to amend section 301 of the Federal Meat Inspection Act, as amended, so as to increase from 50 to 80 per centum the amount that may be paid as the Federal Government's share of the costs of any cooperative meat inspection program carried out by any State under such section. Referred to the Committee on Agriculture and Forestry.

By Mr. STENNIS (for himself and Mrs. SMITH) (by request):

S. 1317. A bill to amend title 10, United States Code, to provide scholarships to selected persons for education in medicine, dentistry, and other health professions. Referred to the Committee on Armed Services.

By Mr. FANNIN:

S. 1318. A bill to deny tax exemption under section 501 of the Internal Revenue Code of 1954 to organizations which use any of their income or funds for political purposes. Referred to the Committee on Finance.

By Mr. PROXMIRE:

S. 1319. A bill for the relief of Elzbieta Kuznecka. Referred to the Committee on the Judiciary.

By Mr. TOWER (for himself, Mr. BENNETT, Mr. CURTIS, Mr. DOLE, Mr. ERVIN, Mr. FANNIN, Mr. GOLDWATER, Mr. GURNEY, and Mr. THURMOND):

S. 1320. A bill to ensure the separation of Federal powers by amending the National Labor Relations Act to provide for trial of unfair labor practice cases in the United States district court, and for other purposes. Referred to the Committee on the Judiciary (by unanimous consent).

By Mr. TOWER:

S. 1321. A bill to amend title 37, United States Code, so as to extend from 1 to 3 years the period that a member of the uniformed services has following his retirement to select his home for purposes of travel and transportation allowances under such title, and for other purposes. Referred to the Committee on Armed Services.

S. 1322. A bill to provide excess storm loss reinsurance for commercial fishing fleets. Referred to the Committee on Commerce.

S. 1323. A bill to provide for the appointment of additional U.S. district judges. Referred to the Committee on the Judiciary.

By Mr. TALMADGE:

S. 1324. A bill for the relief of Shizuko Okinaka; and

S. 1325. A bill for the relief of John Persad Morris and Zorina Ali Morris. Referred to the Committee on the Judiciary.

By Mr. SCHWEIKER:

S. 1326. A bill to amend chapter 607 of title 10 United States Code, with respect to retirement of civilian members of the teaching staff of the U.S. Naval Academy. Referred to the Committee on Armed Services.

By Mr. CANNON:

S. 1327. A bill for the relief of Colin Alvin Ward. Referred to the Committee on the Judiciary; and

S. 1328. A bill to amend the Gun Control Act of 1968 to provide for certain exceptions for members of the Armed Forces of the United States while on temporary duty. Referred to the Committee on the Judiciary.

By Mr. GRAVEL:

S. 1329. A bill to establish the Joint Federal-State Natural Resources and Land-use Planning Commission for Alaska. Referred to the Committee on Interior and Insular Affairs.

By Mr. LONG (on behalf of the Committee on Finance):

S. 1330. A bill to authorize the Secretary of the Treasury to transfer to the Government of the Republic of the Philippines funds for making payments on certain pre-1934 bonds of the Philippines, and for other purposes; placed on calendar.

By Mr. WILLIAMS:

S. 1331. A bill to amend the Public Health Service Act to continue and broaden eligibility of schools of nursing for financial assistance, to improve the quality of such schools, and for other purposes. Referred to the Committee on Labor and Public Welfare.

By Mr. BURDICK:

S. 1332. A bill to amend section 205 of the Flood Control Act. Referred to the Committee on Public Works.

By Mr. CHILES:

S. 1333. A bill to require the Comptroller General to gather and compile information with respect to the reprograming of appropriated funds and to furnish such information to Members of the Congress; and

S. 1334. A bill to amend the Budget and Accounting Act, 1921, to require that the budget for each fiscal year contain information with respect to indirect expenditures made through the Federal tax system. Referred to the Committee on Government Operations.

By Mr. HARTKE (for himself and Mr. ALLEN, Mr. RANDOLPH, Mr. MANSFIELD, Mr. MCGEE, Mr. HRUSKA, Mr. HART, Mr. EASTLAND, Mr. MUSKIE, Mr. MAGNUSON, Mr. HUGHES, Mr. EAGLETON, Mr. BIBLE, Mr. RIBICOFF, Mr. CURTIS, Mr. STEVENSON, Mr. ALLOTT, Mr. PASTORE, Mr. BURDICK, Mr. FULBRIGHT, Mr. PERCY, Mr. COOK, Mr. HUMPHREY, Mr. MONTOYA, Mr. THURMOND, Mr. METCALF, Mr. HANSEN, Mr. GURNEY, Mr. MONDALE, Mr. MOSS, Mr. MCGOVERN, Mr. HARRIS, Mr. BROOKE, Mr. STEVENS, Mr. WILLIAMS, Mr. CASE, Mr. INOUYE, Mr. CANNON, Mr. DOMINICK, Mr. CHURCH, Mr. CHILES, Mr. GRAVEL, Mr. BAYH, Mr. BEALL, Mr. HOLLINGS, Mr. NELSON, Mr. YOUNG, Mr. GOLDWATER, Mr. BOGGS, Mr. BENTSEN, Mr. TUNNEY, Mr. MATHIAS, Mr. SCHWEIKER, Mr. TOWER, Mr. FANNIN, Mr. BAKER, Mr. MCINTYRE, Mr. JACKSON, Mr. PROUTY, Mr. CRANSTON, Mr. BELLMON, Mr. BYRD of West Virginia, Mr. JAVITS, Mrs. SMITH, Mr. KENNEDY, and Mr. MILLER):

S. 1335. A bill to amend title II of the Social Security Act so as to liberalize the conditions governing eligibility of blind persons to receive disability insurance benefits thereunder. Referred to the Committee on Finance.

By Mr. MONDALE (for himself and Mr. RANDOLPH):

S. 1336. A bill to limit the amount of the monthly premium for participation in the supplementary medical insurance program established by part B of title XVIII of the Social Security Act. Referred to the Committee on Finance.

By Mr. MONDALE:

S. 1337. A bill to amend title XVIII of the Social Security Act to provide full payment (subject to any deductibles and coinsurance generally applicable) for whole blood furnished an individual under the program of health insurance for the aged. Referred to the Committee on Finance.

By Mr. EAGLETON (by request):

S. 1338. A bill to authorize the government of the District of Columbia to fix certain fees;

S. 1339. A bill to authorize the District of Columbia to issue obligations to finance District capital programs, to provide Federal funds for District of Columbia institutions of higher education, and for other purposes; and

S. 1340. A bill to amend the act of August 9, 1955, relating to school fare subsidy for transportation of schoolchildren within the District of Columbia. Referred to the Committee on the District fo Columbia.

By Mr. PERCY:

S. 1341. A bill to amend the Urban Mass Transportation Act of 1964 to increase the amount of the Federal grant for certain mass transportation projects and to remove certain limitations on the amount of grant assistance which may be made available in any one State;

S. 1342. A bill to amend the Urban Mass Transportation Act of 1964 to authorize grants for comprehensive long-range planning for the development of balanced statewide or regional transportation systems; and

S. 1343. A bill to amend the Urban Mass Tranportation Act of 1964 to authorize grants to assure adequate commuter service, and to permit a State to elect to use funds from the highway trust fund to achieve a balanced transportation system. Referred to the Committee on Banking, Housing and Urban Affairs.

S. 1344. A bill to revise and improve national transportation programs. Ordered to be held at the desk.

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## STATEMENTS ON INTRODUCED BILLS AND JOINT RESOLUTIONS

By Mr. PEARSON:

S. 1311. A bill to provide certain privileges against disclosure of confidential information and the sources of information obtained by newsmen. Referred to the Committee on the Judiciary.

THE NEWSMEN'S PRIVILEGE ACT OF 1971

Mr. PEARSON. Mr. President, I introduce today the Newsmen's Privilege Act of 1971, a bill which Congress should enact to resolve a conflict among the U.S. courts of appeals in a manner consistent with the fundamental and supremely important free press guarantee of the first amendment to the Constitution.

This legislation provides that newsmen shall not be required by any court, grand jury, agency, department, or commission of the United States, or by either House of Congress, to disclose any confidential information obtained by them in their capacity as newsmen. The bill further provides that newsmen shall not be required to disclose the source of any information received in a professional capacity.

Under this proposal, the newsmen's privilege to maintain the confidentiality of his news sources is subject to two reasonable qualifications: First, the privilege does not apply to the source of any allegedly defamatory information in a case where the defendant, in a civil action for defamation, asserts a defense based upon the source of such information. Second, the privilege shall not apply to the source of any information concerning the details of any grand jury or other proceeding which was required to be secret under the laws of the United States. Finally, the bill establishes procedures for divesting the privilege when there is substantial evidence that disclosure of information held confidential by the newsman is required to prevent a threat to human

life, of espionage, or of foreign aggression.

FIRST INTRODUCED BY SENATOR CAPPER OF KANSAS

Mr. President, the Newsmen's Privilege Act is of special significance to me, because it was first introduced in Congress by one of my distinguished predecessors, the late Senator Arthur Capper. Senator Capper served Kansas and the Nation for 40 years in the seat which I now have the honor to occupy.

The original author of this proposal, quite fittingly, was a newspaperman. Mr. Capper was born in Garnett, Kans., in 1865. He attended the common and high schools, learned the printing trade, and subsequently became a newspaper reporter. Before entering public service, Mr. Capper became owner and publisher of the Topeka Daily Capital, Capper's Weekly, Capper's Farmer, the Household magazine, and other publications, as well as the owner of two radio stations.

Perhaps Senator Capper was prompted to introduce the Newsmen's Privilege Act by an incident which happened in Topeka—an incident widely reported in the national press. An editorial writer for the Topeka State Journal named E. B. Chapman had been reporting on a topic of perennial interest: conditions of vice in the city. Mr. Chapman was hauled into police court, and when he refused to divulge his confidential sources, claiming a first amendment privilege to remain silent, he was fined $25.

While this incident no doubt rankled the Senator, I rather suspect the Newsmen's Privilege Act was prompted by Mr. Capper's long experience in journalism, and his deep understanding of the requirements of a truly free press.

THE CASE OF JOHN PETER ZENGER

Newsmen have been struggling with courts over the question of "privilege" since the earliest days. When newsmen have been faced with threats of fine and imprisonment for refusing to divulge their confidential news sources, they have consistently followed the example of the uncanonized saint of American journalism—John Peter Zenger.

Zenger was born in Germany in 1697, came to New York in 1711, learned the printer's trade, and in 1733 began to publish the New York Weekly Journal.

This paper was the outlet for sentiment against Col. William Cosby, Governor of the Province, and Zenger engaged in a continual newspaper war with his rival, the administration's Gazette. As Zenger was not good at writing English, most of his material was supplied by others in the antiadministration party.

Zenger was charged—by information, as the grand jury did not indict—with making "false scandalous malicious and seditious publication." No direct effort appears to have been made to get him to tell the source of the articles—perhaps none could be made, as Zenger himself was a defendant and could not be forced to testify. Instead, by proclamation, Governor Cosby offered £50 "to such persons who shall discover the author or authors of the said scandalous, virulent and seditious reflections contained in the said journal's or printed newspapers, to be paid to the person or persons discovering the same, as soon as such author or authors shall be convicted."

Pending his trial Zenger stayed in jail for want of £400 bail, publishing his newspaper from his cell with the help of his wife. Two lawyers were disbarred when they appeared for him and objected to the due commissioning of his judges, but when his case was finally submitted to a jury, he was acquitted in "a small time."

Zenger's case shows that concealment, by a journalist, of the origin of articles critical of the Government, was an important question in the colonies 200 years ago.

The issue has become more important as time has passed. In 1949 the New York Law Revision Commission collected and published dozens of cases, reported and unreported, in which newsmen have been cited for contempt because they have insisted that the identity of their sources is privileged information.

Mr. President, I am convinced that newsmen have a constitutional right to keep confidential their sources of information. It is a curious state of affairs when newsmen, in exercising their right to be part of a "free press," must, from time to time, serve terms in prison for contempt of court. I believe the exercise of a constitutional right cannot be contemptuous of Federal courts, or any other arm of the Federal Government. The Newsmen's Privilege Act of 1971 will serve to perfect the promise our Founding Fathers made, that men cannot be free without a free and uninhibited press to serve them.

THE FIRST AMENDMENT GUARANTEE

The first amendment to the Constitution of the United States declares that "Congress shall make no law abridging the freedom of speech, or of the press." It is undisputed today that this mandate proscribes abridgment of free speech and press not only by the legislative branch, but also by the executive and the judiciary.

Mr. President, newsmen cannot meet their obligation as members of the press without full opportunity to gather newsworthy information from confidential sources. The gathering of pertinent information prior to publication constitutes an inseparable and indispensible phase of the overall news effort. It is axiomatic that there can be no dissemination of information without collection of information. Therefore, unreasonable governmental interference with the collection of newsworthy information is inimical to a free press.

There is ample authority to support this basic premise. The courts have recognized that all legitimate activities incidental to dissemination of the news must be protected if freedom of the press is to remain inviolate. These activities include, specifically, the gathering of the news.

In order to gather information effectively, the reporter must seek out sources to provide information for publication. The importance of these sources cannot be overemphasized. As the Supreme Court has suggested, the first amendment "rests on the assumption that the widest possible dissemination of information from diverse and antagonistic sources is essential to the welfare of the public, (and) that a free press is a condition of a free society."

For reasons which are entirely personal, citizens often wish to convey information to the public while maintaining anonymity. The informant's motivation for disclosure, be it avarice or a high sense of civic duty, is usually unimportant to the public which generally has an overriding interest in acquiring an informant's information, not his identity. The press has played an historic role as an intermediary for confidential news sources, and that role is central to the first amendment concept of a free press.

Newsmen, famous and obscure, skilled and inexperienced, maintain that confidential sources are important contributors of worthwhile information and that most confidential sources will refuse to contribute further if exposed. Walter Cronkite, news correspondent with CBS News, has made the following statement:

> The material that I obtain in privacy and on a confidential basis is given to me on that basis because my news sources have learned to trust me and can confide in me without fear of exposure. . . . I certainly could not work effectively if I had to say to each person with whom I talk that any information he gave me might be used against him.

Mr. President, the statement of Mr. Cronkite reflects the collective judgment of the press. Recognizing that informants need assurance that their identities will not be compromised, the American Newspaper Guild adopted a code of ethics which, in canon 5, states:

> That newspapermen shall refuse to reveal confidences or disclose sources of confidential information in court or before judicial or investigating bodies. . . .

If reporters and commentators were alone in attesting to the importance of confidential news sources, the argument would be persuasive but perhaps not conclusive. In fact, at least 14 States have adopted legislation protecting, in varying degrees, the confidentiality of the newsman's sources. These States have determined that newsmen can best serve the public interest if not required to divulge their confidential sources in most judicial, administrative, and investigative proceedings.

POLICE INFORMER PRIVILEGE

The press is not the only occupational group to assert the value of confidential informants. Law enforcement officers habitually receive information from informers, whose identities they withhold to promote their continued usefulness and to protect the physical safety of the sources. The "police informer privilege" places society's interest in law enforcement above the "right" of a criminal defendant to know his accuser, except in cases where that knowledge is essential to the defense. This practice has been upheld by the Supreme Court, notwithstanding the sixth amendment right of the accused "to be confronted with the witnesses against him; (and) to have compulsory process for obtaining witnesses in his favor."

Mr. President, I submit that the newsman's interest in maintaining confidential sources is analogous to the interest of the lawman. The police protect their informers in the hope that future criminal activity will be reported. The newsman protects his sources in the hope that future information, of value to the public, will be reported to him. Any action by government which serves to defeat the newsman's efforts to gather the news, or impairs his access to the sources upon which he depends, constitutes an abridgment of freedom of the press.

THE COMMON LAW PRIVILEGES

Mr. President, it is an accident of history that the newsman's privilege was not recognized at common law. While the early courts were willing to sacrifice relevant, material testimony in order to protect the confidential relationship between husband and wife, and between lawyer and client, the confidential relationship between newsman and source was never protected. No doubt the abhorrent practice of "licensing" and the early view that newspapers should be controlled by government agencies contributed to the low esteem in which newsmen were held before the bar.

Times have changed vastly, and for the better. The New York Times against Sullivan line of cases has elevated the press to its deserved position under our Constitution, and thus made more secure our liberties.

Unfortunately, the Supreme Court has never held that newsmen have a constitutional right to remain silent as to their confidential sources of information, or confidential information received in a professional capacity.

Thus in about 36 States, and in most Federal district courts, newsmen today may be called upon to divulge information which they hold in confidence. Should a newsman in one of those States or before a Federal tribunal follow the canons of his profession, and refuse to testify as to his confidences, he may be held in contempt and fined or jailed until he talks.

As Mr. Justice Holmes once remarked, if I may paraphrase him, there seems to be no better reason for punishing newsmen in this fashion than that it was done that way in the reign of Henry II.

RECENT DECISIONS UPHOLD CONSTITUTIONAL RIGHT

Mr. President, the history of the newsmen's privilege is marked with irony and tragedy. Several States have enacted the privilege in the wake of public outcry against the incarceration of a well-known newsman. Few newsmen have been as fortunate as Earl Caldwell of the New York Times.

Caldwell had been assigned by the Times to cover radical groups in the San Francisco area. Cadlwell's published reports led U.S. Department of Justice officials to believe that Federal laws had been violated by members of the so-called Black Panther Party. Caldwell was subpenaed to appear before a grand jury, presumably to tell what he knew of the Panthers' activities. He petitioned Judge Alfonso J. Zirpoli's Federal district court for an order quashing the subpena, claiming a first amendment right to remain silent on any question relating to confidential sources or information gathered as a newsman.

For the first time in the history of the Federal judiciary, Judge Zirpoli held squarely that Caldwell was entitled to withhold his sources from the grand jury on first amendment grounds.

Judge Zirpoli's decision was upheld, and his first amendment presumption of privilege was affirmed by the ninth circuit in November 1970.

Thus, Mr. President, there is a conflict among the courts of appeals on the question of a constitutional basis for the newsmen's privilege. Presumably, although we cannot know, at least some of the other Federal district and appeals courts would still follow the inflexible pattern of the common law, and deny the privilege to a newsman called to testify as to his sources.

On several occasions the U.S. Supreme Court has denied certiorari in cases involving newsman-contemners who have unsuccessfully asserted the privilege.

The time has come for Congress to affirm the constitutional right to protect news sources from divulgence, and to delimit the privilege in an appropriate fashion to protect public safety and the national security.

Congress shares with the courts the duty to interpret the Constitution. The legislation which I propose today will be a landmark in the continuing drama of the relationship between government and the press. I respectfully urge the early consideration and timely enactment of the Newsmen's Privilege Act of 1971.

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By Mr. JACKSON (for himself and Mr. GURNEY):

S. 1312. A bill to amend the act of November 26, 1969, to provide for an extension of the date on which the Commission on Government Procurement shall submit its final report. Referred to the Committee on Government Operations.

Mr. JACKSON. Mr. President, on behalf of the senior Senator from Florida (Mr. GURNEY) and myself, I introduce a bill to extend the period within which the Commission on Government Procurement must make its final report to Congress.

In establishing the Commission, Congress provided that the Commission would make its final report within 2 years of the date of enactment of the act which created it. This 2-year period ends on November 26, 1971. The bill I am introducing today for the two Senate members of the Commission, Senator GURNEY and myself, would require the Commission to make its final report on or before December 31, 1972.

There are two major reasons which created the need for this extension. The first involved events over which the Commission had no control. Because of delays in organizing and appointing the Commission, it was unable to hold its first meeting until 5 months after Congress authorized its establishment. It was inevitable that the recruitment of staff and development of an overall study plan would take some time after that. It was last summer before the Commission was able to get involved in the substance of its work.

The second reason for the extension stems from the scope of the Commission's assignment. Under the able leadership of its chairman, E. Perkins McGuire, the Commission is attempting to concentrate on the most significant problems in the procurement process. Despite rigorous attempts to narrow the issues, the Commission is still confronted with a full agenda of complex and difficult problems. It has 13 task forces at work in key problem areas and it will take many months for the Commission itself to digest and evaluate the work of these groups. It would be unrealistic and unwise to ask the Commission to produce a major report, covering dozens of complex subjects, by next November.

The proposed extension will give the Commission a reasonable opportunity to make the best use of the studies it has started, and develop sound recommendations for the Congress and the executive branch.

Mr. President, Senator GURNEY has injured his eye and is unable to be here today. I ask unanimous consent that the statement he prepared regarding this bill be placed in the RECORD at this point.

There being no objection, the statement was ordered to be printed in the RECORD, as follows:

Mr. GURNEY. Mr. President, I wish to associate myself with the remarks of the distinguished Senator from Washington (Mr. JACKSON).

We are today introducing a bill identical to that which was introduced in the House by Mr. HOLIFIELD on February 23, 1971 as H.R. 4848. This bill will extend the life of the commission on government procurement and permit its final report and recommendations to be filed with Congress on or before December 31, 1972.

Mr. President, the act which created the commission on government procurement was signed into law by the President on November 26, 1969; however it was not until April 1970 that the final selection of members was made by the President. The entire commission was sworn in on April 3, 1970 at the White House. The first organizational meeting was held on April 22, 1970. The commission's chairman, Mr. E. Perkins McGuire, has, in my opinion, done an outstanding job since April 1970 in gathering an outstanding professional staff, in determining the scope and dimensions of our inquiry, in planning the organization and gathering task forces.

We have now begun the actual work of the commission and it is truly an enormous task. The chairman, Mr. McGuire, will appear before the House Government Operations Committee later this month in support of S. 4848 and at that time he will give a report on the commission's progress to date. We expect Mr. McGuire will appear here in the Senate in the same role in April.

As members of the Commission, Mr. President, we have recognized from the outset that the commission, owing to its late start, would not be able to hold to the original statutory schedule. This bill will extend the commission's life and give us what we consider sufficient time to discharge our important tasks. I urge prompt action on this measure.

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By Mr. HARRIS (for himself, Mr. CHURCH, Mr. HART, Mr. INOUYE, Mr. MATHIAS, and Mr. PASTORE):

S. 1315. A bill to protect ocean mammals from being pursued, harassed, or killed; and for other purposes. Referred to the Committee on Commerce.

OCEAN MAMMALS MUST BE PROTECTED

Mr. HARRIS. Mr. President, the last warning given by that great humanitarian and naturalist, Joseph Wood Krutch, before his death is worthy of our attention:

> The 70's may be the beginning of the end, or the beginning of a new civilization. If it becomes the latter, it will not be because we have walked on the moon and learned how to tinker with the genes of unborn children, but because we have come to realize that wealth, power and even knowledge are not good in themselves but only the instruments of good or evil.

As we have become more aware of the delicate balances built into the ecological patterns of our earth's resources, we are more closely examining practices which can upset those balances. We now see that the various species of wildlife are a part of our environment, and that needless killing of animals is cruel, unjustifiable and even dangerous to our overall well-being on this planet. To limit the brutal and unnecessary killing of defenseless animals, and to maintain balance in our ecology, I am today introducing a bill to protect the mammals of the ocean—whales, seals, otters, porpoises, walruses, sea lions, and polar bears.

None of these species belongs to any one country, much less to any commercial interest. And yet, for the sake of money—primarily the American dollar—these intelligent, highly evolved animals are subjected to massive brutality and slaughter at the hands of man. It is time to recognize that the end result of these acts, coupled with pollution of the oceans, will be the extinction of these animals, each of which is needed to keep our oceans viable.

The far-reaching consequences of man's unthinking slaughter of animals is apparent right now off the coast of California. The giant kelp, mainstay of life for the fish of the area, is being consumed by a burgeoning sea urchin population. In the past, the urchins were controlled by the sea otter, an animal with a voracious appetite for urchins. But the fur hunters have effectively wiped out the sea otter. In so doing, they have performed a disservice to the earth and to the people who catch and consume the fish.

Empowered by the Endangered Species Act, the Secretary of the Interior has acted to ban the importation of products from a few species of animals. However, this is no time to deal with species one by one. We must offer a blanket of protection to all of the oceans' mammals. This is what my bill will achieve.

The bill which I am introducing has as its aim the protection of all ocean mammals from harassment or slaughter. The bill would prohibit any person or vessel subject to the jurisdiction of the United States from the taking of ocean mammals. The bill also bans the import into the United States of ocean mammals or any part thereof, including skins, both raw or in finished form. The ban on imports of ocean mammal products will serve to remove a great deal of the economic incentive for their slaughter.

It is singularly appropriate that such action be initiated by the United States, for it is our affluent society which is the major consumer of the luxury products made from the mammals of the ocean. It is the sale of the fur coat or the suede purse for the American dollar which provides the economic incentive for the killing of hundreds of thousands of seals in the Atlantic.

My bill further provides that negotiations should be undertaken with foreign governments to obtain international agreements to provide a worldwide ban on the slaughter of ocean mammals.

Special recognition is given in the bill to our obligations under the North Pacific Fur Seal Convention. This treaty contains an agreement on the part of the United States to kill 15 percent of an annual quota for Japan and 15 percent for Canada, in exchange for their agreement not to engage in pelagic sealing—the taking of seals in open waters. The 70-percent balance of this quota is presently assigned to the United States. Under my bill, no seals shall be killed to fill the U.S. quota, and all skins of the Alaskan fur seal are banned from import into the United States. Japan and Canada shall be given the option of taking the average dollar value, over the last 5 years, of the 15 percent of the kill to which each is entitled, or to take 9,000 skins shipped directly to each country. We will, during the remaining term of this convention, press for an international agreement to ban killing of North Pacific fur seals, whether at sea or on land.

We have reason to believe that an agreement to forgo the killing of the northern fur seal of the Pacific both on land and at sea will be looked at favorably by Russia. That nation also has an agreement to kill seals on its Commander Island rookeries for Japan and Canada. But Russia has announced that "there is a serious depletion of the once huge herds." Thus, the time may have come for meaningful negotiation for the protection of the species.

My bill would further provide for the designation of the Pribilof Islands as a National Seal Rookery Preserve and Bird Sanctuary, to be under the control of the Department of the Interior. Opportunity shall be given to the Native Aleuts to serve as guides and rangers. A commission shall be established to promote tourism and develop an economy on the islands.

While eliminating commercial slaughter by all Americans, the bill protects the culture and rights of the native peoples. It guarantees the right of the Indians, Eskimos, and Aleuts who dwell on the coasts of the North Pacific or Arctic Oceans to continue to kill animals—except polar bears—in their traditional manner for their own use. I would also urge that similar guarantees for the customs of native people in all lands would be incorporated into any international treaty made under the provisions of this bill.

The enactment of this bill would remove the threat of upsetting the balance of nature in our oceans; it would also halt the brutality inflicted upon these helpless animals for unnecessary purposes. I use the word "unnecessary," since there is no product from any one of these animals which is essential for human survival or welfare. Each has a substitute in one form or another. Men and women can keep warm in garments made of cloth or artificial fiber rather than fur. The ivory tusk of the walrus is replaced by plastic. To kill a polar bear to use its skin as a throw rug is held today as repugnant. The cessation of brutality to animals is one step toward a more nonviolent world. It is a step which should be taken now.

Mr. President, I ask unanimous consent that the bill, and a section-by-section analysis, be printed in the RECORD at this point in my remarks.

There being no objection, the bill and analysis were ordered to be printed in the RECORD, as follows:

S. 1315

A bill to protect ocean mammals from being pursued, harassed, or killed; and for other purposes

*Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,* That the following Act may be cited as the Ocean Mammal Protection Act of 1971.

Title I—FINDINGS AND DECLARATIONS OF POLICY

FINDINGS

SEC. 101. The Congress finds that ocean mammals are being ruthlessly pursued, harassed and killed, both at sea and on land by hunters of many nations of the world.

The Congress further finds that many ocean mammals will become rare, if not extinct, unless steps are taken to stop their slaughter.

DECLARATIONS OF POLICY

SEC. 102. (a) It is hereby declared to be the public policy of the United States to protect all ocean mammals from harassment or slaughter.

(b) It is hereby declared to be the further public policy of the United States that negotiations should be undertaken with foreign governments and through interested international organizations with a view to obtaining a worldwide ban on the further slaughter of ocean mammals.

Title II—GENERAL PROHIBITIONS

DEFINITIONS

SEC. 201. For the purposes of this title

(a) "ocean mammals" means all seal, whale, walrus, manatee or sea cow, sea otter, sea lion, polar bear, porpoise, and dolphin;

(b) "person" includes individual, partnership, corporation, association, and Federal and State agencies; and

(c) the terms "take" or "taking" or "taken" mean to harass, pursue, hunt, shoot, dynamite, capture, collect, kill, or attempt to harass, pursue, hunt, shoot, dynamite, capture, collect or kill.

PROHIBITIONS

SEC. 202. (a) It is unlawful, except as provided in Section 203 of this Title or in Title III, for any person or vessel subject to the jurisdiction of the United States to engage in the taking of ocean mammals either on the high seas or on lands or waters under the jurisdiction of the United States, or to use any port or harbor or other place under the jurisdiction of the United States for any purpose connected in any way with such taking, or for any person to transport, import, offer for sale, or possess at any port or place or on any vessel, subject to the jurisdiction of the United States, ocean mammals or the parts of ocean mam-

mals taken after the enactment of this Act, including but not limited to, raw, dressed, or dyed fur or skins.

(b) The possession of ocean mammals or any part thereof by any person contrary to the provisions of this Act shall constitute prima facie evidence that ocean mammal or part thereof was taken, purchased, sold, or transported in violation of the provision of this Act or the regulations issued thereunder.

EXCEPTION FOR INDIANS, ALEUTS, AND ESKIMOS

SEC. 203. (a) Indians, Aleuts, and Eskimos who dwell on the coasts of the North Pacific or Artic oceans are permitted to take ocean mammals (except polar bears) for their own use but not for sale: *Provided, however*, Such taking must be done in accordance with customary traditions and as an adjunct of the native culture.

(b) The authority contained in this section shall not apply to Indians, Aleuts, and Eskimos who are employed by any person under the provisions of the Fur Seal Act of 1966 or Title III of this Act for the purpose of taking ocean mammals, or who are under contract or agreement to deliver the skins to any person.

EXCEPTIONS FOR MEDICAL AND SCIENTIFIC RESEARCH, AND FOR MUNICIPAL AND/OR OTHER NONPROFIT ZOOS

SEC. 204. (a) Nothing herein shall be considered to be a prohibition against municipal and/or other nonprofit zoos from obtaining written consent from the Secretary of Interior to humanely capture a representative number of the ocean mammals herein defined for replacement for deceased or otherwise ailing members of these species in these zoos.

(b) Further, nothing herein shall be construed to be a prohibition against the humane capture of a select number of these species of ocean mammals for certificable scientific and/or medical research.

(c) Regulations shall be promulgated by the Secretary of Interior for the purposes of Subsections (a) and (b) above as to who shall be granted permission and for what purposes. Further, methods of capture, supervision and transportation shall be subjects of said regulations by the Secretary.

FORFEITURE

SEC. 205. (a) Every vessel subject to the jurisdiction of the United States that is employed in any manner in connection with a violation of the provisions of this Title, including its tackle, apparel, furniture, appurtenances, cargo, and stores shall be subject to forfeiture and all ocean mammals or parts thereof, taken or retained in violation of this title or the monetary value thereof shall be forfeited.

(b) All provisions of law relating to the seizure, summary and judicial forfeiture, and condemnation of a vessel, including its tackle, apparel. furniture, appurtenances, cargo and stores for violation of the customs laws, the disposition of such vessel, including its tackle, apparel, furniture, appurtenances, cargo, and stores, or the proceeds from the sale thereof, and remission of mitigation of such forfeitures shall apply to seizures and forfeitures incurred or alleged to have been incurred, under the provisions of this title, insofar as such provisions of law are applicable and not inconsistent with the provisions of this title.

ENFORCEMENT

SEC. 206. (a) Enforcement of the provisions of this title is the joint responsibility of the Secretaries of State, Treasury, Interior, Commerce and Transportation. In addition, the Secretary of Interior may designate officers and employees of the States of the United States to enforce the provisions of this Act, which relates to persons or vessels subject to the jurisdiction of the United States. When so designated, such officers and employees are authorized to function as Federal law-enforcement agents for these purposes, but they shall not be held and considered as employees of the United States for the purposes of any laws administered by the Civil Service Commission.

(b) The judges of the United States district courts and the United States Commissioners may, within their respective jurisdictions, upon proper oath or affirmation, showing probable cause, issue such warrants or other process, including warrants or other process issued in admiralty proceedings in Federal district courts, as may be required for enforcement of this title and any regulations issued thereunder.

(c) Any person authorized to carry out enforcement activities hereunder shall have the power to execute any warrant or process issued by any officer or court of competent jurisdiction for the enforcement of this title.

(d) Such person so authorized shall have the power—

(1) with or without a warrant or other process, to arrest any person committing in his presence or view a violation of this title or the regulations issued thereunder;

(2) with a warrant or other process or without a warrant, if he has reasonable cause to believe that a vessel subject to the jurisdiction of the United States or any person on board is in violation of any provision of this title or the regulations issued thereunder, to search such vessel and to arrest such person.

(e) Such person so authorized may seize any vessel subject to the jurisdiction of the United States, together with its tackle, apparel, furniture, appurtenances, cargo and stores, used or employed contrary to the provisions of this title or the regulations issued hereunder or which it reasonably appears has been used or employed contrary to the provisions of this title or the regulations issued hereunder.

(f) Such person so authorized may seize, whenever and wherever found, all ocean mammals or parts thereof taken or retained in violation of this title or the regulations issued thereunder and shall dispose of them in accordance with such regulations.

SEC. 207. The Secretaries of State, Treasury, Interior, Commerce and Transportation are authorized to issue regulations to carry out the provisions of this title.

SEC. 208. Any person violating the provisions of this title or the regulations issued thereunder shall on the first offense be fined not more than $5,000 or imprisoned not more than one year, or both; on conviction of second and subsequent offenses, the violator shall be fined not more than $10,000 or jailed for not less than one nor more than three years, or both.

SEC. 208. Title III ("Protection of Sea Otters on the High Seas") of Public Law 89–702 is hereby repealed.

## TITLE III—NORTH PACIFIC FUR SEALS

TERMINATION OF NORTH PACIFIC FUR SEAL CONVENTION

SEC. 301. It is the sense of the Congress that the North Pacific Fur Seal Convention, signed on February 9, 1957, should not be continued after its current termination date in 1975, and that the said Convention should be permitted to expire in 1976.

Further, it is the sense of the Congress that the Secretary of State should immediately notify the other parties to the Convention that the United States does not intend to extend is life beyond 1976.

Further, it is the sense of the Congress that the Secretary of State should immediately initiate negotiations with the parties to the Convention and any other interested States for the purpose of obtaining an international agreement or agreements to ban all killing of North Pacific fur seals whether at sea or on land.

INTERIM ARRANGEMENTS

SEC. 302. (a) After enactment of this Act, no further North Pacific fur seals shall be killed to fill the U.S. "quota" (70%) under the terms of the North Pacific Fur Seal Convention; all skins or parts thereof of the Alaskan fur seal shall be banned from import into the United States or in interstate commerce between the States; any agreement under section 104 of the Fur Seal Act of 1966 for the processing of skins in any State other than Alaska shall be terminated.

(b) To honor our treaty provisions, between the enactment of this Act and the expiration of the North Pacific Fur Seal Convention, Japan and Canada shall be given the option of taking the average dollar value (over the last five years) of the 15% of the kill to which they are entitled or to take 9,000 skins each, to be shipped directly from the Pribilof Islands to those countries. If Japan or Canada elects to take the skins, the killing in the Pribilofs shall be done in the most humane manner and as close to the shore as possible. Further, to the extent practicable, such killings shall first be of old or crippled bachelor seals and second of old or crippled female seals; no seal under one year of age shall be killed.

ESTABLISHMENT OF PRIBILOF SEAL ROOKERY

SEC. 303. The Pribilof Islands shall be designated a national seal rookery preserve and bird sanctuary under the Department of the Interior; and the native Aleuts shall be given the opportunity to be the rangers and guides for this purpose, and they shall be given whatever training necessary for these jobs.

PRIBILOF ISLANDS COMMISSION

SEC. 404. The President, with the advice and consent of the Senate, shall appoint a commission to help in the transfer of the Pribilof Islands from a place of killing into a preserve, to help promote tourism, and to develop an economy on the island for the Aleuts to take the place of their participation in the slaughter of the seals.

The Commission shall be comprised of a number of Pribilof Aleut natives, and it shall include the Secretaries or their designates from the Departments of State, Treasury, Commerce, the Administrator of the Small Business Administration, the Governor of Alaska, and two independent scientists in the fields of ocean biology and ecology.

REPEALER

SEC. 405. Such provisions of the Fur Seal Act of 1966 which are inconsistent herewith are hereby repealed.

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## TITLE-BY-TITLE AND SECTION-BY-SECTION ANALYSIS OF OCEAN MAMMAL PROTECTION ACT OF 1971

TITLE I

*Title I* contains the findings and declarations of policy by Congress with respect to protection of ocean mammals, namely seals, walrus, sea cow, sea otter, sea lion, polar bear, porpoise, and dolphin.

*Section 101* contains a finding by Congress that ocean mammals are being ruthlessly pursued and killed and are in imminent danger of becoming rare, if not extinct.

*Section 102* declares that it is the public policy of the United States to prevent further harassment and killing of ocean mammals not only by unilateral actions of the United States, but also by the negotiation of treaties with other nations for the same purpose.

TITLE II

*Title II* contains the general prohibitions against further slaughtering of ocean mammals by United States citizens, vessels under United States jurisdiction, or upon any land or water under United States jurisdiction.

*Section 201* contains definitions of "ocean mammals," "person," and "take or taking."

*Section 202* makes it unlawful for any person or vessel subject to United States jurisdiction to engage in the taking of ocean mammals either at sea or on land. It also flatly

prohibits the import or export of the skins or other parts of ocean mammals in interstate or foreign commerce, whether processed or unprocessed, and regardless of where the animal was killed.

*Section 203* exempts from the provisions of the Act those few ocean mammals which may be killed by Indians, Aleuts, and Eskimos for their own use and as a part of their native culture. There is, however, an absolute prohibition against the killing of pollar bears by anyone, as these animals are in danger of becoming extinct.

*Section 204* exempts from the provisions of the Act the humane capture of a reasonable number of these species for medical and scientific research and for municipal and/or nonprofit zoos.

*Section 205* relates to forfeiture of vessels, skins, etc., in cases of violations of provisions of the Act.

*Section 206* provides for enforcement of the Act by the Secretaries of States, Treasury, Interior, Commerce, and Transportation, and for proceedings in U.S. District Courts in cases of alleged violations of the Act.

*Section 207* authorizes the several Secretaries (referred to in Section 206) to issue regulations for enforcement of the Act.

*Section 208* contains penalties for violation of Title II. Persons convicted under the Act for a first offense shall be subject to a maximum fine of $5,000, a term of imprisonment not to exceed one year, or both; second offenses may be punished by a fine up to $10,000, a jail sentence of from one to three years, or both.

*Section 209* contains a repealer of Title III of P.L. 89–702. "Protection of Sea Otters on the High Seas," as redundant.

TITLE III

*Title III* of the present Act deals specifically with the killing of the North Pacific Fur Seal which is currently subject to a treaty between the United States, U.S.S.R., Canada and Japan, which terminates in 1976 unless extended by mutual agreement.

*Section 301* states that it is the sense of Congress that the treaty should be permitted to expire in 1976, and that the United States should immediately notify the other signatories of its intention not to extend the treaty.

Concurrently, the Secretary of State is urged to immediately open negotiations for an entirely new treaty which would substitute a total ban on killing *in lieu* of the present "harvest" of the Alaskan seals.

*Section 302* provides interim arrangements pending expiration of the Treaty in 1976. Under the treaty, the United States retains 70% of the seals we kill on our Pribilof Islands, and Canada and Japan gets 15% each, with a promise by them not to engage in any pelagic sealing, i.e., killing seals at sea.

Under the interim arrangements of Section 302, the United States "quota" of 70% simply would not be slaughtered. Canada and Japan would have a choice between receiving their 15% (approximately 9,000 skins) or the cash equivalent thereof. If those countries would insist upon receiving the skins they would be shipped directly to them from the Pribilof Islands and not by way of a processing plant in mainland U.S.A. Further, the seals, if they must be killed until 1976 to honor our treaty commitments, shall be killed in the most humane manner possible.

*Section 303* would change the Pribilof Islands from a place devoted almost entirely to the slaughter of seals to a National Seal Rookery Preserve and Bird Sanctuary under the Department of Interior.

*Section 404* would establish a Pribilof Island Commission to assist in the achievement of the objectives set forth in the preceeding sections.

*Section 504* contains a repealer of such provisions of the Fur Seal Act of 1966 which are inconsistent with the present Act.

Mr. MATHIAS. Mr. President, the Senator from Oklahoma (Mr. HARRIS) has today introduced the Ocean Mammal Protection Act of 1971, a bill to protect seals, walruses, sea lions, polar bears, and other like mammals from being pursued, harassed, killed, and exterminated. I take great pride in cosponsoring this legislation which I believe is exemplary in its goals and worthy of the support of every Member of this body.

It is a somber reflection of the estranged soul of man that it is necessary for this Government to enact a law prohibiting the cruel, unwarranted slaughter of any of God's creatures. Yet, we approach that duty today because we see that citizens of this Nation continue to condone, and even encourage, the mass destruction of ocean mammals. In its most blatant form, this conscious act of extermination continues because certain entrepreneurs know that there is money to be made in the selling of seal skins to persons who enjoy wearing expensive, ornamental accoutrements. To supply this mercantile market as many as 2,500 seals may be clubbed and skinned in a single day's outing on the northern Pacific Pribiloff Islands. At the same time the delicate ecological balance amongst the species has been seriously impaired. The harbor seal population has declined by four-fifths of its number, the blue whale by one-hundredth of its number, and the polar bear is almost extinct.

The Pribiloff Island natives employed in these annual summer-long hunts do not kill the ocean mammals for purposes of enjoyment or sport. They do so in the belief that it is the only available means of deriving food and shelter for their families and themselves. The Ocean Mammal Protection Act provides these natives with an alternative life style which will meet their economic needs.

The act establishes the islands as a National Seal Rookery Preserve and Bird Sanctuary, and it directs the Department of the Interior to train and hire the natives who remain on the islands as rangers and guides. The act also establishes an appointed Commission to "help in the transfer of the Pribilof Islands from a place of killing into a preserve, to help promote tourism, and to develop an economy on the islands for the Aleuts to take the place of their participation in the slaughter of seals."

The brutality that is currently perpetrated against the mammals of the ocean is a rank violation of the covenant of preservation which exists between man and his surrounding world, his total environment. We have lately rediscovered that covenant because it has become apparent that through our careless abrogation of this law of nature we have allowed our land, our water, and our air to be poisoned. It is quite possible that had we been more aware of this natural responsibility in the past, we would not be so endangered at present by pervasive pollution.

That covenant and natural responsibility, however, exists fundamentally upon a moral basis, and it extends to all things and all living creatures. We step beyond our natural bounds if we kill for any other reason than to protect ourselves and to provide for our sustenance. This act presents alternative livelihoods for those persons currently engaged in the great mammal hunts, and it presents the opportunity for this Nation to adopt a visibly humane purpose. Further, it presents a challenge to all of us to preserve an essential part of our environment, a segment of the animal kingdom that is steadily disappearing. I urge Senators to act promptly and favorably in support of this legislation.

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By Mr. STENNIS (for himself and Mrs. SMITH) (by request):

S. 1317. A bill to amend title 10, United States Code, to provide scholarships to selected persons for education in medicine, dentistry, and other health professions. Referred to the Committee on Armed Services.

Mr. STENNIS. Mr. President, by request, for myself and the senior Senator from Maine (Mrs. SMITH), I introduce, for appropriate reference, a bill to amend title 10, United States Code, to provide scholarships to selected persons for education in medicine, dentistry, and other health professions.

I ask unanimous consent that a letter of transmittal requesting consideration of the legislation and explaining its purpose be printed in the RECORD immediately following the listing of the bill.

There being no objection, the letter was ordered to be printed in the RECORD, as follows:

GENERAL COUNSEL OF
THE DEPARTMENT OF DEFENSE,
*Washington, D.C., February 12, 1971.*

Hon. SPIRO T. AGNEW,
*President of the Senate,*
*Washington, D.C.*

DEAR MR. PRESIDENT: A draft legislation "To amend title 10, United States Code, to provide scholarships to selected persons for education in medicine, dentistry and other health professions" is enclosed.

This proposal is part of the Department of Defense Legislative program and the Office of Management and Budget has advised that the enactment of the proposal would be in accord with the program of the President. It is recommended that the proposal be enacted by the Congress. This proposal is also being sent to the Speaker of the House of Representatives.

PURPOSE OF THE LEGISLATION

The purpose of the proposed legislation is to authorize the establishment of an Armed Forces Health Professions Scholarship Program. The objective of such a program is to ensure an adequate number of commissioned officers on active duty who are qualified in the various health professions required in order to provide proper military medical services for our Armed Forces.

The critical shortage of career or long-term military personnel who are qualified in the health professions has long been a matter of concern within the Department of Defense. Of the physicians in the Medical Corps of the Army, Navy, and Air Force, for example, over 9,000 of the approximatley 15,000 such officers on active duty have less than two years of active service. These officers, for the most part, will be released from active duty under current law when they attain that amount of service. Only 800 physicians in the Medical Corps have between three and four years of active service, with lesser numbers (for each of the years covered) having any greater amounts of service.

Each of the Military Departments now has a program involving a partial subsidization of medical education in return for obligated service. These programs, however, are small and lack uniformity. The attached proposal

would provide a specific statutory basis for a larger and uniform program covering all the health professions for which there is a need in the military medical services and which require training beyond the baccalaureate level.

Under the proposal, qualified persons accepted by (or already attending) an accredited graduate school and who are pursuing an education in one of the health professions, would be appointed as second lieutenants or ensigns, ordered to active duty with full pay and allowances and stationed at their respective civilian colleges or universities. In addition, their tuition, books and other educational fees would be paid for by the Government. In return for this financial assistance, participants would incur an active duty obligation, the amount of which would be determined under regulations prescribed by the Secretary of Defense. The proposal provides, however, that the Secretary may not prescribe a period of less than one year for each year of participation in the program.

The Department of Defense recognizes that the pay and allowances of a second lieutenant/ensign would provide participants with funds considerably greater than those now generally available to students in the health professions under various scholarship and loan programs. The Department also recognizes, however, that the other loan and scholarship programs now available in increasingly large numbers do not involve any obligation for military service and that, in fact, acceptance of the funds in question generally involves no obligation whatsoever.

The cost of an education in the health professions continues to increase. For many gifted and deserving young people, the substantial outlay required to complete such an education rules out any possibility of their entering the professions in question. The establishment of the program covered by this proposal will offer these young people an opportunity otherwise denied them. At the same time, greater stability would accrue to the military medical services if the program is successful.

The program contemplated by this proposal will be partially successful if it results in significant improvement in the number of commissioned officers in the health professions who serve on active duty beyond two years. It will be completely successful if it results in a retention rate, upon completion of obligated service, of at least 10% of those who participate. The Department of Defense believes that a long-term and voluntary exposure to the military medical services, beginning as a student, will have that beneficial result.

In his message to the Congress of April 23, 1970 the President indicated that one of his objectives is to achieve an all-volunteer force as soon as such an objective can be achieved prudently in view of the military manpower requirements necessary for the national security of the United States. This proposal is intended to assist in the attainment of that objective.

COST AND BUDGET DATA

It is estimated that the enactment of this proposal will result in the following additional annual cost (in millions):

| | Fiscal year 1972 | Fiscal year 1973 | Fiscal year 1974 | Fiscal year 1975 | Fiscal year 1976 |
|---|---|---|---|---|---|
| Army | $7.5 | $15.0 | $18.8 | $18.8 | $18.8 |
| Navy and Marine Corps | 6.0 | 12.0 | 15.0 | 15.0 | 15.0 |
| Air Force | 6.5 | 13.0 | 16.2 | 16.2 | 16.2 |
| Total | 20.0 | 40.0 | 50.0 | 50.0 | 50.0 |

Note: Funds have been included for this purpose in the President's budget for fiscal year 1972.

By Mr. FANNIN:

S. 1318. A bill to deny tax exemption under section 501 of the Internal Revenue Code of 1954 to organizations which use any of their income or funds for political purposes. Referred to the Committee on Finance.

Mr. FANNIN. Mr. President, last Tuesday I entered a statement in the RECORD urging the Congress to do a thorough job of reform in drafting new legislation to control campaign contributions.

Today I want to talk further on the subject; I want to introduce some evidence and examples of what I am talking about; and I want to introduce a bill which would help solve the problem.

It is inconceivable that Congress would consider campaign reform legislation without including provisions to cure the current abuses arising from union political activity.

Union dues collected involuntarily are being used to support political campaigns from the local level to the Presidency. This is contrary to the wishes of many union members who find themselves forced to help financially in the election of candidates they oppose. It is also against Federal law.

As examples of what I am talking about, I ask unanimous consent to have printed in the RECORD at this point two articles, one of them from the March 17, 1971, Chicago Tribune, and the other from the March 18, 1971, Wall Street Journal.

There being no objection, the articles were ordered to be printed in the RECORD, as follows:

SUE UAW ON DUES SPENDING

Top leaders of the United Auto Workers were charged with illegally spending union funds on political candidates and radical causes in a suit filed in Federal District Court yesterday.

Twelve members of UAW Local 558, including the local's recording secretary, Bernard McNamara, filed the suit. They seek an accounting of members' dues and a curb on future political action spending by international and local UAW officials.

Named in the suit were Leonard Woodcock, UAW president; Emil Mazey, international secretary treasurer; Robert Johnston, UAW Region 4 director and Illinois Community Action Program chairman; James Wright, Chicago C. A. P. chairman; and Gerald Peterson, Local 558 financial secretary.

DEMAND REPAYMENT

The Local 558 members who work in the General Motors Corp.'s Fisher Body plant in Willow Springs not only are demanding an accounting of political ideological expenditures in the last five years, but damages and repayment of all money illegally spent.

McNamara's suit said that each member must pay two hours' wages each month in dues and that 3 per cent of the money is earmarked for political action funds. Union membership is a condition of employment, the suit said.

The suit stated that Local 558 is required to pay more than $10,000 a year in political action contributions and that the UAW state fund exceeds $300,000 a year. The suit said the local pays more than $500,000 into the international treasury, which collects more than $200 million a year from members.

STEVENSON RECEIVED AID

"This money or portions of it are being spent for various organizations espousing ideological doctrines and causes totally unrelated to, and in many instances antithetical, to interests and welfare of the union and its members."

Sen. Stevenson [D., Ill.] was named as a recipient of union funds in his Senate campaign last year. Congressional and state political candidates also were among beneficiaries of union funds but were not named specifically in the suit.

The suit accused Johnston, Wright and Peterson with illegally financing state and local candidates with union funds.

GAVE TO 15 GROUPS

Woodcock and Mazey were accused of donating members' money to 15 organizations.

Specifically named were the Students for a Democratic Society, Students Nonviolent Coordinating Committee, the New Mobilization for Peace, National Students Association, Americans for Democratic Action, National Committee for a Sane Nuclear Policy.

Others named were the United States Committee for Democracy in Greece; United World Federalists, DuBois Memorial Committee, Turn Toward Peace, Citizens Committee for a Nuclear Test Ban, Peace With Freedom, Inc., United States Committee for the U.N., the American Association for the U.N. and Confederation of Spanish Societies.

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UAW LOCAL MEMBERS ALLEGE UNION USES DUES FOR POLITICAL CAMPAIGNS—RANK-AND-FILERS' LAWSUIT ASSERTS LEADERS ILLEGALLY SUPPORTED STEVENSON, HOUSE CANDIDATES

CHICAGO.—A dozen rank and file members of a United Auto Workers local charged in a lawsuit that union leaders are illegally spending union dues money to support political campaigns.

The suit, filed in federal district court here by members of Local 558, charges that UAW officials spent union dues to support the campaigns of Adlai Stevenson III, a successful Democratic candidate for the Senate last year, and of various candidates for the House of Representatives. UAW President Leonard Woodcock and its secretary-treasurer, Emil Mazey, both were named as defendants in the civil action, along with Robert Johnston, a regional vice president of the UAW in Chicago, and James Wright and Gerald Peterson, two officials of the union's Community Action Program council in the Chicago area.

The suit involves expenditures of funds by the CAP council, according to Bernard McNamara, leader of the group that filed the suit. A fixed percentage of every union member's dues goes to the CAP council, and some CAP funds are being spent to support political causes, the suit alleges. The action asks that union officers be required to pay the union treasury any money used for such purposes.

In Detroit, a UAW spokesman declined comment on the suit, saying the details hadn't reached union officials yet. The spokesman said a fixed amount—five cents a month—rather than a fixed percentage of each member's dues are earmarked for CAP purposes. "Money out of that fund is used in state and local campaigns," he said, and some of the CAP funds are used for citizenship education programs. But he denied that CAP funds are used in campaigns for election to federal offices.

The plaintiff group's Mr. McNamara said the UAW constitution calls for a monthly CAP contribution of five cents a man. But he said the union sent locals an administrative letter directing them to pay 3% of dues to their state CAP council; that practice is being followed, he asserted.

The Landrum-Griffin Act forbids contributions by unions to federal campaigns which the suit alleges the UAW has been making in Illinois, Mr. McNamara asserted.

He also said his local passed a resolution 1½ years ago stating the members didn't want any of their money to go to any campaigns, even state or local ones. The resolution also asserted that contributions of their money for such elections therefore would violate the union officials' responsibilities to members.

Mr. FANNIN. Mr. President, I do not intend to prejudge this particular case. It is before the courts, and I will watch with interest to see how it comes out.

What is so meaningful about this case is the fact that Members finally have the courage and the means to challenge the bosses of big unionism.

It is no secret that what these union members allege has been going on all over America. Compulsory union dues have been channeled into so-called political education committees or community action committees. And these committees have served to funnel a portion of the wages of millions of working men directly into political campaigns.

In Chicago, the dozen members of the United Auto Workers Local 558 are charging that part of their union dues went to support one campaign for the U.S. Senate and to finance various other candidates for the House of Representatives.

It is against the Federal Corrupt Practices Act for compulsory union dues to be used for the financing of campaigns for Federal office.

Furthermore, the leader of the group which filed the suit in Chicago points out that Local 558 had passed a resolution more than 1½ years ago stating that members did not want any of their money going into campaigns. Not only did they oppose the spending of their compulsory dues for elections to Federal office, they also objected to its use in State and local election campaigns.

Mr. FANNIN. Mr. President, union funds are being used across our Nation to finance election campaigns for selected candidates. Rank and file employees of the unions have virtually no voice in saying where, when or how this money will be used. The decisions are made by the big union bosses who hold dictatorial power.

The general public is not aware of the great sums being spent by the unions. Under current reporting laws, unions have to report at the Federal level only the funds they spend in campaigns involving elections for Federal office.

These reports may be deceptive in themselves.

In a report filed with the House of Representatives, the United Auto Workers, on October 10, 1970, reported a $50 contribution for the campaign of John J. Gilligan who was running for Governor of Ohio.

As I said, there is no requirement that the union report to Congress what it spends on political campaigns at the State or local level. The report filed with the Clerk of the House of Representatives might lead one to believe that the sum total of the UAW contribution to the successful Gilligan campaign was $50.

But a check with the secretary of state's office in Ohio reveals a quite different picture.

Records show the Democratic candidate received more than $66,000 from various units of the United Auto Workers.

I ask unanimous consent to include in the RECORD a list of these contributions as recorded with the Ohio secretary of state.

There being no objection, the list was ordered to be printed in the RECORD, as follows:

| | |
|---|---|
| PRIMARY CAMPAIGN | |
| Citizens for Gilligan Committee: April 16, 1970, United Auto Workers CAP Council | $5,000 |
| Hamilton County Citizens for Gilligan Committee: April 23, 1970, UAW–CAP Council | 5,000 |
| Cleveland Citizens for Gilligan Committee: April 15, 1970, UAW–CAP Council | 5,000 |
| GENERAL CAMPAIGN | |
| Gilligan Dinner Committee: June 18, 1970, UAW–CAP | 1,500 |
| Sponsors' Dinner for Gilligan Committee: | |
| June 13, 1970, Greater Springfield CAP | 1,600 |
| June 13, 1970, Franklin County CAP (Columbus) | 2,000 |
| June 13, 1970, Marion Area CAP Council | 1,500 |
| June 13, 1970, Region No. 2–UAW (Columbus) | 600 |
| Montgomery County Citizens for Gilligan: July 22, 1970, UAW International (Columbus) | 5,000 |
| Gilligan for Governor Committee: | |
| August 14, 1970, Lima-Troy Area CAP Council | 1,532.88 |
| August 18, 1970, Stark County CAP (Canton) | 418.06 |
| August 21, 1970, Ohio UAW–CAP (Columbus) | 10,000 |
| September 22, 1970, UAW–CAP Council (Castalia) | 877.92 |
| September 22, 1970, Greater Springfield UAW–CAP | 1,309.92 |
| November 13, 1970, Toledo Area CAP Council | 4,180 |
| September 5, 1970, Greater Cincinnati UAW–CAP (Norwood) | 711.59 |
| September 4, 1970, Butler-Warren-Highland Counties UAW–CAP (Hamilton) | 487.74 |
| September 4, 1970, Fostoria Area UAW–CAP Council (Findley) | 557.41 |
| September 3, 1970, Dayton Metropolitan UAW–CAP | 808.25 |
| September 3, 1970, Defiance Area UAW–CAP Council | 641.04 |
| September 3, 1970, Cuyahoga Medina Counties UAW–CAP (Cleveland) | 6,549.66 |
| September 3, 1970, Summit-Portage-Ashland-Trumbull-Mahoning UAW–CAP (Kent) | 1,000 |
| September 8, 1970, Greater Columbus-Franklin County UAW–CAP Council (Columbus) | 1,296 |
| September 8, 1970, Lorain County UAW–CAP (Vermillion) | $1,254.18 |
| Lucas County Citizens for Gilligan: July 16, 1970, UAW–CAP Council (Columbus) | 5,000 |
| Friends of Gilligan Dinner: Stark County UAW–CAP (Canton) | 300 |
| Cleveland Friends of John Gilligan: | |
| June 15, 1970, UAW Region No. 2 (Cleveland) | 1,000 |
| June 16, 1970, UAW–CAP (Cleveland) | 500 |
| June 23, 1970, UAW No. 1250 (Cleveland) | 200 |
| June 30, 1970, UAW No. 122 (Twinsburg) | 200 |
| Gilligan for Governor Committee (DC): William Dodds (Director Legislative Activities, UAW) | 50 |

Mr. FANNIN. Mr. President, this $66,000 is about one-quarter of what labor unions reported spending on the campaign to make Mr. Gilligan the Governor of Ohio. And the quarter of a million dollars reported by the unions as contributions add up to about one-fifth of the estimated cost of Governor Gilligan's campaign.

Such a heavy contribution would put any politician heavily in the debt of the union bosses.

I would like to point out another facet. The United Automobile, Aerospace, and Agricultural Implement Workers of America reported to the Clerk of the House that in 1970 they spent about $380,000 on political activities through their committees.

When we see that the UAW spent more than $66,000 on the race for Governor in just one State, it becomes obvious that the $380,000 figure reported to the House is only the tip of the iceberg.

Union bosses are shelling out millions upon millions of dollars to political candidates. Some of this money is taken from compulsory union dues. Some of it comes from coercion—union members are forced to make voluntary contributions to avoid harassment or loss of their jobs. Democracy goes out the window when it comes to collecting this money and deciding how it will be used.

A popular charade played by the union bosses is the creation of "education" or "community action" programs. Union funds are used to "educate" voters to cast ballots for the candidates who have the blessing of the union bosses. "Community action" is aimed at winning the political points that the union leader wants.

One device is the so-called voter registration drive. This is used by the union's political experts as a door-to-door canvass to win votes for specified candidates and to sign up these voters. These drives are bipartisan in name only. Most often the drives are aimed at restricted areas where union strategists have determined the added registration will be of the most benefit to a given candidate who has union endorsement.

Mr. President, the Federal Corrupt Practices Act has been a dismal failure.

This act has failed to keep union bosses from using involuntary dues for political purposes. Furthermore the act applies only to Federal elections—not State and local.

We must take action to stop the illegal and unjust use of compulsory union dues for political purposes.

The bill I am introducing today would amend the Internal Revenue Code to deny tax-exempt status to organizations which use membership dues or assessments for political purposes.

This bill would prohibit organizations from claiming an income tax exemption:

For any taxable year in which any part of its income or of those amounts received for its support—including, in the case of a membership organization, dues, assessments, fees, compulsory or other charges imposed on members—is used, directly or indirectly—

(1) to support or oppose any candidate for public office,

(2) to support or oppose any political party, or

(3) to carry on any voter registration.

This is a fair bill. It treats union and management organizations equally.

The bill also carries out the original intent of Congress in the Internal Revenue Code. The underlying assumption in granting unions tax exemption obviously was that they would not engage in activities beyond their tax exempt purposes. In other words, it was assumed they would not use involuntary dues for political purposes.

Mr. President, it is wrong that unions should use compulsory dues for political purposes. This wrong is compounded by the fact that these unions may maintain their tax-free status under these circumstances.

The bill I propose would discourage unions from committing the compulsory dues from their members to political candidates. It would put some sanity and equality into the law regarding the taxation of organizations.

It is not a cure-all for the problems I have discussed today. But it is a good start.

Mr. President, I introduce, for appropriate reference, a bill to amend the Internal Revenue Code to deny tax exempt status to labor organizations which use compulsory membership dues or assessments for political purposes.

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By Mr. TOWER (for himself, Mr. BENNETT, Mr. CURTIS, Mr. DOLE, Mr. ERVIN, Mr. FANNIN, Mr. GOLDWATER, Mr. GURNEY, and Mr. THURMOND):

S. 1320. A bill to insure the separation of Federal powers by amending the National Labor Relations Act to provide for trial of unfair labor practice cases in the U.S. district court, and for other purposes. Referred to the Committee on the Judiciary (by unanimous consent).

UNFAIR LABOR PRACTICE CASES

Mr. TOWER. Mr. President, Senators will recall that last year I introduced a bill to remove jurisdiction over unfair labor practice cases from the National Labor Relations Board and place this authority with Federal district courts. Prior to introduction of the bill, I addressed the Senate on the seriousness of the problem of biased interpretation of national labor policy by the NLRB. That was on March 25, 1970. The bill was introduced April 3, 1970, as S. 3671.

I am introducing the identical bill today along with the support of nine other sponsors.

Without impugning the record of the present Board, I believe the need for corrective action is every bit as pressing today as it has been for years. When the decisions of the Board are inadequate, no subsequent actions or decisions—regardless of how adequate in themselves—can ever fully rectify the Board's earlier mistakes. Until action is taken to achieve an institutional framework which will assure faithful, objective intrepretation of congressionally enunciated labor policy, there will always be the threat of biased interpretation.

Although the bill I introduce today would divest the Board of jurisdiction over unfair labor practice cases, it would retain the Board's authority over representation matters, including authority to investigate representation petitions, hold hearings, conduct elections, and certify representatives.

The bill would abolish the office of General Counsel and eliminate the positions of trial examiners and attorneys who represent the Board before the courts, since there would be no further need for these positions.

Under the terms of this bill, unfair labor practice cases would be initiated by a complaint filed in any district court "having jurisdiction of the parties". The bill specifies that district courts would have jurisdiction of a labor organization in the district where it maintains its principal office, or in any district in which its officers or agents are engaged in protecting the interests of employee members, or in any district in which the unfair labor practice is alleged to have occurred.

Any person aggrieved by an unfair labor practice could initiate a suit in the proper district court within 6 months after the date on which such unfair labor practice occurred. He could either file and prosecute the complaint in the court on his own, or he could file a charge with the U.S. attorney and request him to file and prosecute a complaint. The latter option would permit employees and other parties who could not afford the expense of prosecution to have it handled by the U.S. attorney without cost.

When a charge is filed, the U.S. attorney would be required to notify the person against whom it was made and, within a reasonable time, to file a complaint in court and to prosecute it in the name of and on behalf of the person filing the charge, unless he determines that the charge is "frivolous, or otherwise without basis in law or fact," in which case he must notify the parties of such determination. The charging party would still have the right to file the complaint and prosecute it himself.

Under this procedure every charging party would have the right to a day in court. This, I feel, would be a vastly preferable arrangement to present procedure under which the party has no remedy if the general counsel of the Board refuses to issue a complaint on his charges.

Trial would be by the court without a jury. Where there are issues of fact involved, the court would appoint a master to take evidence and make findings of fact and could also direct him to submit with his report a recommended order.

The courts would be authorized to grant temporary injunctive relief but only after holding a public hearing and making findings that an unfair labor practice has been committed and will be continued unless restrained, that substantial and irreparable injury to the complainant will follow, that greater injury would be inflicted if injunctive relief is denied than if it is granted, and that complainant has no adequate remedy at law.

If the court finds an unfair labor practice after full hearing on the merits, it is directed to enjoin such practice and to order the party who committed it to take such affirmative action as may be necessary to enforce compliance with the Act, "including reinstatement of employees with or without back pay." The court may require back pay from an employer, a labor organization, or both, in such proportion as the court may assess responsibility for discrimination suffered by an employee.

Mr. President, hearings were held last year on S. 3671 before the Subcommittee of Separation of Powers of the Senate Judiciary Committee. The statement I delivered to the subcommittee at that time is timely today. I ask unanimous consent that it be printed at the conclusion of my remarks. I also ask that an article, "Union Power and the New Inflation," by Gilbert Burck, which appeared in the February 1971 issue of Fortune magazine, be also printed.

The ACTING PRESIDENT pro tempore. Without objection, it is so ordered.

(See exhibit 1.)

Mr. TOWER. Mr. President, I believe that the bill I am introducing will do much to correct the imbalance in bargaining strength which is contributing to inflation.

I hope it will not be said that this bill is antilabor. In no way does it touch or change the substance of labor law. What is defined as an unfair labor practice in law today will be so when this bill becomes law. Its effect is procedural only and my efforts are motivated by a desire to assure that Congress maintains control over national labor policy. Congress created the National Labor Relations Board. If that experiment has not worked out—and I do not think it has—then it is incumbent upon us to reassert our constitutional prerogative and correct the situation.

Mr. President, Senators BENNETT, CURTIS, DOLE, ERVIN, FANNIN, GOLDWATER, GURNEY, HRUSKA, and THURMOND have indicated their interest in sponsoring this bill with me, and I ask that their names be added as cosponsors.

Since this matter concerns the constitutional separation of powers between the three branches of Government, I ask that it be sent to the Senate Judiciary Committee's Subcommittee on Separation of Powers.

STATEMENT OF SENATOR JOHN TOWER

Senator ERVIN, distinguished members of this subcommittee, first, I want to thank the subcommittee for taking up the subject of S. 3671. As I will point out, this is not a particularly new approach to one aspect of labor law reform. But the need for some remedy to the problems of unfair labor practice adjudication becomes clearer day by day.

Secondly, speaking for constituents in Texas, many of whom have experienced problems in this area, I want to express our appreciation for the excellent job this subcommittee has done to focus attention on the continuing problem of obtaining faithful administrative interpretation of congressional policy, especially as regards the National Labor Relations Board. Your hearings in 1968 developed a wealth of information on the workings of the Board, and the subcommittee's report filed earlier this year pointed the way toward protecting the prerogatives of Congress to determine national labor policy.

Regardless of the particular fate of S. 3671, I trust the subcommittee has every intention of carrying forward its investigations and will look into all of the administrative agencies. Their unique post-Constitutional

origins demand that Congress review their actions frequently and in depth.

Insofar as S. 3671 is a proposal to strip the National Labor Relations Board of its judicial authority, it is not a new idea. The proposal to transfer jurisdiction over unfair labor practice cases to Federal District Courts is one of the oldest and most persistent suggestions made to obtain a more objective hearing of cases. Bills to this effect were introduced in both the House and the Senate as early as 1939, four years after passage of the National Labor Relations Act. Hearings at that time before the Senate Committee on Education and Labor led to a report in which the Board was found to be unfair and biased in its conduct due to the "absence of judicial temperament and the presence of radical tendencies in Board personnel." In 1953 the House Committee on Education and Labor recommended that the Board be divested of its judicial functions and allowed to handle only representation issues.

In 1955, the second Hoover Commission, in recommending the establishment of an Administrative Court of the United States, suggested that it contain a Labor Section to hear cases involving unfair labor practices. This Subcommittee is also quite aware, I am sure, of legislation which has been proposed by Senator GRIFFIN to establish a separate labor court to have such jurisdiction. I will turn to the Labor Court proposal and review it later in my remarks.

In essence S. 3671 separates the administrative and judicial functions of the Board by transferring the trial of unfair labor practice cases to Federal district courts. It is essentially the same bill approved by the House Committee on Education and Labor in 1954. The Board is continued as an administrative agency handling representation cases, including the conduct of representation elections.

S. 3671 would abolish the offices of General Counsel of the Board and examiners. It would give complainants the alternative right to present their own cases before the courts or to have such cases presented for them by a United States Attorney. If the United States Attorney refused to prosecute the charge, the individual could still file his own complaint with the court. In the event there are issues of fact to be determined, the court is authorized to appoint a special master to hear the case and submit a recommended order.

In addition, the court is authorized after a public hearing, pending final disposition of the case, to issue a temporary restraining order. Such a temporary restraining order could be used, however, only after a finding of substantial and irreparable injury to the complainant and that the complainant has no adequate remedy at law.

The performance of the National Labor Relations Board throughout its 35 years is best characterized as tragic ineptitude. I can think of no statutory area which has been so transformed by those entrusted to administer it. I can think of no area of Congressional policy-making in which the intent of Congress has been so fully ignored by those delegated to interpret it. If ambiguities do exist in law, they are insignificant as compared to the gross failure of the Board faithfully to carry out its mandate when the language and direction are clear.

My office receives a steady stream of letters from employees, from employers, from representatives of small unions, and from members of larger unions describing their experiences with the Board. I can best describe them as filled with cynicism and resigned pessimism. Not all, it is true, have a legitimate complaint against the Board. But for those who do, it is instructive to see what passes for equal protection under the law nowadays in adjudication of unfair labor practice cases.

Reading over the testimony of the witnesses who appeared before this Subcommittee in 1968, criticism appeared to break into two main areas. There was the charge that the Board had failed to faithfully adhere to the will of Congress, and secondly, that its decisions were biased in favor of large unions. These charges are related, of course. In addition, there was cited the continuing problem of delays in handing down decisions.

It should be recognized at the outset that the powers delegated the National Labor Relations Board are fundamentally different than those accorded others of the so-called Administrative Agencies. The Wagner Act, the Taft-Hartley Act and the Landrum-Griffin Act spelled out in definite terms conduct which constitutes unfair labor practices. The duty of the Board is to determine through investigation whether unfair labor practices—acts enumerated and specified by Congress—did occur. Congress has never authorized the Board to determine the country's labor policy. It gave the Board no authority to decide what the relations among unions, employers, or employees ought to be.

To quote the 1954 report of the House Committee on Education and Labor:

"Other Federal Agencies are not so restricted. For instance, the Civil Aeronautics Administration determines what safety regulations shall be observed on airplanes and at airports; the Securities and Exchange Commission regulates the conduct of stock exchanges; the Federal Communications Commission has wide latitude in the issuance of radio and television licenses; the Federal Power Commission sets standards for construction of power lines; the Interstate Commerce Commission has discretion to determine the rates a public carrier may charge.

"Each of these agencies necessarily has a broad grant of policy-making power from Congress. The NLBR has none. It has no right to tell the parties to unfair practice cases what they ought to do in their dealings with each other. It is firmly limited by a statute to a judicial finding on whether specific acts violate the well-defined terms of the law."

The Report issued by this Subcommittee earlier this session of Congress cited a number of cases supporting the contention that the Board has thwarted Congressional will. I shall briefly recall some of these, along with others which I believe also illustrate the argument that a double standard favoring large unions is evident.

The Board's rule in the well-known Bonwit Teller (96 NLRB 608 (1961)) case supports both contentions. Section 8(c) of the amended National Labor Relations Act was included to guarantee free speech for both unions and employers in connection with campaign material used during union organizing drives or representation election campaigns with the single provision that the material must contain "no threat of reprisal or force or promise of benefit." Despite this, the Board ruled in this and other similar cases that an employer may not address his workers on company time and property, even though no threat or promise was made, or even implied, without granting the union equal time to address his workers on the company's own time and on its own property.

In a case (Maryland Drydock 88 NLRB 1305 (1950)) decided a year earlier, the Board had ruled that an employer violated the Taft-Hartley Act by forbidding the distribution on his own premises of a union newspaper which characterized the company's president as a "vulture", a "doublecrosser" and compared the company's officials to Adolf Hitler.

As former Congressman Fred Hartley, Jr., one of the coauthors of the Taft-Hartley Act, was moved to comment regarding these two cases: "It is interesting to note that in respect to the employer the Board flagrantly ignored the intent of Congress to guarantee him his freedom of speech, whereas in respect to the union it stretched the right to the extreme point of shielding unlimited indulgence in defamation and scurrility against an employer of his own property."

We should not delude ourselves into thinking that this sort of conduct and decision-making by the Board is a thing of the past. Two recent decisions, upheld last year by the Supreme Court, are even more portentous. They are the NLRB vs. Gissel Packing Co. and Sinclair Company vs. NLRB. These cases concern the question of free employee and the closely related issue of free speech. In effect the Gissel decision held that the NLRB may impose upon employees a union which they have deliberately rejected in a secret ballot election if that union has been able to amass the signatures of a majority on cards authorizing it to act as their bargaining agent. The Supreme Court's decision in this case rejected the contrary views of a majority of the U.S. courts of appeals. The lower courts had evidenced a mistrust of authorization cards for two reasons: that employees are subjected to deceptions and that they are exposed to pressures which they would be insulated from in the polling booth.

Section 9(c) of the NLRA (NLR Act) clearly states that secret ballot elections are to be the *only* criteria for resolving representation elections. Also, it was the common understanding in Congress at the time of passage of the Taft-Hartley Act that this section precluded the use of authorization cards as a means of resolving representation questions. Furthermore, the NLRB expressly noted in its 1948 annual report that henceforth secret ballot elections would have to be the "sole method of resolving a question concerning representation." I think the Board's failure to follow its obvious Congressional mandate is clear. It represents a drastic impairment of the principle of free employee choice.

In the Sinclair case, the employees voted to reject the union, but the Board issued a complaint charging election interference and refusal to bargain in good faith. It then issued a bargaining order. The Board's justification for its actions was a letter sent by management to the employees in which it was quite truthfully stated that the plant was in a precarious financial condition and that if a strike were called, as past labor history in the area indicated it would, there was the possibility of a plant shut-down. At the same time, assurances were given that every effort would be made to keep the plant open whether there was a strike or not. The Board ruled, as we have seen, that these statements were unfair and made a fair election an impossibility. There seemed to be no question about the truth or the falsehood of these statements. Thus the Sinclair case goes about as far as it is possible to go in limiting employer free speech and circumscribes the ability of the employee to hear more than one side of the issue.

Commenting on these cases recently, Professor Sylvester Petro, who I believe is scheduled to appear before this Subcommittee tomorrow, stated: If the "Sinclair doctrine takes hold, the Board will have power to silence any meaningful challenge from employers, thus leaving employees exposed to only one side of the story. In future organizing campaigns union organizers will be privileged to exaggerate, distort, and misrepresent the merits of collective bargaining, while employers will be required either to maintain silence or to confine themselves to the kind of 'argument' which one reads in chemistry and physics journals."

Because of the importance of the issue of free speech, I want to cite two other cases which illustrate the use of the double standard. In Sewel Manufacturing Company (138 NLRB 66 (1962)), the employer related to a group of presumably white employees the role that unions had played in attempts at racial integration. On the basis of this, the NLRB said the employer had destroyed "laboratory conditions" necessary for a fair election and invalidated the election results. In the Archer Laundry Company case (150 NLRB 1427 (1965)) the Board upheld a union which, in

the course of seeking to organize negro employees, had depicted management as racist and sought to convince the employees of management's approval of the use of brutal police tactics, dogs and firehoses. The Board found that this was simply a permissable appeal to racial pride.

The validity of the use of authorization cards, referred to earlier, was criticized in the report filed by this subcommittee earlier this Congress. In it the majority states: "The persistent use of the card check to replace the election process is . . . a violation of the Board's obligation to enforce terms and intent of the statute." While the use of a single seemingly innocuous phrase on the part of an employer is enough to have the Board throw out the results of an election because "laboratory conditions" supposedly no longer obtain, the Board has ruled that authorization cards must be invalidated *individually* by proof that they were secured fraudulently if the Board is to fail to certify the union. As an example of the Board's seemingly inexhaustable patience with the most doubtful of union organizing tactics, consider the following instances. The Board *has held valid* an authorization card which was signed by an employee's wife without the employee's knowledge; a card bearing the name James Robert whereas the employee, James Robert Smith, testified that he did not sign his last name when he found that the solicitor was a union representative; cards signed by employees who later testified they would not have signed except for the union's misrepresentation that a majority had already signed; cards signed when fellow employees threatened that those not signing would lose their jobs; and cards dated up to four years before bargaining was requested. It has certified unions on the basis of cards such as these.

In the case River Togs, Inc. (160 NLRB No. 2 (1966)) the Board upheld the validity of cards over the objections of employees of Polish background who could not read English and who testified they thought signing the cards entitled them to Long Island Duck dinners which the union was giving in its organization campaign. Apparently the Board never felt that "laboratory conditions" need exist on both sides.

As Mr. Theophil Kammholz, a former General Counsel of the Board remarked in his testimony before the Subcommittee two years ago: "In practical effect . . . the employee's right to a secret ballot election rises and falls, not on their own conduct, but on their employers ability to conform to the Board's ever-shifting restrictions on employer activity."

As this Subcommittee is very much aware, Section 7 of the National Labor Relations Act was amended by the Taft-Hartley Act to assure that employees have, in addition to the right to bargain collectively, the right to refrain from joining labor organizations. In my remarks in the Senate on March 25th of this year, I attempted to document the charge that the Board has attempted in every way possible to ignore the language added by Taft-Hartley. It has sought in numerous cases to interpret on the basis of the Wagner Act, wherein employees were not guaranteed the freedom of choice to join labor unions or not.

I shall not go into this again here. As evidence of how the Board continues to read its Congressional mandate, I refer to a fact sheet issued by the Board on 1 January 1970 in which it views its duties thus: "A complex statute, the NLRA has a simple purpose: to preserve the public interest by promoting the full flow of commerce through encouragement of collective bargaining, protection of employee organization, and prohibition of unfair labor practice by employers and unions.

Other witnesses have appeared before this Subcommittee in the past and will be appearing this week who will further document the charges that the Board has failed to confine itself to interpreting the law and that it places the interest of large unions over the rights of management, employees, and small unions. Instances of misinterpretation in other areas, too numerous to mention, have already been provided. The issues of boycotts, union disciplinary action against members, the Board's one-sided interpretation of what constitutes bargaining in good faith, its protection of featherbedding, orders holding innocent parties responsible for unfair labor practices committed by others: all these and more were reviewed during the 1968 hearings.

Now it is sometimes argued that the Board could not have been greatly in dereliction of its duties since the Courts have more often than not sustained the views of the Board. I submit that this is due to the reluctance of the courts to overrule an administrative agency which has been set up and designated as a body of experts on the particular subject matter with which it deals, and the Courts have deferred to this alleged expertise. I might point out that during the Republican years of the 1950's—a time during which we might reasonably expect that the Board, not being altogether isolated from the winds of political change, would issue decisions at odds with its decisions at other times—the NLRB did fare just as well before the courts as did predecessor and successor boards.

Now if I may, I would like to anticipate some of the objections which might be raised to the Tower bill. In the past critics of this approach have contended that the Federal district courts lack expertise in labor matters and that placing unfair labor practice cases before the courts would over-burden them to an even greater degree.

In my remarks in the Senate of 25 March I stated in reply to this question:

"The case has never been proven to my satisfaction that labor relations are any more complex than any other of the thousands of relationships with which the judiciary is called upon to deal daily. We do not assign judges to cases on the basis of their expertise in aerospace, when that is involved, or medicine, or mental therapy, or disputed contracts by motion picture actresses, or any of a number of other relationships.

"In fact, judges do possess expertise in the only area which is important: They are practiced in art of legal administration. The judicial temperment requires, to quote Professor Petro again, 'a strong but open mind; a habit of reserving judgment until all the facts are in and disinterestedly evaluated; a willingness to listen—really listen—to argument; patience; respect for the opinions of other judges; a good logical mind which will readily distinguish the relevant from the irrelevant facts and the cogent from the illogical arguments; an inclination to start out every case believing that the facts, the law and the arguments—not the identity of the parties—should determine the decisions."

It is interesting that the courts presently discharge their other responsibilities under the Act—matters such as injunctive relief, national emergency proceedings, breaches of contracts, damage suits for boycotts, and the criminal penalties for certain improper money payments—without apparent problem. Whatever expertise is needed resides, I submit, more clearly in the courts now than it does in the NLRB.

With regard to the argument that the courts are over crowded, by answer I would quote a portion of the 1954 report of the House Committee on Education and Labor:

"We know there are some who say this change is not a wise one—because our federal courts face a growing backlog of judicial business. We review this superficial objection with some dismay. For we hope the day will never come when Congress will deny any litigant his proper access to our courts simply because existing court facilities seem to be overtaxed. We do, however, note the present plight of our Federal judiciary, and to the extent that unfair labor practice cases add to its burden, we recommend that Congress promptly take the necessary steps to increase the number of judges."

I hope it will not be said that S. 3671 represents an anti-union bias. I think I speak for the co-sponsors of S. 3671, as well as for myself, in saying that collective bargaining was the very natural and necessary outgrowth of a social movement toward a system based upon contract. As such, it is an institution symbiotically linked to capitalism. On the individual level, this is the ultimate recognition of a system of private ownership of the means of production.

No, Mr. Chairman, if anything, this legislation is designed to improve collective bargaining by making its institutions more responsive to the needs of its members, by creating an atmosphere of mutual respect between labor and management within their natural adversary roles, and—perhaps most importantly—reassert Congressional dominance over the administrative framework.

I want to point out that E. 3671 does not in any way change substantively our body of labor law. What is defined as an unfair labor practice today will still be an unfair labor practice at such time as this legislation may be signed into law. It simply reassigns jurisdiction.

Finally, I want to mention the Griffin bill which establishes a 15-member Labor Court. As I indicated to Senator Griffin in our colloquy on the floor on 25 March, I am not wedded to any particular approach to the problem. I do favor placing these cases in Federal district courts because I am fearful that a special court might eventually evolve problems similar to those the Board has developed. I would not expect this to occur under S. 3671. I hope the Subcommittee will keep this problem in mind. At the same time it is imperative that some action be taken to alleviate the present intolerable situation, and I am perfectly willing to work with others to develop the best approach.

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[From the Fortune magazine, February 1971]

UNION POWER AND THE NEW INFLATION

(By Gilbert Burck)

The gravest economic problem facing the Western world in the early 1970's is cost-push inflation powered by excessive wage increases. European economists have been arguing this for about a year, and lately some U.S. economists have come to the same conclusion. In its scope and intensity, this inflation can be regarded as a new phenomenon. By past standards, Chairman Arthur Burns of the Federal Reserve Board recently said, the U.S. Government moderately restrictive monetary and fiscal policies should have slowed the pace of wage increases, along with demand and business activity. But those policies seem to have had little effect on union settlements, and it looks as if only intolerable unemployment could tame them. Excessive wage increases, Burns concluded, are for practical purposes a new problem. Even Nobel Prize winner Paul Samuelson has come around to recognizing the current cost-push inflation as a "new disease."

What is happening, throughout the Western world, is that organized labor is overreaching. The London Telegraph last November caught the spirit of the movement in a cartoon depicting a labor leader haranguing

a group of his colleagues: "Nor shall we relax our efforts, brothers, until the lowest paid worker is earning more than the national average wage." At times, indeed, organized labor seems to be chasing the delusion that a society can consume more than it produces, and that everybody can prosper by beggaring his neighbor. But of course a country's real wages, or the purchasing power of money wages, cannot possibly rise faster, on the average, than over-all productivity or output per man-hour. Wage increases in excess of productivity are inevitably followed by unemployment or price increases or both—it is the unorganized, the unemployed, and the aged who pay.

Most labor leaders know all this. Yet unions continue to make excessive demands. U.S. construction wages rose an average of about 19 percent last year, and despite a few wrist slaps by the Administration, construction workers are demanding 50 to 60 percent over the next three years. U.S. auto workers, not content with an annual increase four times the rate of over-all productivity increase, compounded the evil by winning an automatic wage adjustment geared directly to the cost of living. That is to say, they got immunity from the consequences of other workers' exorbitant wage increase. The steelworkers are confidently predicting that they will shake the country down for an even better deal.

The same sort of thing is going on in other industrial nations. Canada's program of voluntary price and wage restraint, accorded wide cooperation by employers, was wrecked by labor's barefaced refusal to go along. In Britain, labor's exactions have reached a crisis stage. Although the productivity of British industry has recently been rising at less than 2 percent a year, wages are rising at something like 13 percent, and prices are accordingly heading up fast. Japan, too, has its own peculiar version of the problem. Even West Germany, long a bastion of monetary stability and fiscal rectitude, has apparently succumbed to the disease—wages are rising about three times as fact as productivity.

Such wage increases redistribute income by force, breaking down time-tested wage differentials that eventually must be restored at the cost of more inflation. Labor's impositions are also accompanied by strikes and slow-downs that seriously reduce national output, or by monetary policies calculated to subdue excessive demand by deliberately reducing output. This is a sorry spectacle—a world wasting resources quarreling about the division of output instead of expanding it. The problem, to be sure, is getting expert attention; rarely have so many eminent and accomplished people advanced so many schemes for dealing with an economic ailment. The trouble is that so far none seems to embody an effective remedy. The malady is a complex mixture of old basic ailments and new complications, and is not likely to be cured by quick or painless treatment.

MONOPOLY ABETS MONOPOLY

The underlying trouble is a phenomenon so much taken for granted that it seldom gets the critical scrutiny it deserves—labor's unique monopoly power. "When you really examine that power today," says an eminent British economist, "it is quite fantastic." Unions were originally established, of course, to protect workers from exploitation and to advance their general welfare. It was partly because of the union's benign role that the Western world put the interests of people as producers ahead of their interests as consumers. Thus favored, however, labor union naturally sought to gain higher wages and benefits for their members than they could get in the open market. They became monopolies. They rig the markets for labor by restricting the supply, thereby raising the price. Allowed to organize like armies, they practice coercion and intimidation, and do not hesitate to disrupt a whole economy to gain their ends. And because a company with great market power can usually afford higher wages than it could if it had to compete vigorously, labor unions tend to abet business monopoly. They even in effect join their employers in exacting tribute from the public, as in the construction industry (see "The Building Trades Verus the People," FORTUNE, October, 1970).

Paradoxically, unions are all the more difficult to bargain with in the name of the public interest because labor power is so fragmented. When people think of monopoly, they tend to think of bigness, but it is not by swinging big aggregations of power that unions have won monopoly wages. One giant union with the power to settle for all would tend to exercise some social responsibility if only because it would lean against excessive wage differentials within its ranks. But many small or relatively small unions, each dominating its own market, have been able to gain more for their members than a single big union could. No country has such a union, with the power to settle for all; almost everywhere the local unions are completely autonomous, often belligerently so.

This autonomy leads to a contest in irresponsibility. Union leaders find themselves driven to get a better deal than their colleagues. Thus they not only put the interests of labor in general above the interests of consumers, but also put the interests of their own unions above those of labor in general. Self-restraint on their part would open them to the charge of being statesmen, and a modern professional labor leader resents nothing so much as being called a statesman. Only romantics, of course, expect him to act like one.

The pattern is reinforced by a new restlessness and disatisfaction in the rank and file. To begin with, workers almost everywhere want more and believe they are entitled to more. They don't know, even if their leaders do, that the rise in the average standard of living is necessarily slow, limited by the rate of increase in real output per capita. What they don't know, unfortunately, hurts everybody.

Their wage expectations are all the higher because work satisfactions in many unionized trades have declined over the years. Only rarely does one find a carpenter or other craftsman who takes pride in his work and goes out of his way to do a good job. In the mass-production industries, younger workers are increasingly alienated from their jobs; for many of them, getting away from the job counts as an additional strike benefit. And some of the pervasive social unrest that afflicts many Western nations finds its expression in the insistent demands of organized labor.

A TENDENCY TO RETREAT

Several trends in industrial nations have conspired to increase the power of unions and weaken the countervailing forces. Government full-employment policies have practically extinguished old fears of being out of a job for a long time. Unemployment insurance and other cushions provided by a well-intentioned society take the hardship out of strikes and enable strikers to stay out in relative comfort until the employer surrenders. As workers develop a taste for very large pay increases, unions become more and more demanding; some union leaders even welcome press attacks on their demands as proof of their manliness and competence. The further employers retreat, moreover, the more aggressively unions behave.

And the tendency of employers these days is to retreat. For one thing, everybody seems to assume at the start that labor is entitled to annual wage increases regardless of what is happening to the economy. Practically nobody any more argues that productivity increases should be passed on in the form of price reductions. Everywhere, or almost everywhere, business assumes that it must yield wage increases that are at least equal to the over-all productivity increase. Thus, by definition, nearly all successful strikes by large unions are inflationary—i.e., they gain *excessive* wage increases. But various pressures operate to force business to give in. There is fear that customers or government or the public will blame the company for the strike. Sitting out a strike in a capital-intensive industry, moreover, can be exceedingly expensive—capital charges go on, of course, whether the plants are working or not. Again, signing an excessively generous contract usually doesn't make a company vulnerable to competition, because its competitors have been or shortly will be burdened with much the same settlement. And to a great extent, employers have been able to pass the higher costs along in the form of higher prices. It is technically true that excessive wage increases would cause unemployment and stagnation unless accompanied by appropriate increases in the money supply, but business knows that government, wanting to avoid high unemployment, will probably ratify excessive wage increases with inflationary monetary policy.

UNIONS VERSUS LABOR

Of all the industrial nations, Britain has been suffering from the most severe case of economic malaise caused by excessive union power. Organized labor is fragmented into 534 trade unions. Their realms are dispersed and overlapping; many factories must deal not only with several unions, but with several factions in each union. Unions representing nine-tenths of all members are affiliated with the Trades Union Congress, but its authority is very limited.

The ability of the unions to keep pushing costs up has graveled Britons of many persuasions, most notably the dogmatic socialists. The socialists championed unionism under capitalism, but they have come to see that no socialist order can tolerate monopolistic trade unions, each trying to outdo the others, and each ready to disrupt the economy to attain its own goal. Perhaps the most eminent exponent of this point of view is Hungarian-born economist Thomas Balogh, Fellow of Balliol College, Oxford. Balogh, was one of the authors of the Oxford studies on which Sir William Beveridge based his 1945 model for the full-employment state. Balogh rose to high places in the Labor party, served as economic consultant to Prime Minister Wilson, and in 1968 was elevated to the peerage. As long ago as 1943 he described British trade-unionism as "one of those monopolistic associations which is syndicalist in its approach, i.e., incapable of securing harmony between the different branches of the economic system." When the Wilson government came to power in 1964, a lot of people, Lord Balogh included, hoped that somehow it would be able to nudge the Trades Union Congress into assuming more responsibility for labor relations and wage policy. But the T.U.C. never did, and union belligerence plagued the Wilson government throughout its tenure. When it tried to push a union-reform bill through Parliament, for example, the unions ganged up to defeat the measure.

Far from moderating, the British cost-push inflation really took off late in 1969. During the last few months of the year, wages were rising at a 9 percent rate. The government

then proceeded to do its inflationary thing by rapidly expanding the money supply—at a rate of nearly 18 percent for a while. Last summer, in the classic inflationary sequence, both wages and prices accelerated sharply, and the London financial press labeled the situation the worst crisis since 1931.

In October, Lord Balogh, now chairman of the Fabian Society, discharged a cannonade in the form of a tract entitled *Labour and Inflation*. It dumped practically all the blame for inflation on union leaders. Distinguishing sharply between the interests of labor in general and the interests of particular unions, Balogh argued that the unions have failed labor. The record of twenty-five years, he said, shows that unbridled trade-union action cannot improve the wage earners' share of the national cake; it can only ruin Britain's ability to compete abroad, and lead to accelerating price increases and a cumulative debauching of the currency. Trade unions have got to realize they are no longer weak representatives of the poor. Their strength makes it necessary for them to accept duties and responsibilities to the community. Balogh's somewhat vague solution is a new "Social Contract," reinforced by an independent review body to deal with prices and incomes.

Union leaders denounced the Balogh tract savagely. Jack Jones, the leader of the Transport and General Workers' Union, declared he wasn't going to take criticism from anyone, least of all professors and journalists who knew nothing about wage claims, "as frankly they've never worked in their lives." But British labor unions are going to be encountering more than pamphlets. The Heath government is pushing through Parliament a new comprehensive Industrial Relations Act, which proposes to overhaul the antiquated British negotiating system, and although the unions are denouncing it as an antistrike act, it is expected to pass. The unions' scramble to outdo one another in wage rises has reinforced a widespread feeling in Britain that there is a need for some kind of intervention to subdue wage inflation.

THAT OLD STABILITÄTSBEWUSSTSEIN

For a long time it looked as if West Germany had the right formula for combining swift growth, full employment, and stable prices. Over the five years 1965–69, G.N.P. rose at a rate of 7.5 percent and consumer prices at about 2.5 percent; unemployment averaged less than 1 percent. Underlying this enviable record was the national fear of inflation, dating back to the great postwar inflation of 1920–23 and the lesser but still severe inflation of 1945–48. As Rudolf Henschel, secretary of the executive committee of the German Federation of Trade Unions (D.G.B.), puts it, the people of West Germany have a *Stabilitätsbewusstsein* (stability consciousness). The average West German, recent public-opinion polls suggest, actually understands that he is better off with a combination of steady prices and small wage raises than with large raises and rising prices.

In keeping with the stability consciousness, West Germany has enjoyed what might be called a statesmanlike labor movement. It has gone out of its way to gear wage demands to the country's ability to pay. This lack of belligerence stems in part from arrangements designed to give organized labor a secure and responsible place in the social structure. A few years after the end of World War II, the coal and steel industries agreed to put union members on corporate boards of directors. Later on, an elaborate profit-sharing scheme was established throughout the country. And organized labor is less fragmented in West Germany than in the U.S. and England. There are only sixteen unions, and each is represented in the federation. Although they are strictly autonomous, they seem to think pretty much alike. West Germany, moreover, has imported two million "guest workers," mainly from Yugoslavia, Turkey, and Italy; while most of them are union members, their presence has eased the labor market and helped soften demands for higher wages.

On top of all this, Economics Minister Karl Schiller about four years ago introduced what he called *Konzertierte Aktion* (Concerted Action). It was less vigorous than its name suggests: a group of representatives of government, banks, labor, and management simply met regularly for a kind of kaffeeklatsch. In Schiller's words, "It amounts to a discussion of our economic panorama, of our national account, of our alternatives and possibilities for the future." But if they did not really act in concert, the participants did apparently get to understand one another. For some time, at least, there appeared to exist a working informal consensus that helped to keep union demands within reasonable limits.

Then, in 1969, the edifice of orderly give-and-take seemed to fall apart. In the fall of that year the country was racked by a wave of wildcat strikes. Germany, too, is troubled by political unrest, and although union officials play down the idea, some responsible people blame the uproar on agitators, including a group known as the "Extra-Parliamentary Opposition," organized and subsidized by the "East" (i.e., the Communist bloc). Whatever the origin of their unrest, the wildcat strikers made much of employers' high profits. The unions had agreed to moderate their wage claims in the slowdown of 1967, and with profits high the workers wanted more.

The practice of linking wage demands to profit levels has been troublesome in other nations too. If they surpass productivity gains, wage increases geared to profits are just as inflationary as increases claimed on other grounds. More important, the notion that labor has a right to share in an industry's exceptional profitability is dubious to begin with. Although profits tend to fluctuate with productivity, they are only partly a function of productivity, and depend on many other factors as well. The appropriate, equitable correctives for too-high profits in a given industry are more employment, lower prices, and more investment in that industry. Temporary increases in relative wages are economically justified only when needed to attract more workers to the industry; the practice of funneling abnormally high profits into abnormally high wages tends to constrain efficiency and output.

West German workers, at all events, are getting highly inflationary wage increases. Last fall some four million metalworkers (steel, iron, vehicles, etc.), who had contented themselves with a modest 3 percent gain in 1969, won raises ranging between 11 and 14 percent, against a national productivity increase of 4 to 5 percent. Since then, union demands have swelled even larger. As prices have gone up less steeply than wages in recent union settlements, some German workers are for the moment enjoying considerably enhanced purchasing power; but as other workers get *their* big increases, prices will catch up. Demand and profits, moreover, are softening, and appear to be in for a sluggish year or two. Will unions that got big increases be content with much smaller ones next time around, or will the pressure from below oblige them to demand too much for the health of the economy and society?

Both the Federation of German Industry and the Economics Ministry optimistically hope that labor will display some of that old *Stabilitätsbewusstsein*. Their official projections suggest that average wage increases will taper off during the next few years to a point where consumer prices will be rising at somewhere between 1 and 2 percent. The Federation of Trade Unions professes a similar optimism, which may mean that the unions are actually planning to exercise restraint. "German unions," says economist Karl-Heinz Friedrichs of the metalworkers' union, "want *real* increases, not money increases."

But a lot of fingers are crossed, including those of Karl Klasen, head of the Bundesbank (Germany's central bank). Unlike the U.S. Federal Reserve, the Bundesbank would not dream of contracting the money supply to the point of bringing about a significant rise in unemployment (now about 0.5 percent). That, says Klasen, would be "politically impossible." So aside from tightening credit, Klasen can only hope, like the Economics Ministry, that stability consciousness will prevail. Nearly everything that has happened in the world of organized labor since World War II has tended to support the late Henry Simons' famous generalization, put forward in 1944, that monopoly power has no use except abuse. Within a year or two the world will know whether West German labor unions provide an exception.

A "RITUAL" OF NEUTRALISM

Economists aren't waiting. They are proposing a variety of remedies, all of which in one way or another restrain or counterbalance the monopoly power of labor. Although it is still fashionable among those plugging for restraints to equate business' market power with labor's monopoly power, the equation simply isn't valid. Most business organizations exercise nothing like the market power of organized labor. All U.S. companies are in one way or another subject to the antitrust laws. The prices of natural monopolies, such as utilities and transportation companies, are regulated by the government. Even companies in highly concentrated industries, such as steel, autos, and computers, are constrained by market discipline (the latest evidence is an analysis conducted by Professor J. Fred Weston of the University of California at Los Angeles). And prices of commodities, of course, respond to the forces of supply and demand. When the copper supply shifted from scarcity to abundance not long ago, the price suddenly began to fall. Representatives of the producer countries and their workers fared to Paris to discuss ways of halting the decline, but even while they huffed and puffed, the price of copper fell more steeply than ever. The price of union labor, however, never falls. It moves only upward. And nowadays it moves upward even when the economy is faltering.

Accordingly, it is a mistake to insist that any restraint imposed on wages must be matched by a corresponding restraint on prices. This mistake is an example of what economist George Terborgh some time ago called "ritual neutralism." Last month Edwin L. Dale Jr., economic correspondent of the New York *Times*, put the case against present-day ritual neutralism this way: "Public debate and discussion of the present inflation issue has been bedeviled by a fatal semantic error: the use of the term 'price and wage problem.' It is a *wage* problem, and it will not be solved until the 'plague on both your houses' mentality is overcome. Corporate profits, no matter how measured, are not the culprit now." Dale's proposed remedy for inflation has a certain grandeur about it, but it suffers from a neutralism of its own, lumping together all kinds of earners and all kinds of compensation. For the next two years, he suggests, the federal government should prohibit employers from increasing anybody's compensation more than 3 per-

cent a year. Prices, meanwhile, would be subject to no restraints except market forces.

YES FROM BUSINESS, NO FROM LABOR

Very few of the dozens of ideas that have been put forward in recent months go anywhere near this far. Most, indeed, are rather vague. But practically all recognize that reasonable fiscal and monetary restraints alone are not likely to retard the current climb in union wages. The minimal program, just one degree beyond doing nothing, is "moral suasion," an elegant synonym for jawboning. Even Raymond Saulnier, Chairman of the Council of Economic Advisers under Eisenhower, argues that the White House should take the lead in spelling out the implications of labor-cost increases three or four times as great as productivity increases. The most notable convert to moral suasion, considering his past views and his present position in the U.S. Government, is Arthur Burns, who in early December proposed a high-level wage-and-price review board with broad authority to investigate, advise, and recommend price and wage changes. It would lay down guidelines, in short, but would have no power to enforce them.

Burns, as it happened, advanced his idea at an inauspicious time. Only a few days before his speech, Canada abandoned its experiment with voluntary guidelines. The experiment had begun in June of 1969, with the establishment of a prices and incomes commission under John H. Young, professor of economics at the University of British Columbia. Young, a dedicated and persuasive man, patrolled the country, preaching the gospel of voluntary restraint. Labor, arguing that prices and profits must be restrained first, refused to cooperate.

Young took up labor's challenge. Early in 1970, at a conference on price stability, he persuaded 250 of Canada's leading businessmen to agree to keep price increases "clearly below" cost increases for the rest of the year. Afterward he persuaded hundreds of other businessmen to join the movement. The price curve flattened out dramatically.

But when Young's commission indirectly tried again last spring to persuade labor to hold wage demands down—6 percent was the recommended guidepost—labor again refused. Wage settlements subsequently ran as high as 15 percent. The national government itself was forced to grant postal workers a raise of close to 10 percent. Late in the fall, when Young and his men again took to the road to ask businessmen to extend the pact six months more, they got a uniformly cool reception. The upshot was Young's announcement that wage-and-price guidelines would not be extended beyond the end of the year.

The Canadian experience supports the arguments of those who say that voluntary guideposts will not work. And Burns, among others, has recognized that guideposts might need additional support. He has suggested that Congress might have to subject labor disputes involving the public interest to compulsory arbitration, and that the President might have to suspend the Davis-Bacon Act, which augments union power in the construction industry by fixing wage rates on federally financed projects at the highest prevailing rates.

Professors Henry Wallich of Yale and Sidney Weintraub of the University of Waterloo in Canada have independently proposed using a profit tax to "defuse" union power. To induce employers to stand up to excessive wage increases, they would levy an extra tax on the profits of companies granting such increases. Wallich and Weintraub point out that their plans involve no coercion and employ only market forces. But such plans could also impose additional burdens in the wrong place, leaving the power of unions untouched.

TO END THE FREE-FOR-ALL

A good many ideas for restraining inflation, appropriately enough, are being hatched in Britain. Something ought to be done, many British economists are beginning to say, about the extreme decentralization of organized labor, which virtually compels union leaders to keep on demanding excessive increases. Henry Phelps Brown, a professor at the University of London, recently published in the London *Times* a proposal "to end the pay claims free-for-all." Those who make wage decisions, he argues, must be confronted with the consequences of those decisions. "At present," he wrote, "they are not. Any one inflationary settlement is not followed immediately by a rise in the prices of what the employees buy. On the contrary, their purchasing power rises initially in full proportion to the rise in their pay . . . This must be so as long as decisions about pay are taken singly. Only when the parties to these decisions are brought together on a broad front, to consider rises in a large number of rates of pay at the same time, can they see inflationary rises for the delusion that they are, at the time when the rises are decided."

So Brown proposes to establish a National Council for Pay, which would represent management, employees, and the public, and would lay down general wage guidelines. Each sector of employment would be represented by a similar tripartite council that would apply the guidelines to the particular circumstances. The decisions of the councils would be binding. Although strikes would continue to be legal, strikes that breached the prescribed procedures would be denied the normal protection of the laws.

All these proposals and the many others that have been advanced are welcome signs that the problem of union monopoly is getting wide and thoughtful attention. But though they may hobble union power somewhat, none of them offers a convincing remedy even for the short run, much less the long. Time may prove that there is no remedy except a direct legislative assault on the monopoly power itself—perhaps, as some have proposed, a revision of the antitrust laws that will put business and union labor on a roughly equal footing. The labor unions were in 1914 specifically exempted from the Clayton Act on the grounds that the labor of a human being is not a commodity or article of commerce. But many argue that this provision does not make any sense these days when it is the labor unions that are exploiters.

But much will have to happen before any intervention so apocalyptic comes to pass. In the meantime, any effective program to restrain cost-push inflation must include measures to chip away at union puissance. One step, for example, might be to end the practice of letting strikers draw unemployment insurance. Another might be to abolish union control over the admission, training, and certification of skilled workers. Still another might be a crackdown by federal and state authorities on the unions' use of violence in industrial disputes.

THE TRUE ECONOMIC STRUGGLE

While such measures to redress the balance of power between business and the unions are being talked about, hopes for reasonable price stability continue to be dependent to a large extent on the good sense and statesmanship of labor leaders. This is a somewhat disconcerting prospect, but it has a redeeming feature. Unless labor does show some sense and statesmanship, informed public opinion may well get so fed up with abuse of union monopoly power that it will in time support radical legislation to restrain that power. Labor still has great political strength, but, after all, more than three-quarters of the U.S. labor force does not belong to any union.

The unions are already getting a bad press, as more and more reporters and editorial writers blame inflation on union power rather than business power. These rumblings in the papers may be important signs of a developing shift in public opinion. Perhaps large numbers of people are coming to understand that the true economic struggle these days is not between workers and employers, but between labor monopoly power and the community.

There are other signs of the times, too. When the city's taxi drivers recently went on strike, New Yorkers discovered they could get along pretty well without taxis; and the drivers discovered they weren't quite as indispensable as they thought. And in the United Kingdom last December, some 125,000 electrical workers, demanding a wage increase of 25 to 30 percent, decreed a work slowdown that blacked out parts of the country. Public hostility rose to the point where bartenders and shopkeepers refused to serve the strikers. The union backed down, and the government succeeded in referring its demands to a court of inquiry. If the unions want to disprove the axiom that monopoly power has no use except abuse, perhaps they had better start soon.

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By Mr. TOWER:

S. 1321. A bill to amend title 37, United States Code, so as to extend from 1 to 3 years the period that a member of the uniformed services has following his retirement to select his home for purposes of travel and transportation allowances under such title, and for other purposes. Referred to the Committee on Armed Services.

Mr. TOWER. Mr. President, I introduce a bill which would offer a solution to a small but important personnel problem which exists today in the military.

A service member now has only 1 year to select a home for purposes of transporting his dependents and household. In actuality, more time is often needed for a serviceman to choose his retirement locale. The first location may very well only be a tentative one, while the serviceman obtains a civilian job or finds a suitable area for quiet retirement. Since many of these career servicemen have been moving around the country and the world during their 20 or more years in the service, it may very well take some time for them to ascertain to their satisfaction where they will be best suited.

I think that it would not really cost the Defense Department significantly more to carry this relocation period for an additional 2 years, so that the retired serviceman will have adequate time to make his choice of a final home for his retirement years. Consequently, my bill would allow a total of 3 years for the relocation period of the retired serviceman under the Joint Travel Regulations of the Uniformed Services.

I hope that the Senate will examine this question carefully in this session of Congress and make a needed change in this provision.

I also believe that this is one of the many small improvements we need to consider in order to make military service more attractive. Thus, my bill is compatible with overall efforts to encourage volunteers in the hope of eventually achieving an all-volunteer force.

I ask unanimous consent that the text of my bill be printed at this point in the RECORD.

There being no objection, the bill was ordered to be printed in the RECORD, as follows:

S. 1321

A bill to amend title 37, United States Code, so as to extend from one to three years the period that a member of the uniformed services has following his retirement to select his home for purposes of travel and transportation allowances under such title, and for other purposes

*Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,* That (a) section 404(c) of title 37, United States Code, is amended by striking out "one year" and inserting in lieu thereof "three years".

(b) Section 406(g) of such title is amended by striking out "one year" and inserting in lieu thereof "three years".

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By Mr. TOWER:

S. 1322. A bill to provide excess storm loss reinsurance for commercial fishing fleets. Referred to the Committee on Commerce.

Mr. TOWER. Mr. President, I introduce today for appropriate reference a measure designed to give some relief to the owners and operators of the Nation's fishing fleet. I have become concerned recently that many fishermen and shrimpers are no longer able to operate their boats properly, due in large part to the ever-increasing insurance rates. In my own State of Texas, there have been two major hurricanes in the last 3 years. As a result of these storms, large segments of the fishing fleet were either completely destroyed or severely damaged. Fortunately, however, most of that damage was covered by insurance. The real problem seems to be that the disaster reserves that insurance companies in the area have kept for such storm emergencies are depleted, and the companies are having to raise premiums on this type of insurance in order to raise the necessary reserves. Some companies have even stopped writing this type of insurance altogether, since the risk of these disasters has been so apparent in the last 3 years.

As the price of insurance is rising, and nearly every other cost of doing business is going up at the same time, the small fisherman or shrimper finds it nearly impossible to insure his boat, even if he can find somebody to write it. In fact, there are currently only two markets for this type of insurance, and both of them seem to be in danger, I feel that it is imperative that we take immediate steps to come to the assistance of this most important industry in the United States in this limited, proper way.

Mr. President, my legislative proposal would amend the Fish and Wildlife Act of 1956, as amended, by creating a new section, section 4A, dealing with storm reinsurance. The Secretary of Commerce would be authorized to take the necessary action to provide reinsurance to carriers against excess losses on claims for losses resulting from damage to or destruction of commercial fishing property caused by storms. In carrying out his authority under this act, the Secretary would establish the fishing fleet reinsurance fund. In this way, we would not only be helping to insure that there would be private insurance available and that the Government would not have to ultimately move into this field, as the Government of Canada has found it necessary to do already; but, more hopefully, we would also help to entice new companies into this field of insurance by making it profitable again. At present, a company might only write such a policy for one of its better customers in order to be of assistance to that particular customer. The fisherman or shrimper who has no other insurance, but who needs the protection for one or a few boats, has little chance of purchasing adequate protection at any price, much less at a cost which he can afford. I hope that after they have had a chance to examine the record many of my collegues will join me in sponsoring this legislation.

Mr. President, I do not view this as an attempt to put the Government irrevocably into the fish industry insurance business. Rather, I view this measure as an extension of the principle that has governed storm losses on land for years: where private companies are unable to protect against storm and storm-related losses at reasonable rates. The Government has moved in and underwritten this disaster insurance. It is now time that the Government provide the same protection to the man who makes his living offshore as it already does for the man who makes his living on shore. The fact that there are currently only two concerns that even consider writing this type of insurance for the average fisherman or shrimper in the Gulf of Mexico area shows that we are in a crisis situation. If we should wait until after there is another storm in the gulf, there might indeed be no insurance industry left to save and no fishing or shrimping fleet left to worry about.

I ask unanimous consent that the bill be printed at this point in the RECORD.

There being no objection, the bill was ordered to be printed in the RECORD, as follows:

S. 1322

A bill to provide excess storm loss reinsurance for commercial fishing fleets

*Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,* That the Fish and Wildlife Act of 1956, as amended (16 U.S.C. 742a), is amended by inserting after section 4 thereof a new section as follows:

"STORM REINSURANCE

"SEC. 4A. (a) The Secretary of Commerce is authorized to take such action as may be necessary to provide reinsurance to carriers against excess losses on claims for losses resulting from damage to or destruction of commercial fishing property caused by storms. The Secretary may enter into such contracts, agreements, or other arrangements, upon such terms and conditions as may be agreed upon, with such carriers in order to carry out the purposes of this section. The Secretary may issue such regulations regarding the classification, limitation, or rejection of excess loss risks reinsured by him under this subsection as he deems advisable.

"(b)(1) Reinsurance under subsection (a) shall be made available to any carrier who issues insurance against (A) probable storm losses at premium rates approved by the Secretary consistent with the objective of this section to provide insurance against such probable losses at reasonable costs, and (B) excess storm losses at no premium charge, but subject to reinsurance by the Secretary under this section.

"(2) Premium rates established by the Secretary for probable loss coverage shall be—

"(A) uniform with respect to similar classifications of property and risks;

"(B) sufficient to provide adequate proceeds to pay all claims for probable losses over a reasonable period of years; and

"(C) exclusive of any loading for administrative expenses of the United States under this section.

"(3) No premium may be charged any carrier for excess loss reinsurance unless the Secretary determines that such carrier's probable loss experience justifies the imposition of such a premium, but in no case shall an excess loss reinsurance premium exceed premium rates established under paragraph (2) of this subsection for any classification of property.

"(d)(1) The Secretary is authorized to establish a Fishing Fleet Reinsurance Fund (hereafter called the 'fund') which shall be available without fiscal year limitations to make such payments as may be required under reinsurance contracts, agreements, or other arrangements under this section.

"(2) The fund shall be credited with reinsurance premiums, interest which may be earned on investments of the fund, such amounts as may be appropriated for the fund or advanced to the fund from appropriations, and receipts from any other source.

"(e) For the purposes of this section—

"(1) 'citizen of the United States' includes a corporation, partnership, or association which is organized under the laws of any State of the United States, the District of Columbia, the Commonwealth of Puerto Rico, or any territory or possession of the United States;

"(2) 'carrier' includes private insurance companies, associations of persons engaged in the business of commercial fishing, associations of persons who own commercial fishing property, or any combination thereof;

"(3) 'commercial fishing property' means any real or personal property (including vessels and any machinery, equipment, or gear thereon) of which at least 50 percent of the interest therein is owned by a citizen of the United States and which is used in the business of commercial fishing; and

"(4) 'storms' includes hurricanes, typhoons, waterspouts, tidal waves, and any other such wind or water disturbance, whether or not directly caused by meteorological forces, as the Secretary may define by regulation to be included in the definition of storms.

"(f) No contract, agreement, or other arrangement for reinsurance shall be issued or entered into under this section covering risks against which insurance is available on reasonable terms from other public or private sources."

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By Mr. TOWER:

S. 1323. A bill to provide for the appointment of additional U.S. district judges. Referred to the Committee on the Judiciary.

Mr. TOWER. Mr. President, I introduce today a measure which would create an additional judgeship for the Northern District of Texas, giving the area seven in all. The need for this judgeship has previously been recognized by the Judicial Conference of the United States and should be considered, I believe, on an emergency basis. The Northern District of Texas is comprised by 100 counties and encompasses more than 95,000 square miles. In this district, there is a

population of 3,625,739, which is quite a substantial increase over the figure for 1960. The district has had only one new judgeship since 1961, whereas civil filings have risen 110 percent, criminal filings more than 70 percent, and bankruptcy cases more than 296 percent.

From these statistics, the case for an additional judgeship can easily be made, but additional reasons exist. The northern district was given increasing habeas corpus jurisdiction by a 1966 congressional act. These cases are, for the most part, complex and time consuming. Another burden results from the nature of the cases in the northern district, for example, 58 percent of all bankruptcy and more than 50 percent of all insurance transactions in Texas occur in the northern district.

The Bar Association of the Northern District of Texas, along with the presiding judges there and the Judicial Conference of the United States, are united behind the effort to provide an additional judgeship for this area. The President's call for improving judicial machinery and the speediness of trial and our own effort here for a 60-day time limit for instituting trial in criminal matters, a measure introduced by Senator ERVIN and which I cosponsor, call attention to the need for this action. I hope that we will be able to give this important matter our speedy consideration.

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By Mr. CANNON:

S. 1328. A bill to amend the Gun Control Act of 1968 to provide for certain exceptions for members of the Armed Forces of the United States while on temporary duty. Referred to the Committee on the Judiciary.

Mr. CANNON. Mr. President, I introduce for appropriate reference a bill to amend the Gun Control Act of 1968 to provide for certain exceptions for members of the Armed Forces of the United States while on temporary duty.

One of the fundamental constitutional rights we enjoy as American citizens is the right to carry and use firearms, as sportsmen and for the protection of our home. I think we would all agree that the proper function of gun control legislation should be to cope with crime and violence while not treading on the rights of those legitimately using guns. This was the intent of the Congress in passing the Gun Control Act of 1968. At the time of passage, I favored a cautious wait-and-see attitude to determine how well the act would carry out the above intent.

These gun laws should be continuously reviewed for the swift elimination of those provisions which prove only an annoyance to decent citizens and are not useful to fight crime.

With this in mind, I am today introducing an amendment to the Gun Control Act of 1968 which would allow members of the armed services who are serving at temporary duty locations to transport into or purchase sporting firearms in the State of their temporary duty.

I have introduced this measure because I feel it is unfair to prohibit servicemen on active duty for our country from enjoying hunting and sportshooting activities on their off-duty hours merely because they are not in their home State.

Mr. President, I ask unanimous consent that the bill be printed in the RECORD at the conclusion of my remarks.

There being no objection, the bill was ordered to be printed in the RECORD, as follows:

S. 1328

A bill to amend the Gun Control Act of 1968 to provide for certain exceptions for members of the Armed Forces of the United States while on temporary duty

*Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,* That section 925(a) of title 18, United States Code, is amended—

(1) by redesignating paragraph (5) as paragraph (6); and

(2) by inserting immediately after paragraph (4) the following new paragraph:

"(5) Subject to regulations issued by the Secretary of the Treasury, the provisions of this chapter shall not apply with respect to the sale, transportation, shipment, receipt, or importation of any firearm or ammunition which is purchased by any member of the United States Armed Forces while serving on temporary duty at the location of such duty and which is (A) determined by the Secretary to be generally recognized as particularly suitable for sporting purposes, and (B) intended for the personal use of such member.

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By Mr. GRAVEL:

S. 1329. A bill to establish the Joint Federal-State Natural Resources and Land-Use Planning Commission for Alaska. Referred to the Committee on Interior and Insular Affairs.

Mr. GRAVEL. Mr. President, I send to the desk a legislative proposal to establish a "Natural Resources and Land-Use Planning Commission in Alaska."

Several forces come together to make the timing propitious for the creation of a new organizational entity in Alaska devoted to a joint Federal-State approach to wise planning and optimal use of the public land resources of Alaska. These include:

First, the legislative expiration of the Federal Field Committee for Development Planning in Alaska on June 30, 1971;

Second, the recommendation of the Public Land Law Review Commission—"One-third of the Nation's Land"—in June 1970 to establish a joint Federal-State natural resources and regional planning commission for Alaska in the interest of the wise management, disposition, and utilization of the land resources of that state;

Third, the need and opportunity for coordinated and comprehensive land-use planning as Alaska continues selecting the remaining 90 million acres provided under the Alaska Statehood Act and the Federal Government looks to its alternative uses and disposition of the balance of the public land resource—still to be two-thirds of the State when the selection process is completed;

Fourth, the anticipated settlement by the Congress of the Alaska Native claims issue with very substantial land-use implications;

Fifth, the imminence of oil pipeline and other transport network development, the dependence of Alaska's economy on the land resource and the increasing attention to environmental preservation matters;

Sixth, the likelihood of a "Federal Regional Council" established in Alaska by the Bureau of the Budget and designed to accomplish program coordination among line agencies; and

Seventh, the interest of the administration and the Congress in finding new mechanisms for solving intergovernmental problems.

After the Federal Reconstruction and Development Planning Committee for Alaska completed its activities in the year immediately following the March 1964 earthquake, the Federal Field Committee for Development Planning in Alaska was created by Executive Order No. 11182 to harness the longer term development forces occasioned by the postearthquake reconstruction period. A counterpart Executive order was signed by the Governor of Alaska to make the enterprise a joint Federal-State effort.

The Federal Field Committee first reported to a Cabinet Committee on Alaska and subsequently to the Federal Advisory Council on Regional Economic Development—also a Cabinet committee, and to which the Appalachian and so-called Title V Regional Action Planning Commissions also report. The field committee was underpinned by legislation in 1967 and, like most of the other regional development experiments, is due to expire June 30, 1971. It appears that there is no interest on the part of the administration to extend its life and the field committee was instructed last year to prepare to shut down. It has made some valuable contributions over its 5-year existence, and at least two contractor evaluations have been made of its design and operations.

The Public Land Law Review Commission performed an extensive Alaska land law study in the course of its existence, and recently included in its final report—June 1970—several Alaska recommendations. While it concluded that, generally, public land laws should apply equally in all States, the situation is entirely different with regard to planning for the future. This difference comes from the fact that State selection of public lands is to continue to 1984, and that it is essential that there be carefully coordinated planning between the Federal Government and the State during the period. The PLLRC also properly pointed up the special need in Alaska for coordination by Federal land management agencies with local and State governments, and the need for the State of Alaska to be given a greater role in planning the future uses of the public land base.

Finally, by way of placing in perspective the joint interest of the State and the Federal Governments in this important field, the PLLRC wrote:

The emphasis given to the state's desires and needs underscores the Federal responsibility to plan for the retention and management or disposition of the lands that it will have after the selection process is completed, in a manner not to thwart the state's effort to chart its own destiny.

I understand that Chairman ASPINALL has indicated in public that the first rec-

ommendations of the PLLRC to be treated by the new Congress will be those dealing with the organization of public land agencies and the establishment of land use planning objectives and procedures. A proposal such as contained here would seem to be consistent with the chairman's legislative schedule.

In informal conversations with the Bureau of the Budget there is indication that the administration would favor such a proposal as is here made for Alaska. The BOB has long taken a special interest in Alaska and recognizes the importance of a smooth functioning Federal-State policy planning effort. Also since the BOB has recently created Federal regional councils around the country for program coordination and intends to establish a similar entity in Alaska—perhaps related to a "parent" Seattle FRC—the opportunity is there for the creation of a planning entity for the major remaining public policy issue in Alaska, that is, what to do with the land resource in all its varied aspects.

The Public Works Committee itself is now reviewing portions of the Public Works and Economic Development Act including those relating to regional commissions. The present law allows for the creation of a title V regional commission in Alaska—and in Hawaii—but this has never been encouraged and it appears this would not be a good direction to pursue. Note, too, that the field committee in the legislative process has always looked to the Interior committees and not the Public Works committees, and the attached proposal would presumably have the Alaska Natural Resources and Land-Use Planning Commission take the same route. Since the Alaska Commission is of limited duration, unique in structure, and with a well defined specific task, it should report to the President, which is to say a designated senior White House staffer. To have the Commission enter Government through some existing line agency would be to largely lose the full participation of all other Federal agencies who would be members of the Commission.

The overall emphasis, then, should be to encourage the fullest involvement of the State government in Alaska, and this can only be accomplished by the direct participation and support of the Governor. While the Federal cochairman would be a Presidential appointee in order to provide a base of influence with the member agencies, the person's primary qualification should be professionalism and appropriate administrative and technical skills with minimum concern for political affiliation.

Lest there be any doubt about the extent of the Federal Government's involvement in Alaska as that involvement relates to the land resources, several scatted statistics may be instructive. For example, while the Federal Government owns one-third of the Nation's land, almost half of this total acreage is in Alaska. Sixty percent of the Interior's land holdings are in Alaska, 11 percent of Agriculture's, and 8 percent of DOD's holdings. Other statistics indicating the appropriateness of a Federal concern for land-use planning include the estimates that 94 percent—by acres—of national lakes and reservoirs for recreation are in Alaska; 83 percent—by miles—of fishing streams; 76 percent of the unsurveyed lands of the Nation; 73 percent of the wild game habitat; and a third of the Nation's big game animals. This is without any reference, of course, to the vast values involved in the minerals and timber estate.

The conclusion seems clear that both the State and Federal governments have a mutual interest in joining together in a land planning effort at a high policy level over the coming 5 years. In a recent hearing before the Interior and Insular Affairs Committee, Gov. William A. Egan of Alaska, testifying on native claims matters now before Congress, stated that his administration was prepared to introduce counterpart legislation in the State legislature to parallel the bill I now introduce for appropriate referral and, I hope, early action. Governor Egan has already introduced the counterpart legislation in Alaska.

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By Mr. WILLIAMS:

S. 1331. A bill to amend the Public Health Service Act to continue and broaden eligibility of schools of nursing for financial assistance, to improve the quality of such schools, and for other purposes. Referred to the Committee on Labor and Public Welfare.

Mr. WILLIAMS. Mr. President, the grave crisis which our Nation is experiencing in the availability and delivery of vital health services is of prime concern to us all. Contributing to the development of this situation are: Increased demands for health care; inequality of availability and access to care; overload pressures on established health care institutions forcing a decline in the quality of care; and as is so often headlined, the everincreasing cost of health care.

Solutions to these problems are neither simple nor easy. Manpower, facilities, economics, and geography must all be considered as we move toward providing a better system.

During the past several months we have heard a great deal about the need for more doctors and dentists. And to help provide the means for training these and other health professionals, Senator KENNEDY and I have introduced legislation to amend and expand the Health Professions Education Assistance Act so that our current and future needs in this area can be met.

I am disturbed, however, that we are not hearing much said, either by the press or by the present administration, about the need for more nurses. Today, there are some 700,000 practicing registered nurses in the United States and it is estimated that this represents a present shortage of 150,000. By 1975 it is projected that we will need 300,000 more nurses than are currently available and unless we take some dramatic steps it will be impossible to meet that need.

In September of 1964, during the 88th Congress, title VIII, the nurse training section, of the Public Health Service Act was enacted and signed into law. It was amended in the 90th Congress which extended the program for 2 fiscal years.

As presently written, the nurse training title authorizes grants in aid to collegiate, associate degree, or diploma schools of nursing. It provides for traineeships for the advanced training of nurses and allocated money for loans to undergraduate nursing students. And, in addition, it provides construction funds for the building of facilities for nurse training.

Since the time the original legislation took effect there has been a substantial increase in the number of nurses who were prepared by the Nation's schools of nursing. In 1964, prior to the enactment of the nurse training act there were 129,269 students enrolled in schools of nursing. Six years after the Nurse Training Act, in 1970, there were 163,743 students enrolled in nursing schools—a 26.6 percent increase. Had it not been for this law, we might have had an even greater shortage of nurses than currently exists.

But, we have found that we still lack the adequate resources. Several nursing schools are in severe financial distress. Some State university nursing programs have had to restrict enrollment because they do not have enough money to continue at present levels. And so, if we are to come close to meeting the goal of 1 million nurses by 1975, nursing schools and their students must receive more ample Federal assistance than ever before.

On June 30, 1971 the current law will expire. Thus we now have the opportunity to take meaningful steps so that we can overcome the deficit which now exists in the nursing field.

I am today introducing the Nurse Manpower Training Act of 1971 to extend and to modify title VIII of the Public Health Service Act.

This bill, which has the support of the American Nurses Association, the National League for Nursing, the American Hospital Association, the American Association of Deans of Collegiate Schools of Nursing, and the Federation of Associations of Schools of the Health Professions, is designed to overcome the critical shortage of nurses by increasing and restructuring Federal support for the training of nurses. The heart of this bill is the recognition that our institutions for the education of nurses are a precious national resource and, as such, they deserve the protection provided by a substantial and predictable commitment of Federal financial assistance.

First, the bill will increase construction authorizations from $35 million in fiscal year 1971 to $40 million in fiscal year 1972, $45 million for fiscal year 1973 and $50 million for fiscal year 1974. In addition, the maximum Federal share would be increased from 66⅔ to 75 percent in the case of major expansions of training capacity and from 50 to 66⅔ percent in the case of other construction.

Second, it would establish a new program of institutional grants based on a capitation formula for the allocation of funds to nursing schools. Each school would receive $2,000 per year full-time nursing student providing the enrollment of first-year students was increased by 5 percent—or 10 students—over the average first-year enrollment of the two

highest first-year enrollments over the past 5 years. Not only will this section provide a more realistic approach to meeting the financial needs of nursing schools but it will provide the necessary incentive for the schools to expand their enrollments and thus increase the supply of this vitally needed manpower resource.

This bill would substantially expand the loan program for nursing students. Maximum annual loans would be increased from $1,500 to $2,500 and the maximum limit on the cumulative amount that may be loaned to an individual nursing student would be increased from $6,000 to $10,000. An important feature of the loan provisions would provide that up to 100 percent of the loan principal and interest could be canceled at the rate of 20 percent per year if a nurse chooses to serve in a nonprofit agency or institution. This cancellation rate could be increased to 33⅓ percent per year when a nurse serves in a nonprofit hospital in areas where there is a substantial shortage of nurse manpower.

Other features of the bill include authorization for traineeships for the advanced training of nurses and the bill would provide scholarship grants at a rate of $3,000 multiplied by one-tenth of the full-time enrollment of nursing students.

Mr. President, we were all dismayed and disappointed when we learned that the President's fiscal year 1972 budget for nursing education had been cut by $6.6 million from the fiscal year 1971 level. This is indeed difficult for me to understand since the administration has proposed a $90 million increase for education of other health professions.

In addition to augmenting the number of nurses in the United States, we must make it possible for them to function at their optimum level. They must be prepared to help provide primary health care to families, to screen and refer those in need of special health services, and they must be trained to decide when a physician needs to see a patient. But we cannot increase the quality of nursing care unless we are willing to make a substantial investment in the training of these personnel.

At a time when it is acknowledged by the President, by the Congress, and by the people of this Nation that our health care system is in jeopardy, we must proceed without hesitation to expand and support our nurse training facilities and to allow for the placement of these nurses in the areas where they are most critically needed. I think that the bill I am introducing today provides an opportunity for us to accomplish this task. In my judgment, we can afford to do no less.

Mr. President, I ask unanimous consent that the text of this bill and a brief summary of its provisions be printed in the RECORD immediately following my remarks.

There being no objection, the bill and summary were ordered to be printed in the RECORD, as follows:

S. 1331

A bill to amend the Public Health Service Act to continue and broaden eligibility of schools of nursing for financial assistance, to improve the quality of such schools, and for other purposes

*Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,*

SHORT TITLE

SECTION 1. This Act may be cited as the "Nurse Manpower Training Act of 1971."

CONSTRUCTION GRANTS

SEC. 2. (a) Section 801(a) of the Public Health Service Act is amended by (1) striking out "and" after "1970", and (2) striking out the period at the end and inserting in lieu thereof a comma and "$40,000,000 for the fiscal year ending June 30, 1972, $45,000,000 for the fiscal year ending June 30, 1973, $50,000,000 for the fiscal year ending June 30, 1974."

(b) Section 802(a) of such Act is amended by striking out "1970" and inserting in lieu thereof "1973".

(c) Clause (A) of section 803(a) of such Act is amended by striking out "66⅔ per centum" and inserting in lieu thereof "75 per centum"; and clause (B) of such section is amended by striking out "66⅔ per centum" and inserting in lieu thereof "75 per centum" and by striking out "50 per centum" and inserting in lieu thereof "66⅔ per centum".

IMPROVEMENT GRANTS

SEC. 3. (a) Section 808(a) of the Public Health Service Act is amended to read as follows:

"SEC. 808. (a) For grants under section 805 there are authorized to be appropriated $20,000,000 for the fiscal year ending June 30, 1972; $25,000,000 for the fiscal year ending June 30, 1973; and $30,000,000 for the fiscal year ending June 30, 1974."

(b) Effective with respect to appropriations under section 808(a) of such Act for fiscal years beginning after June 30, 1971, section 805(a) of such Act is amended by striking out "the sums available therefor from appropriations under section 808 for the fiscal year ending June 30, 1970, and the next fiscal year" and inserting in lieu thereof "appropriations under section 808(a)".

INSTITUTIONAL GRANTS

SEC. 4. (a) Effective with respect to appropriations under section 808(b) of the Public Health Service Act for fiscal years beginning after July 30, 1971, subsection (a) of section 860 of such Act is amended to read as follows:

"SEC. 806. (a) The sums appropriated under section 808(b) shall be distributed to the schools with approved applications as follows: Each school shall receive $2,000 for each full-time student enrolled in such school in the school year beginning in such fiscal year."

(b) The first sentence of subsection (b) of such section 806 is amended—

(1) by striking out "June 30, 1970" and inserting in lieu thereof "June 30, 1973"; and

(2) effective with respect to grants made under such section for fiscal years beginning after June 30, 1971, by striking out "July 1, 1963, through June 30, 1968, by at least 2½ per centum of such average first-year enrollment, or by five students" and inserting in lieu thereof "July 1, 1966, through June 30, 1971, by at least 5 per centum of such average first-year enrollment, or by ten students".

(c) Effective with respect to grants under section 806(a) of such Act for fiscal years beginning after June 30, 1971, subsection (c)(1) of section 806 of such Act is amended to read as follows:

"(c)(1) For the purposes of this part and part D, regulations of the Secretary shall include provisions relating to determination of the number of students enrolled in a school or in a particular year-class in a school, as the case may be, on the basis of estimates, on the basis of the number of students who were enrolled in a school or in a particular year-class in a school, in earlier years, as the case may be, or on other such basis as he deems appropriate for making such determination, and shall include methods of making such determination when a school or a year-class was not in existence in an earlier year."

(d) Subsection (b) of section 808 of such Act is amended to read as follows:

"(b) For grants under section 806 there are authorized to be appropriated $275,000,000 for the fiscal year ending June 30, 1972; $325,000,000 for the fiscal year ending June 30, 1973; and $375,000,000 for the fiscal year ending June 30, 1974. Sums appropriated pursuant to this subsection for a fiscal year shall remain available for obligation through the close of the next fiscal year."

TRAINEESHIPS

SEC. 5. Section 821(a) of the Public Health Service Act is amended (1) by striking out "and" after "1970,", and (2) by inserting after "1971," the following: "$20,000,000 for the fiscal year ending June 30, 1972, $22,000,000 for the fiscal year ending June 30, 1973, and $24,000,000 for the fiscal year ending June 30, 1974,".

LOANS

SEC. 6. (a)(1) Effective with respect to academic years (or their equivalent as determined under regulations of the Secretary of Health, Education, and Welfare under section 823 of the Public Health Service Act) beginning after the date of enactment of this Act, subsection (a) of such section is amended by striking out "$1,500" and inserting in lieu therof "$2,500".

(2) Section 823(a) of such Act is amended by striking out "$6,000" and inserting in lieu thereof "$10,000".

(b) Effective with respect to any year of service ending after the date of the enactment of this Act for which cancellation of all or part of a loan made under part B of title VIII of the Public Health Service Act is authorized under section 823(b)(3) of such Act, such section is amended to read as follows:

"(3) an amount up to 10 per centum of any such loan (plus interest thereon) shall be canceled for full-time employment as a professional nurse (including teaching in any of the fields of nurse training and service as an administrator, supervisor, or consultant in any of the fields of nursing) in any public or nonprofit private institution or agency, at the rate of 20 per centum of the amount of such loan (plus interest) unpaid on the first day of such service, for each complete year of such service, except that the rate shall be 33⅓ per centum for each complete year of service as such a nurse in a public or nonprofit private hospital in any area which is determined, in accordance with regulations of the Secretary, to be an area which has a substantial shortage of nurses at such hospitals;".

(c) Section 824 of such Act is amended (1) by striking out "and" immediately after "1970,", (2) by striking out "and such sums for the fiscal year ending June 30, 1972" and inserting in lieu thereof "$25,000,000 for the fiscal year ending June 30, 1972, $30,000,000 for the fiscal year ending June 30, 1973, and $35,000,000 for the fiscal year ending June 30, 1974, and such sums for the fiscal year ending June 30, 1975", and (3) by striking out "before July 1, 1971" and inserting in lieu thereof "before July 1, 1974".

(d) Section 826 of such Act is amended

by striking out "1974" each place it occurs and inserting in lieu thereof "1977".

(e) The first sentence of section 827(a)(1) of such Act is amended by striking out "next three fiscal years" and inserting in lieu thereof "next six fiscal years".

SCHOLARSHIP GRANTS

SEC. 7. Effective with respect to scholarship grants made under subsection (a) of section 860 of the Public Health Service Act for fiscal years beginning after June 30, 1971—

(1) subsection (b) of such section is amended to read as follows:

"(b) The amount of the grant under subsection (a) for the fiscal year ending June 30, 1972, and for each of the next two fiscal years to each such school shall be equal to $3,000 multiplied by one-tenth of the number of full-time students of such school. For the fiscal year ending June 30, 1975, and for each of the two succeeding fiscal years, the grant under subsection (a) shall be such amount as may be necessary to enable such school to continue making payments under scholarship awards to students who initially received such awards out of grants made to the school for fiscal years ending before July 1, 1974."; and

(2) subsection (c)(1) of such section is amended (A) by striking out "1970, and the next fiscal year" in clause (A) and inserting in lieu thereof "1972, and the next two fiscal years", (B) by striking out "1971" in clause (B) and inserting in lieu thereof "1974", and (C) by striking out "1972, and each of the three" in such clause and inserting in lieu thereof "1975, and each of the two".

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SUMMARY OF PROVISIONS OF THE NURSE MANPOWER TRAINING ACT OF 1971

SEC. 1. The title of the Act is the "Nurse Manpower Training Act of 1971".

SEC. 2. The authorizations for appropriations for the construction of educational facilities for nurse training would be $40,000,000 for fiscal year 1972, $45,000,000 for fiscal year 1973 and $50,000,000 for fiscal year 1974. The maximum Federal share would be increased from 66⅔ percent to 75 percent in the case of major expansions in training capacity and from 50 percent to 66⅔ percent in the case of other construction.

SEC. 3. The authorizations for appropriations for project grants to improve nurse training programs would be $20,000,000 for fiscal year 1972, $25,000,000 for fiscal year 1973, and $30,000,000 for fiscal year 1974.

SEC. 4. A new program of formula grants on a per capita basis would be authorized by this section. Each school would receive $2,000 per year per full-time nursing student, providing the enrollment of first-year students was increased by 5 percent or 10 students, whichever is greater, over the average first-year enrollment of the two highest first-year enrollments over the past five years. The authorizations for appropriations would be $275,000,000 for fiscal year 1972, $325,000,000 for fiscal year 1973 and $375,000,000 for fiscal year 1974.

SEC. 5. The authorization for appropriations for traineeships for the advanced training of nurses would be $20,000,000 for fiscal year 1972, $22,000,000 for fiscal year 1973, and $24,000,000 for fiscal year 1974.

SEC. 6. The maximum annual loan per nursing student would be increased from $1,500 to $2,500. The maximum limit on the cumulative amount that may be loaned to an individual nursing student would be increased from $6,000 to $10,000. Up to 100 percent of the loan principal plus interest could be cancelled at the rate of 20 percent per year for service as a nurse in a non-profit agency or institution and at the rate of 33⅓ percent per year for service as a nurse in a nonprofit hospital in areas with a substantial shortage of nurses. The authorization for appropriations would be $25,000,000 for fiscal year 1974.

SEC. 7. Grants for scholarships would be authorized at the rate of $3,000 multiplied by one-tenth of the full-time enrollment of nursing students.

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By Mr. HARTKE (for himself and Mr. ALLEN, Mr. RANDOLPH, Mr. MANSFIELD, Mr. MCGEE, Mr. HRUSKA, Mr. HART, Mr. EASTLAND, Mr. MUSKIE, Mr. MAGNUSON, Mr. HUGHES, Mr. EAGLETON, Mr. BIBLE, Mr. RIBICOFF, Mr. CURTIS, Mr. STEVENSON, Mr. ALLOTT, Mr. PASTORE, Mr. BURDICK, Mr. FULBRIGHT, Mr. PERCY, Mr. COOK, Mr. HUMPHREY, Mr. MONTOYA, Mr. THURMOND, Mr. METCALF, Mr. HANSEN, Mr. GURNEY, Mr. MONDALE, Mr. MOSS, Mr. MCGOVERN, Mr. HARRIS, Mr. BROOKE, Mr. STEVENS, Mr. WILLIAMS, Mr. CASE, Mr. INOUYE, Mr. CANNON, Mr. DOMINICK, Mr. CHURCH, Mr. CHILES, Mr. GRAVEL, Mr. BAYH, Mr. BEALL, Mr. HOLLINGS, Mr. NELSON, Mr. YOUNG, Mr. GOLDWATER, Mr. BOGGS, Mr. BENTSEN, Mr. TUNNY, Mr. MATHIAS, Mr. SCHWEIKER, Mr. TOWER, Mr. FANNIN, Mr. BAKER, Mr. MCINTYRE, Mr. JACKSON, Mr. PROUTY, Mr. CRANSTON, Mr. BELLMON, Mr. BYRD of West Virginia, Mr. JAVITS, Mrs. SMITH, Mr. KENNEDY, and Mr. MILLER):

S. 1335. A bill to amend title II of the Social Security Act so as to liberalize the conditions governing eligibility of blind persons to receive disability insurance benefits thereunder. Referred to the Commitee on Finance.

INTRODUCTION OF A BILL TO LIBERALIZE PROVISIONS OF DISABILITY INSURANCE LAW FOR BLIND PERSONS

Mr. HARTKE. Mr. President, since becoming a Member of the U.S. Senate, I have introduced many measures to aid blind people in their valiant struggle to achieve a normal life, and no actions I have taken since joining this distinguished body have given me greater satisfaction than those measures that are now Federal law and beneficially affecting the lives of our sightless fellow citizens.

Today I am again introducing a bill to liberalize the provisions of the Federal disability insurance law for blind persons

The bill I am introducing today is similar in all major respects to S. 2518, which, I am very proud to say, had the cosponsorship of 68 other Senators who joined with me upon introduction. And it is identical to H.R. 14673 which was introduced in the House of Representatives by Congressman JAMES A. BURKE of Massachusetts who was joined by 159 other House cosponsoring Members.

So, Mr. President, 229 Members of the 91st Congress believed as I did, as Congressman BURKE did, that the Federal disability insurance law should be liberalized to benefit blind persons.

And the House and Senate both responded to this tremendous demonstration of support for the disability insurance for the blind bill:

The Ways and Means Committee of the House incorporated a proposal of the bill liberalizing eligibility requirements for blind persons in H.R. 17550.

The Finance Committee of the Senate adopted, in full, S. 2518 as an amendment to H.R. 17550, the Social Security Amendments of 1970.

Of course, it was most unfortunate that time did not permit a reconciliation of differences between Senate and House-passed social security measures.

Millions of elderly and disabled people—thousands of blind people—were the losers by this failure.

Again, I am reintroducing the disability insurance for the blind bill.

It is my hope that finally and at long last, the 92d Congress will enact this measure into Federal law and make its beneficial provisions available to thousands of blind persons who have waited so patiently for the help this measure will provide.

In summary this will would:

First, reduce the number of quarters from 20 of the last 40 to 6 anytime earned, during which a blind person must be employed in social security covered work to qualify for disability benefit payments.

Under existing law, a disabled applicant must work for 5 of the last 10 years in social security covered work to be eligible for disability payments.

Second, the "earnings" test in disability insurance would be entirely eliminated for blind persons applying for or receiving disability payments.

Under existing law, any appreciable earnings—$140 monthly—disqualifies disabled persons from receiving or continuing to receive disability insurance payments.

For a more detailed consideration of my bill, Mr. President, for a fuller exposition of the issues this bill raises and the arguments in support of its proposals, I ask unanimous consent to print in the RECORD at the conclusion of my remarks the text of the bill, followed by an explanatory fact sheet.

There being no objection, the bill and fact sheet were ordered to be printed in the RECORD, as follows:

S. 1335

A bill to amend title II of the Social Security Act so as to liberalize the conditions governing eligibility of blind persons to receive disability insurance benefits thereunder

*Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,* That (a) section 214(a) of the Social Security Act is amended by inserting "or" at the end of paragraph (3) and adding the following new paragraph (4)—

"(4) in the case of an individual who has died and who was entitled to a benefit under section 223 for the month before the month in which he died, 6 quarters of coverage;".

(b) Section 215(b)(1) of such Act is amended by striking out "shall be the quotient" and inserting in lieu thereof "shall (except as provided in paragraph (5)) be the quotient".

(c) Section 215(b) of such Act is further amended by adding at the end thereof the following new paragraph:

"(5) In the case of an individual who is blind (within the meaning of "blindness" as defined in section 216(i)(1)(B)), such individual's average monthly wage shall be the quotient obtained by dividing (i) the total of his wages paid in, and self-employment income credited to, all of the calendar quarters which are quarters of coverage (as defined in section 213) and that fall within the period after 1950 and prior to the year

specified in clause (i) or clause (ii) of paragraph 2(C), by (ii) the number of months in such quarters, except that any such individual who is fully insured (without regard to section 214(a)(4)) shall have his average monthly wage computed under this subsection without regard to this paragraph, if such computation results in a larger primary insurance amount."

(d) Paragraph (3) of section 216(i) of such Act is amended to read as follows:

"(3) The requirements referred to in clauses (i) and (ii) of paragraph (2)(C) are satisfied by an individual with respect to any quarter only if—

"(A) he would have been a fully insured individual (as defined in section 214) had he attained age 62 (if a woman) or age 65 (if a man) and filed application for benefits under section 202(a) on the first day of such quarter, and (i) he had not less than 20 quarters of coverage during the 40-quarter period which ends with such quarter, or (ii) if such quarter ends before he attains (or would attain) age 31 not less than one-half (and not less than 6) of the quarters during the period ending with such quarter and beginning after he attained the age of 21 were quarters of coverage, or (if the number of quarters in such period is less than 12) not less than 6 of the quarters in the 12-quarter period ending with such quarter were quarters of coverage; or

"(B) he is blind (within the meaning of 'blindness' as defined in section 216(i)(1)(B)) and has not less than 6 quarters of coverage in the period which ends with such quarter;

except that the provisions of that part of subparagraph (A) of this paragraph which precedes clause (i) shall not apply in the case of an individual with respect to whom a period of disability would, but for such provisions, begin before 1951. For purposes of clauses (i) and (ii) of subparagraph (A) of this paragraph, when the number of quarters in any period is an odd number, such number shall be reduced by one, and a quarter shall not be counted as part of any period if any part of such quarter was included in a prior period of disability unless such quarter was a quarter of coverage."

(e) The first sentence of section 222(b)(1) of such Act is amended by inserting "(other than such an individual whose disability is blindness, as defined in section 216(i)(1)(B))" after "an individual entitled to disability insurance benefits".

(f) Section 223(a)(1) of such Act is amended—

(1) by striking out the comma at the end of subparagraph (B) and inserting in lieu thereof "or whose disability is blindness (as defined in section 216(i)(1)(B)),";

(2) by striking out "the month in which he attains age 65" and inserting in lieu thereof "in the case of any individual other than an individual whose disability is blindness (as defined in section 216(i)(1)(B)), the month in which he attains age 65"; and

(3) by deleting the last sentence thereof.

(g) Paragraph (1) of section 223(c) of such Act is amended to read as follows:

"(1) An individual shall be insured for disability insurance benefits in any month if—

"(A) he would have been a fully insured individual (as defined in section 214) had he attained age 62 (if a woman) or age 65 (if a man) and filed application for benefits under section 202(a) on the first day of such month, and (i) he had not less than 20 quarters of coverage during the 40-quarter period which ends with the quarter in which such month occurred, or (ii) if such month ends before the quarter in which he attains (or would attain) age 31, not less than one-half (and not less than 6) of the quarters during the period ending with the quarter in which such month occurred and beginning after he attained the age of 21 were quarters of coverage, or (if the number of quarters in such period is less than 12) not less than 6 of the quarters in the 12-quarter period ending with such quarter were quarters of coverage, or

"(B) he is blind (within the meaning of 'blindness' as defined in section 216(i)(1)(B)) and has not less than six quarters of coverage in the period which ends with the quarter in which such month occurs.

"For purposes of clauses (i) and (ii) of subparagraph (A) of this paragraph, when the number of quarters in any period is an odd number, such number shall be reduced by one, and a quarter shall not be counted as part of any period if any part of such quarter was included in a period of disability unless such quarter was a quarter of coverage."

(h) Section 223(d)(1)(B) of such Act is amended to read as follows:

"(B) blindness (as defined in section 216(i)(1)(B))."

(i) The second sentence of section 223(d)(4) of such Act is amended by inserting "(other than an individual whose disability is blindness, as defined in section 216(i)(1)(B))" immediately after "individual".

SEC. 2. In the case of an insured individual who is under a disability (as defined in section 223(d)(1)(B)), who is entitled to monthly benefits under section 202(a) or 223 for a month after the month in which this Act is enacted, and who applies for a recomputation of his disability insurance benefit or for a disability insurance benefit (if he is entitled under section 202(a)) in or after the month in which this Act is enacted, the Secretary shall, notwithstanding the provisions of paragraph (5) of section 215(b) as amended by this Act, if such recomputation results in a higher primary insurance amount.

SEC. 3. The amendments made by this Act shall apply only with respect to monthly benefits under title II of the Social Security Act for and after the second month following the month in which this Act is enacted.

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IMPROVED DISABILITY INSURANCE FOR THE BLIND

A bill to amend title II of the Social Security Act so as to liberalize the conditions governing eligibility of blind persons to receive disability insurance benefits thereunder.

HISTORY

Offered in the 88th Congress by Senator Hubert Humphrey as floor amendment to H. R. 11865 (Social Security bill); adopted by voice vote without a dissent, lost when Social Security conferences ended in deadlock.

Offered in 89th Congress by Senator Vance Hartke, as S. 1787; 41 co-sponsors; adopted as floor amendment to H. R. 6675 by 78 to 11 roll call vote.

Offered in 90th Congress by Senator Vance Hartke, as S. 1681, 57 co-sponsors, including nine of the 17-member Committee on Finance; adopted by Committee on Finance as amendment to H.R. 1280; one provision approved in House-Senate Conference, making the generally accepted definition of blindness (20/200, etc.) the standard for visual loss under the Disability Insurance Program.

Offered in the 91st Congress in the Senate by Senator Vance Hartke, as S. 2518, 68 cosponsors including nine of the 17 member Committee on Finance; adopted by Committee on Finance as amendment to H. R. 17550; offered in the House by Congressman James A. Burke, as H. R. 3782 (identical to S. 2518), and, slightly modified, as H. R. 14673, 160 cosponsors including eleven of the 25-member Ways and Means Committee; offered in the Ways and Means Committee by Congressman Burke; Committee adopted liberalizing eligibility proposal of H. R. 14673; no further action since House-Senate Conference on Social Security matters was not held.

PROVISIONS

Allows qualification for disability benefits under the above definition if the blind person has worked six quarters in Social Security-covered work, rather than twenty of the last forty quarters as presently required to be eligible, as in all other disabilities; continuation of benefits irrespective of earnings so long as blindness lasts, rather than cutting off benefits if the blind person earns as little as $140 a month as provided in existing law.

WHAT CHANGES WOULD DO

The Disability Insurance for the Blind bill would transform the Disability Insurance Program providing only subsistence income to long-time employed but presently unemployable blind persons into a system providing short-term employed persons with insurance income to off-set the economic consequences of blindness—diminished earning power, greatly diminished employment opportunities, greatly increased costs of living and working, blind, in a sight-oriented economy and society.

WHY CHANGES NEEDED

To many blind persons, able to work, although blind, but unable to secure work because they are blind—or unable to secure work of long and steady duration, because they are blind—to these people the requirement of employment for a year and a half in Social Security-covered work, instead of the five of the last ten year requirement in existing law, is much more realistic and reasonable under the special and adverse circumstances facing blind persons.

It is much more realistic, when considering the misinformed or uninformed attitudes, the adverse and prejudicial practices which confront blind people when they seek work, when they are qualified by talent and training for work, when they are skilled and able to operate successfully with blindness, yet, are not hired because they are believed to be incompetent and incapable.

Making disability insurance payments available when a blind person has worked six quarters in Social Security covered work is much more reasonable than the five years' requirement, for it would make such payments more readily available to more persons when the disaster of blindness occurs, when the need for the security provided by regularly received disability payments is greatest in a workingman's life.

The bill recognizes that a person who tries to function, sightless, in our sight-structured world, functions at a financial disadvantage.

For whatever a blind man would do, whatever employment or activity he would pursue, he has the need for sight to assist him.

Sighted family members and friends may be helpful, when the inclination moves them to be helpful, but the blind vending stand operator, the blind lawyer or teacher, the blind piano tuner, even the blind housewife soon discovers that sight which is hired is more reliably available than sight which is given from kindness.

So the blind person who would function self-dependently, the blind person who would earn a living, who would live self-responsibly, must not only pay the usual daily living costs which his sighted fellows pay, but he must also pay the extra, the burdening expenses of blindness—the expenses incurred in hiring sight.

By allowing a blind person to draw disability insurance payments so long as he continues blind and irrespective of his earnings, this bill would provide to such blind person, a regular source of funds to pay for sight, and it would thus help to reduce the economic disadvantages and inequalities of blindness in his life.

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By Mr. MONDALE (for himself and Mr. RANDOLPH):

S. 1336. A bill to limit the amount of

the monthly premium for participation in the supplementary medical insurance program established by part B of title XVIII of the Social Security Act. Referred to the Committee on Finance.

By Mr. MONDALE:

S. 1337. A bill to amend title XVIII of the Social Security Act to provide full payment—subject to any deductibles and coinsurance generally applicable—for whole blood furnished an individual under the program of health insurance for the aged. Referred to the Committee on Finance.

MEDICARE AMENDMENTS

Mr. MONDALE. Mr. President, inflation is wrecking the lives of many older Americans. Not only are their fixed incomes hurt the most by rising prices, but they pay a disproportionate share of some of the fastest rising costs in our economy.

Nowhere is this problem more severe than in the squeeze between meager and declining incomes of senior citizens, and the escalating costs of their medical care.

To assist older Americans with these medical costs, I am introducing amendments which will relieve a portion of the most inequitable costs which they now bear.

I propose to reduce the medicare premium costs for part B coverage for professional care; second, I propose removal of the obnoxious requirement that medicare patients pay a blood deductible charge for the first 3 pints of blood they may require. Finally, Mr. President, I wish to reemphasize the need to expand medicare coverage for out-of-hospital drug costs.

Persons over age 65 constitute only about 10 percent of our population. But 20 percent of the poor people in the United States are over 65.

While inflation takes an increasing toll, the number of persons between 65 and 70 who are employed has fallen by half in the last 15 years.

While the number of all poor persons in the United States fell 36 percent between 1959 and 1968, the number of poor persons over 65 was reduced by only 16 percent.

The incomes of older Americans fall farther and farther behind inflation. Only 17 percent of retired Americans have incomes outside their pensions, and in Minnesota the monthly social security payment to retired workers averages $100.

In recent years, medical costs have risen more than 33 percent faster than the Consumer Price Index.

It was gratifying to see the broad support in the Congress for the recent 10 percent social security benefit increase. But much remains to be done to improve the economic situation for older citizens. The legislation on medicare now pending in the House gives us another opportunity to help senior citizens.

In Minnesota this year, 400,000 older citizens will be asked to pay more than $31 per year more in medicare part B premiums, for professional care, than in 1966 when the program began.

The Nixon administration has increased these premium costs to participants in medicare's supplementary medical insurance program by 33 percent in the last 2 years. The Secretary of Health, Education, and Welfare has raised those costs, originally $3 per month, to $4 in April 1968, $5.30 a month as of July 1970, with another increase anticipated in July of 1971, to around $5.60.

For the great majority of the 20 million medicare beneficiaries, this last increase is intolerable. For, while the administration plans to further increase costs in part B premiums and has increased costs by 18 percent in deductible and per diem payments, they have not sought commensurate increases in social security payments. The increase of 6 percent the administration asked for this year was really no increase, but would have just kept up with inflation. Including the 1970 social security increases, the minimum benefit for a man and his wife is $1,152 a year. This is less than one-half the $2,671 per year estimated by the U.S. Bureau of Labor Statistics as necessary to permit existence at the poverty line for a retired couple.

My amendment would roll back the monthly premium to $4 through June 1971. Effective July 1, 1971, my bill will return the monthly premium for part B to $3 a month, as it was in 1966 when the program was initiated. This additional cost of about $230 million will be paid out of the general fund.

When this program was established, it was decided that half of the cost would be borne out of general revenues of the Federal Government. The other half was to be borne by the participants. Had the cost of living remained reasonably stable, this would have been tolerable. But, in the face of recent and continuing inflationary developments, we cannot ask these poor, aged beneficiaries to pay even one-half of the increased physicians' charges that have been experienced since medicare went into effect.

Seven million people age 65 and over are living in poverty or near poverty, many of them receiving no income except social security benefits. We have succeeded in amending our tax laws so that some of those living in poverty can be freed of Federal income taxes. It makes no sense to levy an increase of $15.60 a year on a person living in poverty just because it is calculated as some kind of "share" of the medical insurance program. This has the effect of saddling those already in poverty with the cruel costs of inflation. My amendment provides a better way.

Since medicare went into effect in 1966, there have also been very substantial increases in the deductible portions of hospital and extended care charges which participants must pay. For example, the hospital deductible was initially set at $40, the payment per day after the 60th day at $10, the individual's share of the lifetime reserve days was $20, and the payment per day for extended care facility charges after the 20th day was $5. The Department of Health, Education, and Welfare increased these charges on January 1, 1970, to $52, $13, $26, and $6.50, respectively.

In short, the administration lays the full burden of inflationary medical costs upon those who have the greatest need for medical care and the least capacity to meet these added burdens.

The increasing deductibles and per day payments will constitute a nearly crushing burden on many of those beneficiaries, who receive benefits at or near the minimum, if they must be hospitalized. For those who have attempted to protect themselves against this risk by private health insurance to supplement the hospital and medical coverage under medicare, the picture is no better.

For example, premiums for the medicare supplementary insurance offered by Blue Shield in Minneapolis have recently been increased from $7.95 a month last year to $14.90 a month today. Thus, these costs have increased by 87 percent in 2 years.

With reference to the second amendment I submit today, Mr. President, one of the most insensitive provisions of medicare is the requirement that participants pay a "blood deductible" charge for the first three pints of the lifegiving fluid which they may require. I offer an amendment to abolish this absurd and inhumane regulation. It is difficult enough for older citizens to maintain dignity in their lives, struggling against inflation and rising medical costs with limited incomes. To sick older citizens without money, and often far removed from possible family blood donors, this blood deductible is a cruel insult. The cost of my amendment is only $16 million per year, only one-eighth the amount we recently approved for 1 year for an impractical space shuttle station.

Finally, Mr. President, I want to reiterate my support for providing coverage of out-of-hospital drug costs under medicare. As Senator MONTOYA has pointed out so ably and so often, this reform is long overdue.

Approximately 3.8 million persons spend more than $100 a year on prescription drugs alone. Older persons pay 20 percent of all prescription drug costs in America.

They cannot afford these expenses. We are all aware that study after study, by the administration and by the Congress, has recommended that medicare assume these costs.

I offered an amendment to this effect in the last Congress, and I urge the passage of the Montoya amendment at the first opportunity this session.

The medicare amendments of 1971 offer the 92d Congress a major opportunity to show that human concerns come first in its order of priorities, and that the pressing needs of older Americans will be met.

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By Mr. EAGLETON (by request):

S. 1338. A bill to authorize the Government of the District of Columbia to fix certain fees;

S. 1339. A bill to authorize the District of Columbia to issue obligations to finance District capital programs, to provide Federal funds for District of Columbia institutions of higher education, and for other purposes; and

S. 1340. A bill to amend the act of August 9, 1955, relating to school fare

subsidy for transportation of schoolchildren within the District of Columbia. Referred to the Committee on the District of Columbia.

DISTRICT OF COLUMBIA LEGISLATION

Mr. EAGLETON. Mr. President, as chairman of the Fiscal Affairs Subcommittee of the Committee on the District of Columbia, I have the honor to introduce for appropriate reference two bills which have been submitted as part of the District of Columbia legislative package. I am also introducing a bill at the request of WMATA as the local governmental authority responsible for public transportation in the area. As soon as the city agencies and commissions have completed submission of their programs, I intend to announce hearings on the bills within my subcommittee's jurisdiction.

The bill "To authorize the Government of the District of Columbia To Fix Certain Fees," would allow the City Council to change, from time to time, a number of relatively minor fees specified by Congress in 21 separate statutes.

The District of Columbia Capital Program Finance Act of 1971 would shift—on a phased basis—District public works financing from direct Federal loans to local District of Columbia bonds. This would remove an immediate burden from the U.S. taxpayer for financing District of Columbia public works projects while simultaneously providing the District with a financial management mechanism of sufficient flexibility so that it can respond to the city's highest priority needs. The other major element of the bill would finance construction of permanent campuses for Federal City College and the Washington Technical Institute by capital grants rather than the loans now employed.

The third bill, which I am introducing on behalf of the Transit Commission would extend for 3 years the school fare subsidy authorized in Public Law 90–605. There is now a statutory requirement that the bus fare for schoolchildren going to and from school be no more than one-half the regular adult fare. If an extension is not authorized, the burden of providing reduced rates for schoolchildren will revert automatically to the bus riders.

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By Mr. PERCY:

S. 1341. A bill to amend the Urban Mass Transportation Act of 1964 to increase the amount of the Federal grant for certain mass transportation projects and to remove certain limitations on the amount of grant assistance which may be made available in any one State;

S. 1342. A bill to amend the Urban Mass Transportation Act of 1964 to authorize grants for comprehensive long-range planning for the development of balanced statewide or regional transportation systems; and

S. 1343. A bill to amend the Urban Mass Transportation Act of 1964 to authorize grants to assure adequate commuter service, and to permit a State to elect to use funds from the highway trust fund to achieve a balanced transportation system. Referred to the Committee on Banking, Housing and Urban Affairs.

S. 1344. A bill to revise and improve national transportation programs. Ordered by unanimous consent to be held at the desk.

THE NATIONAL TRANSPORTATION POLICY

Mr. PERCY. Mr. President, during the second session of the 91st Congress, we enacted several major pieces of legislation in the transportation field. These measures are likely to have an immense impact on the shape of our national transportation policy.

We passed and the President signed into law three major pieces of legislation: the Urban Mass Transportation Assistance Act, the Federal-Aid Highway Act, and the Airport/Airways Development Act.

The Urban Mass Transportation Assistance Act, passed by resounding margins in both bodies, commits Congress to a $12 billion investment in mass transportation over the next 10 years and provides $3.1 billion in contract authority over the next 5 years. The Urban Mass Transportation Administration will provide two-thirds of the costs of projects to construct or modernize mass transit systems.

The Federal-Aid Highway Act provides for completion of 42,500 miles of interstate highways by 1978. It extends the Highway Trust Fund through fiscal 1978 and authorizes expenditures from the Trust Fund of $4 billion through fiscal 1977. These funds will finance the Federal Government's 90 percent share of the cost of the Interstate system, the 50 percent share of the cost of the primary and secondary road system—this will become 70 percent in 2 years—and the Government's share of certain other programs related to Federal-aid highways.

As my colleagues may recall, the Highway Trust Fund was created 15 years ago when highway-related excise taxes were assigned to it by the Highway Revenue Act of 1956. These taxes include manufacturers' taxes on gasoline and lubricating oil for highway use, trucks and buses, truck and bus parts, tires, tubes, and tread rubber for highway use; retailers' taxes on diesel and special fuels for highway use; and taxes on the use of heavy highway motor vehicles. These taxes were extended by last year's legislation.

I wish to point out that Congress has actually authorized only $3.1 billion for mass transit development over a 5-year period, while it has authorized $4 billion a year, or $20 billion over 5 years, for highway construction.

The Airport/Airways Development Act creates an airport/airways trust fund to finance the development of the U.S. airport and airways system and assigns revenues from fuel, ticket, freight, and registration taxes to the fund. Congress has committed itself to expenditures of not less than $2.5 billion over the next 10 years for improvement of the airways system.

The legislation which I have described briefly includes many forward-looking provisions, but it also contains some discouraging aspects.

Let me address myself first to the negative points.

While this legislation provides additional funds for alternative means of transportation, it tends to perpetuate the great imbalance in the allocation of our resources to various modes of transportation. In the postwar years, the Federal Government has spent nearly $80 billion for domestic transportation. Almost three-quarters of these funds have gone for highways; 16 percent has gone for aviation; about 8 percent has been expended on waterways; the remainder—about 1 percent—has gone for urban mass transit or high-speed ground transportation.

Under the provisions of the legislation we passed last year, we shall continue to spend 10 times more annually on highways than on airports and airways and about seven times more annually on highways than the development of mass transit.

How can this imbalance in transportation spending be justified to the 80 percent of our population living in urban areas—a proportion that will grow to 90 percent by the year 2000? I submit that we cannot. And it is instructive to note in this context that the Bureau of Roads proposes that an estimated $95 billion be spent on freeway and arterial highway construction in our urban areas in the next 20 years.

I do not deny the very great benefits that residents of urban areas and other parts of the country have gained from highway development nor do I doubt that there will be a need for further development. But I believe it is also clear that we have an overwhelming need to develop other modes of transportation, especially in our cities.

Automobiles have supplied us with great mobility, but this mobility is being greatly reduced by the escalation of traffic congestion. And, of course, a great many other social costs are involved.

The able Member of the other body, Mr. KOCH of New York, has summarized the basic issue very well:

> What our cities need are not more highways, but mass transit. Our cities simply don't have the resources for large intracity highway networks; they don't have the space; they can't afford the loss of housing demolished to make way for the highways; they don't have facilities to park the cars that highways disgorge into the city's core each day; and their citizens' health cannot support all the pollution spewed into the air through auto emissions.

Our mass transit requirements are literally staggering. The Institute of Rapid Transit computed the capital needs of just 19 major metropolitan transit systems in the coming decade to be nearly $18 billion. The American Transit Association has concluded that the total capital and operating needs of the transit industry over the next 10 years will average about $2.8 billion a year more than is available in current revenues, private capital and local subsidy funds. Urban Mass Transportation Administration funds obviously will do little more than put a dent in equipment needs; they do not, of course, touch operating needs.

Estimates prepared for the Urban Mass Transportation Administration place the total national capital require-

ments for mass transit for the decade at between $28 and $34 billion. UMTA now has applications pending which total $2.7 billion, including $544 million in requests from the city of Chicago.

What makes this situation even more depressing is the fact that the Department of Transportation is cutting back Federal commitments for mass transit capital programs in fiscal year 1971 by $200 million, from the $600 million authorized by Congress to $400 million. The UMTA is requesting only $269.7 million in new obligational authority for capital facility grants in fiscal 1972.

All this is taking place at a time when our urban transportation plant is continuing to age, service is deteriorating, ridership is declining, fares are increasing, and companies are failing. It is tragic to note that 258 transit companies have failed between 1954 and 1970.

But the imbalance in funding is not the sole reason for my concern over the legislation Congress passed last year.

Congress decided in 1970 to perpetuate the highway trust fund and to create a new one, the airport/airway trust fund.

The existence of these separate trust funds does not allow for a rational allocation of resources among various modes of transportation. They militate against the design and development of a balanced transportation system.

The highway trust fund, for example, provides a powerful incentive to the States to build more and more highways that qualify as part of the Interstate Highway System. No other transportation program provides for 90 percent of the cost to be borne by the Federal Government.

Gov. Francis Sargent of Massachusetts has said in this context:

The states have been getting very heavy funding for highways and states have always tried to get as much of the available Federal funds as they could. There simply hasn't been a reasonable amount for other modes.

The choice facing the States is simply to build highways or to do nothing.

Funds allocated to a State from the trust fund are returned to the fund if they are not used for highways.

The result is that local choices are distorted: Highways are built and other modes of transportation are neglected. And, as a consequence, other forms of urban and interurban ground transportation have not been given a fair chance to prove what drawing power they might have had if they had been developed with even half the $50 billion or more spent on highways since 1956.

Moreover, the presence of these trust funds means that our transportation system cannot be seen as an interrelated whole. Yet, it is undeniable that the development of one form of transportation—say, a mass transit facility—redounds to the benefit of the user of another form—such as a highway user. A witness at hearings on transportation financing before the Joint Economic Committee's Subcommittee on Economy in Government indicated last year that 35 percent of the benefit of a new subway would accrue to highway users.

It is apparent that comprehensive planning and coordination of different modes of transportation—highway, rail, air, mass transit, and so on—is exceedingly rare and that it is not stimulated by the policies of the Federal Government. Federal categorical programs and trust fund financing have supported the separate and isolated development of each mode of transportation and have reduced the flexibility of local areas to meet the particular needs of that area.

Gov. Marvin Mandel of Maryland, vice chairman of the Transportation Committee of the Governors' Conference, feels that States should be allowed to set their own transportation priorities.

There is a growing awareness—

He has said—

that transportation must be viewed as a total system—planned and financed in cocoordinated fashion—and not as a series of unrelated modes whose end result is clogged and polluted cities, unaccessible airports, and bankrupt railroads.

He has urged greater latitude for States in spending transportation funds, saying:

The transportation priorities of Wyoming and Colorado are not the transportation priorities of Maryland or Massachusetts or California.

The legislation adopted by Congress last year and actions taken by the administration this year provide us with some hopeful signs, however. There are indications that we are taking steps to reverse the longtime nonpolicy in the transportation field.

I am thinking first of the provisions in the Urban Mass Transportation Act calling on the Department of Transportation to study the feasibility of and the mechanisms for providing Federal assistance to help defray the operating costs of urban mass transit companies. I am pleased that Secretary Volpe expects to have preliminary data on this subject in June and the full report by October.

I also draw some encouragement from the provisions of the Federal Aid Highway Act of 1970 that set aside funds for the construction of exclusive or preferential bus lanes, highway traffic control devices, and passenger loading areas and facilities, and fringe and transportation corridor parking facilities to serve bus and other public mass transportation passengers. These provisions, plus those calling upon the Secretary to study the relationship between highway programs and public transportation services which use highways, give some evidence of movement toward a coordinated Federal transportation policy.

This movement should be given tremendous impetus by an extremely important provision of the Airport/Airways Development Act. It requires the Secretary of Transportation to submit recommendations to Congress for a national transportation policy involving—

The coordinated development and improvement of all modes of transportation together with the priority which shall be assigned to the development and improvement of each mode of transportation.

If the Secretary's report fulfills the promise of this act, then we will have come a long way in developing a truly coordinated plan for the development of our transportation system.

Some flexibility also may be introduced into transportation development by means of special revenue sharing. The administration has proposed the combining of all Federal-aid highway programs except the Interstate system, State and local highway safety programs and the highway beautification programs, into one special revenue-sharing program. Grants made to the States will be spent more in accordance with their own transportation plans and priorities than has been true in the past.

While all of these developments are very much to the good, a great deal remains to be done if we are to reduce the imbalance in our transportation expenditures, to promote the planning and development of a balanced transportation system and to assure financing for this development.

I am today introducing four bills which in combination represent a comprehensive and far-reaching program to meet our national transportation needs. On a general level, these measures are designed to accomplish five objectives:

To provide emergency assistance to mass transit agencies;

To provide immediate and long-range financial relief in substantial amounts to those modes of transportation which have been short-changed in favor of highways;

To provide for the rational planning and future development of a balanced transportation system on a regional, statewide, and national level;

To provide trust-fund financing of transportation development; and

To assure maximum flexibility and maximum funding for transportation development by incorporating the highway trust fund into the special revenue-sharing proposal for transportation, thereby creating a national transportation trust fund.

Now I would like to explain each of my proposals in more detail.

The first bill would amend the Urban Mass Transportation Act to allow a larger Federal share of net project costs and would repeal a provision of that bill limiting a State's share to not more than 12½ percent of available funds. My bill would raise the Federal share of net project costs to 90 percent if the Secretary of Transportation found that a particular project were vital to the implementation of a State or regional transportation plan. The Federal share of all other projects would be raised to 75 percent. The effects of this legislation would be to end the discrimination against the large, more urbanized States with the greatest need for mass transit development; to stimulate comprehensive planning by State and regional transportation agencies, and to help to equalize the funding of transit and highway projects. More funds would be available to the urban areas for transit, thus easing the strain on the limited resources of the cities.

My second bill would amend the Urban Mass Transportation Act of 1964 by cre-

ating a program of grants to State and regional bodies to support studies of transportation needs and the development of comprehensive transportation plans. The bill spells out application procedures as well as the minimum content of State plans. An expenditure of $25 million would be authorized for each of the next 3 fiscal years.

The third bill has two titles: The first is the Emergency Commuter Relief Act, which Senator WILLIAMS and I introduced several weeks ago. The second title would give Governors the authority to divert funds from the highway trust fund to support other modes of transportation. My purpose in tying the Williams-Percy bill to the diversion of funds from the highway trust fund is to indicate that these diverted funds may be used to provide emergency relief to transit lines suffering from operating deficits and capital indebtedness.

Title II would allow diversion of funds from the highway trust fund for any legitimate transportation purpose. One-half of the money diverted would be returned to the States in block-grant form; the remainder would be distributed by the Secretary of Transportation in accordance with the provisions of various transportation grant-in-aid programs.

The effect of this bill would be to give Governors flexibility in allocating funds for transportation purposes and to encourage the design of balanced transportation development programs suited to the individual needs of the States.

The last bill in my transportation package would create a national transportation trust fund. This bill would combine the revenues generated for the highway trust fund and the airport/airways trust fund with funds from the Treasury equivalent to those now authorized for programs for mass transit and Federal-aid highways. All specific transportation aid programs would be terminated on the date that the new trust fund was created.

My bill also would direct the Secretary of Transportation to prepare a comprehensive national transportation development plan, which would include formulas for the allocation of trust fund moneys to the States. In order to receive an allocation, States would have to submit individual transportation development plans indicating the ways their apportionment from the trust fund would be used. While new flexibility is introduced by this form of revenue sharing, accountability of the States would continue to be insured by the planning requirements.

I feel strongly that with a general trust fund it would be possible to allocate funds rationally among transportation modes, choosing in each individual situation the mode which will most efficiently and effectively serve our need for mobility.

Mr. President, I ask unanimous consent that the text of my bills be printed in the RECORD at this point.

There being no objection, the bills were ordered to be printed in the RECORD, as follows:

S. 1341

A bill to amend the Urban Mass Transportation Act of 1964 to increase the amount of the Federal grant for certain mass transportation projects and to remove certain limitations on the amount of grant assistance which may be made available in any one State

*Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,* That the fifth sentence of section 4(a) of the Urban Mass Transportation Act of 1964 is amended to read as follows: "The Federal grant for such a project shall not exceed (1) in the case of any such project found by the Secretary to make a substantial contribution to fulfilling a comprehensive Statewide or regional transportation development plan which has been approved by the Secretary and the Governor or Governors of the State or of States involved, 90 per centum of the net project cost, or (2) in the case of any such project not meeting the requirements of clause (1), 75 per centum of the net project cost."

SEC. 2. Section 15 of the Urban Mass Transportation Act of 1964 is repealed.

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S. 1342

A bill to amend the Urban Mass Transportation Act of 1964 to authorize grants for comprehensive long-range planning for the development of balanced Statewide or regional transportation systems

*Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,* That the Urban Mass Transportation Act of 1964 is amended by adding at the end thereof a new section as follows:

"COMPREHENSIVE TRANSPORTATION PLANNING GRANTS

"SEC. 17. (a) The Secretary is authorized to make grants to State and regional planning agencies for the development of comprehensive long-range plans for balanced transportation systems within the areas served by such agencies. Planning assisted under this section shall include, without being limited to, the formulation of proposals for developing and maintaining various and coordinated modes of transportation to meet present and foreseeable needs and the allocation of funds which are available or will become available over a period of not less than five years for the constituent elements of such a balanced transportation system. A grant under this subsection shall—

"(1) be made upon the basis of an application, approved by the Governor or Governors of the State or States involved, setting forth estimates of the cost of carrying out the planning to be assisted, and indicating the manner in which the public and local governmental bodies within the area to be served will participate in such planning; and

"(2) not exceed 75 per centum of the cost of carrying out the activities for which the grant is made.

All grants under this section shall be subject to terms and conditions prescribed by the Secretary.

"(b) In addition to the grants provided for in subsection (a), the Secretary is authorized to make grants to any municipality, county, or other political subdivision of a State for planning in connection with and essential to (as determined by the Secretary) the development of long-range comprehensive plans for a balanced Statewide or regional transportation system. A grant under this subsection shall be made only on the basis of an application meeting criteria established by the Secretary which is submitted by the municipality, county, or other political subdivision, or agency thereof, undertaking the planning activities, and has been approved by the Governor of the State in which the locality is situated. No grant under this subsection shall exceed 50 per centum of the cost of carrying out the activities for which the grant is made.

"(c) To finance grants under this section there is authorized to be appropriated not to exceed $25,000,000 for each of the first three fiscal years commencing after June 30, 1971. Any amount so appropriated shall remain available until expended; and any amount authorized but not appropriated for any fiscal year may be appropriated for any succeeding fiscal year."

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S. 1343

A bill to amend the Urban Mass Transportation Act of 1964 to authorize grants to assure adequate commuter service, and to permit a State to elect to use funds from the highway trust fund to achieve a balanced transportation system

*Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,*

TITLE I—EMERGENCY ASSISTANCE TO ASSURE ADEQUATE MASS TRANSPORTATION SERVICE IN URBAN AREAS

SHORT TITLE

SEC. 101. This title may be cited as the "Commuter Emergency Relief Act".

FINDINGS

SEC. 102. The Congress finds—

(1) that over 70 per centum of the Nation's population lives in urban areas;

(2) that transportation is the lifeblood of an urbanized society and the health and welfare of the society depends upon the provision of efficient, economical, and convenient transportation within and between its urban areas;

(3) that for many years the mass transportation industry satisfied the transportation needs of the urban areas of the country capably and profitably;

(4) that in recent years the maintenance of even minimal mass transportation service in urban areas has become so financially burdensome as to threaten the continuation of this essential public service;

(5) that the termination of such service or the continued increase in its cost to the user is undesirable, and may have a particularly serious adverse effect upon the welfare of a substantial number of lower income persons;

(6) that some urban areas are now engaged in developing preliminary plans for, or are actually carrying out, comprehensive projects to revitalize their mass transportation operations; and

(7) that immediate substantial Federal assistance is needed on an interim basis to enable many mass transportation systems to continue to provide vital service during the period required to overhaul and revitalize mass transportation operations and to place such operations on a sound financial basis.

EMERGENCY GRANTS TO PAY INDEBTEDNESS

SEC. 103. The Urban Mass Transportation Act of 1964 is amended—

(1) by redesignating sections 6 through 16 as sections 8 through 18, respectively; and

(2) by inserting after section 5 a new section as follows:

"EMERGENCY GRANTS TO MAKE ANNUAL DEBT PAYMENTS

"SEC. 6. (a) Notwithstanding any other provision of this Act, the Secretary is authorized to make grants to States and local public bodies and agencies thereof to assist

in paying the yearly interest on and discharging annual obligations on securities, equipment trust certificates, or other similar instruments of indebtedness which have been incurred in the acquisition, construction, reconstruction, improvement, and leasing (exclusive of any charge for operation or maintenance) of facilities and equipment for use, by operation or lease or otherwise, in mass transportation service in urban areas. A grant may not be made under this subsection unless the Secretary determines that it is essential to prevent (1) the termination of a significant part of the transportation service for a community, or (2) the occurrence of a serious adverse effect upon the welfare of a substantial number of lower income persons who are dependent upon the transportation service of such community. The amount of any grant made by the Secretary under this subsection shall not exceed twice the amount provided by the grant applicant (from other sources than current revenues of a mass transportation system) for use in paying such interest or obligations during the year in which the grant is made.

"(b) To finance grants under subsection (a) of this section, there is authorized to be appropriated $75,000,000 for each of the fiscal years 1972, 1973, 1974, 1975, and 1976. Any amount appropriated pursuant to this subsection shall remain available until expended, and any amount so authorized but not appropriated for any fiscal year may be appropriated for any subsequent fiscal year."

INTERIM ASSISTANCE TO ASSURE ADEQUATE MASS TRANSPORTATION SERVICE IN URBAN AREAS

SEC. 104. The Urban Mass Transportation Act of 1964 is amended by inserting after section 6 (added by section 103 of this Act) a new section as follows:

"INTERIM ASSISTANCE

"SEC. 7. (a) For the purpose of providing interim assistance to assure adequate mass transportation service in urban areas, the Secretary is authorized to make grants to any State or local public body or agency thereof to enable it to assist any mass transportation system which maintains mass transportation service in an urban area within its jurisdiction to defray annual net operating deficits incurred as the result of providing such service to such areas. No grant shall be provided under this section unless (1) the Secretary determines that the mass transportation services provided by the system involved are needed for carrying out a program referred to in section 4(a), and (2) the applicant State, public body, or agency, and the operator (if a different entity) of such system, have jointly submitted to the Secretary a comprehensive mass transportation service improvement plan which is approved by him and which sets forth a program, meeting criteria established by the Secretary, for capital or service improvements to be undertaken for the purpose of providing more efficient, economical, and convenient mass transportation service in an urban area, and for placing the mass transportation operations of such system on a sound financial basis.

"(b) The amount of any grant under this section to a State or local public body or agency thereof to defray the operating deficit of any mass transportation system shall not exceed twice the amount of financial assistance provided by such State, public body, or agency to such system to defray such deficit.

"(c) The Secretary shall issue such regulations as he deems necessary to administer this section in an equitable and efficient manner. Such regulations shall include appropriate definitions of (1) the items of cost and revenue to be used in determining annual net operating deficits, and (2) the sources or types of State or local financial assistance which may be considered in computing the maximum allowable Federal grant.

"(d) To finance grants under this section, there is authorized to be appropriated not to exceed $75,000,000 for each of the fiscal years 1972, 1973, 1974, 1975, and 1976. Any amount so appropriated shall remain available until expended, and any amount so authorized but not appropriated for any fiscal year may be appropriated for any subsequent fiscal year. The Secretary is authorized, notwithstanding the provisions of section 3648 of the Revised Statutes, to make advance or progress payments on account of any grant made pursuant to this section.

"(e) The Secretary shall conduct a study of the operation of the subsidy program authorized by this section comparing it with other operating subsidy programs including those currently carried out by the Federal Government, with a view to determining the efficacy of such program in assuring adequate mass transportation service in urban areas. The Secretary shall submit an interim report of his findings not later than June 30, 1972, and a final report of such findings and recommendations not later than June 30, 1974.

"(f) No grants shall be made under this section after June 30, 1976, except pursuant to a commitment entered into prior to such date."

ADDITIONAL AMENDMENTS

SEC. 105. (a) The following sections of the Urban Mass Transportation Act of 1964 (as redesignated by section 103 of this Act) are amended as follows:

(1) Section 3(b) is amended by striking out "section 7" and inserting in lieu thereof "section 9".

(2) Section 4(c) is amended by striking out "7(b), and 9" and "section 12(d)" and inserting in lieu thereof "9(b), and 11" and "section 14(d)", respectively.

(3) Section 14(c) is amended—

(A) by striking out "and" at the end of clause (4);

(B) by striking out the period at the end of clause (4) and inserting in lieu thereof a semicolon; and

(C) by adding after clause (5) the following new clauses:

"(6) the term 'mass transportation system' means any private company or public authority or agency providing mass transportation service; and

"(7) the term 'annual net operating deficit' means that part of the annual operating costs of a mass transportation system which could reasonably have been avoided by the elimination of all or part of the mass transportation service in an urban area, less the annual revenues derived by such system from the provision of such service."

(4) Section 14(d) is amended by adding the following at the end thereof: "No funds appropriated pursuant to section 4(b) may be used for grants made pursuant to section 6 or 7. Grant assistance provided under any section of this Act shall be coordinated to the greatest extent practicable with any other financial assistance provided under this Act. With the specific exception of the prohibition contained in section 3(c), the extension of financial assistance to a State or local public body or agency thereof under any section of this Act shall not have the effect of prohibiting the extension of financial assistance to such entity pursuant to any other section of this Act."

(5) The first sentence of section 15(c) is amended by striking out "section 3" and inserting in lieu thereof "section 3, 6, 7, or 8".

(6) The part of the first sentence of section 17 which precedes the first semicolon is amended to read as follows: "Grants made under section 3 (before July 1, 1970) and grants made under sections 6 or 7 of this Act (other than for relocation payments in accordance with section 9(b)) for projects in any one State shall not exceed in the aggregate 12½ per centum of the aggregate amount of grant funds authorized to be appropriated pursuant to sections 4(b), 6(b), and 7(c), respectively".

(7) Section 3(e) is amended by striking out "section 13(c)" and inserting in lieu thereof "section 15(c)".

(b)(1) Section 10 of the Urban Mass Transportation Assistance Act of 1970 is amended by striking out "and 6" and inserting in lieu thereof "and 8".

(2) Section 11 of such Act is amended by striking out "6(a), 9, and 11" and inserting in lieu thereof "8(a), 11, and 13".

## TITLE II—FLEXIBLE USE OF HIGHWAY FUNDS TO ACHIEVE BALANCED TRANSPORTATION SYSTEM

SHORT TITLE

SEC. 201. This title may be cited as the "National Transportation Development Financing Act of 1971".

DEFINITIONS

SEC. 202. For purposes of this title—

(1) The term "Federal-aid highway system apportionment" means an apportionment for a fiscal year to a State under one of the six paragraphs of section 104(b) of title 23, United States Code.

(2) The term "Interstate System" means the National System of Interstate and Defense Highways described in subsection (d) of section 103 of title 23, United States Code.

(3) The term "Governor" means the chief executive officer of a State.

(4) The term "State" means a State, the District of Columbia, and the Commonwealth of Puerto Rico.

(5) The term "Secretary" means the Secretary of Transportation.

ELECTION

SEC. 203. (a) There is authorized to be appropriated to the Secretary from the highway trust fund for use in each State for transportation purposes the amount elected to be used for such purposes by the Governor of such State under subsection (b).

(b) The Governor of a State may elect to have all or part of one or more of such State's Federal-aid highway system apportionments for a fiscal year made available to the Secretary for making grants in that year to such State, or to local public bodies or agencies in such State. Such grants may be made in accordance with the provisions of the Urban Mass Transportation Act of 1964, or in accordance with any other Act of Congress authorizing grants to the States, or political subdivisions thereof, for providing transportation facilities and services, including the development of plans for balanced Statewide, metropolitan, or regional transportation systems; except that not to exceed one-half of the amount available to the Secretary for making such grants in any State may, upon the request of the Governor of such State be paid to such State, or such agency or agencies thereof as the Governor may designate, for expenditure in accordance with the laws of such State for transportation purposes. Such election shall be made in such manner as the Secretary shall by regulation prescribe, within sixty days after he certifies to the Governor pursuant to section 104(e) of title 23, United States Code, the sums apportioned to that State for a fiscal year. In making such election, the Governor shall specify the amount to be deducted from one or more of the State's Federal-aid highway system apportionments in order to make available to the Secretary amounts elected to be used for transportation purposes.

(c) If the amount which a Governor of a State elects pursuant to subsection (b) to have used in a fiscal year for transportation purposes in such State exceeds the sum of amounts expended and obligated by the Secretary in such fiscal year in such State from amounts appropriated under the authority of subsection (a), then at the end

of such fiscal year such excess shall no longer be available for such purposes and shall, on January 1 of the next succeeding fiscal year, be added to the State's Federal-aid highway system apportionments for the second fiscal year beginning after such election. The addition to each of a State's apportionments shall bear the same proportion to such excess as the amount deducted (under the last sentence of subsection (b)) from the corresponding apportionment for the fiscal year in which such excess occurred bore to the amount elected to be used for transportation purposes in such fiscal year.

INTERSTATE APPORTIONMENT ADJUSTMENTS

SEC. 204. (a) For purposes of this section—

(1) the term "interstate apportionment" means the Federal-aid highway system apportionment for a State's Interstate System as certified to the Governor and State highway department thereof in accordance with section 104(e) of title 23, United States Code;

(2) the term "interstate apportionment adjustment" means the amount by which a State's interstate apportionment is reduced or increased (after certification under section 104(e) of such title) in accordance with section 209(g) of the Highway Revenue Act of 1956; and

(3) the term "remainder available for interstate construction" means a State's interstate apportionment, less the amount which the Governor of the State specifies, pursuant to the last sentence of section 203(b) of this Act, is to be deducted from that State's interstate apportionment in order to make such amount available for transportation purposes.

(b) In the case of an interstate apportionment adjustment, the amount available to the Secretary for transportation purposes in a State for a fiscal year—

(1) shall not (in the case of a downward adjustment) be reduced by reason of such adjustment, unless the downward adjustment exceeds the remainder available for interstate construction; and

(2) shall (in the case of an upward adjustment) be increased, in accordance with regulations of the Secretary, only to the extent that amounts so available were previously reduced under paragraph (1).

AMENDMENT TO TITLE 23, UNITED STATES CODE

SEC. 205. (a) Section 104(e) of title 23, United States Code, is amended by inserting after "State highway department" the following: "and the Governor or chief executive officer of each State".

(b) Section 104(b)(5) of such title is amended by adding at the end thereof the following: "Rules, regulations, and standards adopted by the Secretary for estimating the cost of completion of the Interstate System and taking into account all previous apportionments shall prescribe a consistent and equitable procedure for taking into account amounts of apportionments which the Governor of a State has elected to have made available for transportation purposes under section 203 of the National Transportation Development Financing Act of 1971."

(c) Section 118(a) of such title is amended by striking out "On and after" and inserting in lieu thereof "Sixty days after".

AMENDMENTS TO HIGHWAY REVENUE ACT

SEC. 206. (a) Section 209(f)(1) of the Highway Revenue Act of 1956 is amended by inserting "(A)" before "making expenditures" and by striking out the period at the end thereof and inserting in lieu thereof the following: "and (B) for the purposes of section 203 of the National Transportation Development Financing Act of 1971."

(b) Section 209(g) of such Act is amended by adding at the end thereof the following: "An election by the Governor of a State under section 203(b) of the National Transportation Development Financing Act of 1971 to use funds for transportation purposes shall not be taken into account in making any adjustment under this section, except as provided in section 204 of such Act."

AMENDMENT TO URBAN MASS TRANSPORTATION ACT OF 1964

SEC. 207. Section 15 of the Urban Mass Transportation Act of 1964 is amended by inserting after "section 7(b)" the following: ", and grants made with funds authorized to be appropriated by section 203(a) of the National Transportation Development Financing Act of 1971".

EFFECTIVE DATE

SEC. 208. This title shall take effect upon the first certification of Federal-aid highway system apportionments under section 104(e) of title 23, United States Code, following the date of enactment of this Act.

## ADDITIONAL COSPONSORS OF BILLS AND JOINT RESOLUTIONS

S. 392

At the request of Mr. GOLDWATER, the Senator from Rhode Island (Mr. PASTORE) was added as a cosponsor of S. 392, the Volunteer Military Act of 1971.

S. 424

At the request of Mr. MCINTYRE, the Senator from Indiana (Mr. BAYH) was added as a cosponsor of S. 424, a bill to require that certain articles of wearing apparel be permanently labeled with laundering and dry cleaning instructions.

S. 592

At the request of Mr. INOUYE, the Senator from Oregon (Mr. HATFIELD) was added as a cosponsor of S. 592, a bill to repeal the Emergency Detention Act of 1950.

S. 632

At the request of Mr. JACKSON, the Senator from Oregon (Mr. HATFIELD) was added as a cosponsor of S. 632, a bill to amend the Water Resources Planning Act to include provision for a national land use policy.

S. 834

At the request of Mr. HARRIS, the Senator from Oregon (Mr. HATFIELD) was added as a cosponsor of S. 834, the International Trade Act of 1971.

S. 835

At the request of Mr. HARRIS, the Senator from Indiana (Mr. BAYH) was added as a cosponsor of S. 835, a bill providing a settlement of the Alaska Native land claims.

S. 855

At the request of Mr. COTTON, the Senator from Montana (Mr. METCALF) was added as a cosponsor of S. 855, a bill to correct certain inequities in the crediting of National Guard technician service in connection with civil service retirement.

S. 1055

At the request of Mr. CURTIS, the Senator from Nebraska (Mr. HRUSKA) and the Senator from Florida (Mr. GURNEY) were added as cosponsors of S. 1055, a bill to amend the National Labor Relations Act with respect to refusals to bargain.

S. 1099

At the request of Mr. MCINTYRE, the Senator from West Virginia (Mr. RANDOLPH), the Senator from Minnesota (Mr. MONDALE), the Senator from Idaho (Mr. CHURCH), and the Senator from Montana (Mr. METCALF) were added as cosponsors of S. 1099, a bill to amend the Public Health Service Act to encourage physicians, dentists, optometrists, and other medical personnel to practice in areas where shortages of such personnel exist, and for other purposes.

S. 1116

At the request of Mr. JACKSON, the Senator from Nevada (Mr. CANNON), the Senator from Florida (Mr. GURNEY), and the Senator from Wisconsin (Mr. PROXMIRE) were added as cosponsors of S. 1116, a bill to require the protection, management, and control of wild free-roaming horses and burros on public lands.

S. 1191

At the request of Mr. MCGOVERN, the Senator from Minnesota (Mr. MONDALE) was added as a cosponsor of S. 1191, the Peacetime Transition Act of 1971.

S. 1212

At the request of Mr. CHURCH, the Senator from South Dakota (Mr. MCGOVERN) was added as a cosponsor of S. 1212, a bill to modify the restrictions contained in section 170(e) of the Internal Revenue Code of 1954 in the case of certain contributions of ordinary income property.

S. 1234

At the request of Mr. INOUYE, the Senator from Iowa (Mr. HUGHES) was added as a cosponsor of S. 1234, a bill to establish limits on the assignment of a member of the Armed Forces to a combat zone, and for other purposes.

S. 1238

At the request of Mr. BOGGS, the Senator from Washington (Mr. MAGNUSON), the Senator from New Hampshire (Mr. COTTON), and the Senator from South Carolina (Mr. HOLLINGS) were added as cosponsors of S. 1238, a bill to regulate the dumping of material in the oceans, coastal and other waters, and for other purposes.

S. 1282 AND S. 1283

At the request of Mr. MONDALE, his name was added as a cosponsor of S. 1282, the Government Facilities Location Act of 1971; and to S. 1283, the Urban Education Improvement Act of 1971.

S. 1290

Mr. BYRD of West Virginia. Mr. President, I ask unanimous consent, at the request of the Senator from Illinois (Mr. STEVENSON), that his name be added as a cosponsor to S. 1290, a bill to extend the life of the Office of Economic Opportunity.

The PRESIDING OFFICER. Without objection, it is so ordered.

S. 1305

At the request of Mr. MONDALE, the Senator from New Hampshire (Mr. MCINTYRE) was added as a cosponsor of S. 1305, a bill to amend the Economic Opportunity Act of 1964 to establish a National Legal Services Corporation.

S. 1307

At the request of Mr. RANDOLPH, the Senator from California (Mr. CRANSTON)

was added as a cosponsor of S. 1307, a bill to provide increased employment opportunities for middle-aged and older workers, and for other purposes.

SENATE JOINT RESOLUTION 9

At the request of Mr. SAXBE, on behalf of Mr. COOK, the Senator from California (Mr. CRANSTON) was added as a cosponsor of Senate Joint Resolution 9, proposing an amendment to the Constitution of the United States relative to equal rights for men and women.

SENATE JOINT RESOLUTION 12

At the request of Mr. CURTIS, the Senator from Nebraska (Mr. HRUSKA) was added as a cosponsor of Senate Joint Resolution 12, proposing an amendment to the Constitution of the United States providing for the election of the President and Vice President.

SENATE JOINT RESOLUTION 28

At the request of Mr. SAXBE, the Senator from Ohio (Mr. TAFT) was added as a cosponsor of Senate Joint Resolution 28, to establish the Cedar Swamp National Monument.

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## SENATE RESOLUTION 77—SUBMISSION OF A RESOLUTION AUTHORIZING THE PRINTING OF "CONGRESS AND THE NATION'S ENVIRONMENT"

Mr. JACKSON. Mr. President, for myself and the Senator from Colorado (Mr. ALLOTT), I submit, for appropriate reference, a resolution authorizing the printing for the use of the Committee on Interior and Insular Affairs of additional copies of its committee print entitled "Congress and the Nation's Environment."

The ACTING PRESIDENT pro tempore. The resolution will be received and appropriately referred.

The resolution (S. Res. 77), which reads as follows, was referred to the Committee on Rules and Administration:

S. RES. 77

Authorizing the printing for the use of the Committee on Interior and Insular Affairs of additional copies of its committee print entitled "Congress and the Nation's Environment".

*Resolved*, That there be printed for the use of the Committee on Interior and Insular Affairs eight hundred additional copies of its committee print of the current session entitled "Congress and the Nation's Environment", a report prepared for the Committee on Interior and Insular Affairs by the Environmental Policy Division, Congressional Research Service, Library of Congress.

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## SENATE RESOLUTION 78—SUBMISSION OF A RESOLUTION AUTHORIZING THE PRINTING OF "A REVIEW OF ENERGY ISSUES AND THE 91ST CONGRESS"

Mr. JACKSON. Mr. President, for myself and the Senator from Colorado (Mr. ALLOTT), I submit, for appropriate reference, a resolution authorizing the printing for the use of the Committee on Interior and Insular Affairs of additional copies of its committee print entitled "A Review of Energy Issues and the 91st Congress."

The ACTING PRESIDENT pro tempore. The resolution will be received and appropriately referred.

The resolution (S. Res. 78), which reads as follows, was referred to the Committee on Rules and Administration:

S. RES. 78

Authorizing the printing for the use of the Committee on Interior and Insular Affairs of additional copies of its committee print entitled "A Review of Energy Issues and the 91st Congress".

*Resolved*, That there be printed for the use of the Committee on Interior and Insular Affairs five thousand additional copies of its committee print of the current session entitled "A Review of Energy Issues and the 91st Congress", a report prepared for the Committee on Interior and Insular Affairs by the Environmental Policy Division, Congressional Research Service, Library of Congress.

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## SENATE RESOLUTION 79—SUBMISSION OF A RESOLUTION RELATING TO THE NEED FOR COMPENSATION OF CERTAIN ETHNIC GERMANS WHO HAVE BECOME CITIZENS OF THE UNITED STATES

Mr. PERCY. Mr. President, I speak today on behalf of the interests of the ethnic Germans, now citizens of the United States, who lost their savings and property in Hungary, Romania, and Yugoslavia following World War II. Almost a quarter century ago they were forced to leave these countries simply because of their German ethnic background, despite the fact that their families had lived for generations in these countries and despite the fact that they were not and never had been German nationals.

As naturalized citizens of the United States, the dispossessed ethnic Germans seek from their adopted government help in obtaining compensation from the Federal Republic of Germany for the losses they suffered as a result of expulsion from their homelands. They petition the U.S. Government to act as intermediary for them in their efforts to negotiate settlements for these losses.

As a nation devoted to the protection of individual rights and to the pursuance of common justice, the United States should assist the ethnic Germans in this matter.

Mr. President, toward this end, for myself and Mr. BAKER, Mr. HUMPHREY, and Mr. HRUSKA, I submit, for appropriate reference, a resolution expressing the concern of the U.S. Senate for the plight of the ethnic Germans and calling upon the Secretary of State to investigate the possibility of obtaining for them some measure of compensation.

The resolution (S. Res. 79), which reads as follows, was referred to the Committee on Foreign Relations:

S. RES. 79

Whereas, at the conclusion of World War II, persons of German ancestry were expelled from Yugoslavia, Hungary, and Romania;

Whereas many of the persons expelled were not and had not at any time been German nationals;

Whereas a substantial number of these persons have taken up residence in the United States and become American citizens; and

Whereas the expulsion of these persons from their homelands has caused these citizens severe hardships through the loss of savings and property: Now, therefore, be it

*Resolved*, that the Senate expresses its concern for the plight of these citizens and respectfully requests the Secretary of State, through diplomatic channels, to explore with other nations the possibility of obtaining for these persons some measure of compensation for the losses which they have sustained.

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## SENATE RESOLUTION 80—SUBMISSION OF A RESOLUTION AUTHORIZING THE PRINTING OF "LEGISLATIVE HISTORY OF THE FEDERAL CONSTRUCTION SAFETY ACT"

Mr. WILLIAMS. Mr. President, I submit, for appropriate reference, a resolution authorizing the printing of additional copies of the committee print entitled "Legislative History of the Federal Construction Safety Act."

The ACTING PRESIDENT pro tempore. The resolution will be received and appropriately referred.

The resolution (S. Res. 80), which reads as follows, was referred to the Committee on Rules and Administration.

S. RES. 80

*Resolved*, That there be printed for the use of the Committee on Labor and Public Welfare three thousand three hundred additional copies of its committee print of the "Legislative History, first session, entitled "Legislative History of the Federal Construction Safety Act."

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## SENATE RESOLUTION 81—RESOLUTION AUTHORIZING SUPPLEMENTAL EXPENDITURES BY THE COMMITTEE ON COMMERCE FOR INQUIRIES AND INVESTIGATIONS—ORIGINAL RESOLUTION REPORTED

Mr. HARTKE. Mr. President, I report, from the Committee on Commerce, an original resolution authorizing supplemental expenditures by the Committee on Commerce for inquiries and investigations, and ask that it be referred to the Committee on Rules and Administration.

The ACTING PRESIDENT pro tempore. The resolution will be received and referred as requested.

The resolution (S. Res. 81), which reads as follows, was referred to the Committee on Rules and Administration:

S. RES. 81

*Resolved*, That the Committee on Commerce, or any subcommittee thereof, is authorized to expend, through February 29, 1972, from the contingent fund of the Senate not to exceed $150,000, in addition to the first amount and for the purposes stated in Senate Resolution 25, Ninety-second Congress, agreed to March 1, 1971, such amount having not been included in that resolution because at the time at which that resolution was considered there was insufficient information to determine the total amount of expenditures the committee would incur in conducting its inquiries and investigations. Of such $150,000, not to exceed $14,000 (which shall be in addition to the amount specified in section 2(1) of such resolution) may be expended for the procurement of individual consultants or organizations thereof.

## ADDITIONAL COSPONSORS OF A RESOLUTION

SENATE RESOLUTION 58

At the request of Mr. HARRIS, the Senator from Indiana (Mr. BAYH) was added as a cosponsor of Senate Resolution 58, expressing the sense of the Senate on impounded public works funds.

## STUDY OF NATIONAL FUELS AND ENERGY POLICY—AMENDMENT

AMENDMENT NO. 26

Mr. ALLOTT submitted an amendment, intended to be proposed by him, to Senate Resolution 45, a resolution to authorize a study of national fuels and energy policy, which was referred to the Committee on Interior and Insular Affairs and ordered to be printed.

## NOTICE OF HEARINGS ON THERMAL POWERPLANT CONSTRUCTION IN THE DESERT AREAS OF THE PACIFIC SOUTHWEST

Mr. JACKSON. Mr. President, the Senate Committee on Interior and Insular Affairs in scheduling field hearings for May 24, 25, and 26 in New Mexico and Utah on the situation which has resulted from the development of a thermal powerplant complex in the Four Corners area. The Four Corners powerplant now has units in operation with total installed capacity of 2,135 megawatts. The Mojave plant in southern Nevada, which has 750 megawatts of capacity in operation, utilizes coal from the Navajo Indian Reservation in the Four Corners area. At the present time, the 2,310 megawatt Navajo steamplant near Page, Ariz., and another 750 megawatt unit at the Mojave plant are under construction. Proposals are under active consideration for another 10,000 megawatts of thermal powerplants in the southwestern desert surrounding the Four Corners area.

This massive installation of coal-fired thermal powerplants has had important impacts upon the region. Questions have been raised concerning the long-range effects of operations upon the air and water and the desert ecology. Extensive surface mining operations will be required to provide the necessary fuel. A significant portion of the scarce water resources of the Colorado Basin will be consumed by the plants. The introduction of a major industry will have a variety of social and economic impacts upon the Indian people and other citizens of the Four Corners area.

The Federal Government has very important interests and responsibilities in this development. There are obvious concerns that appropriate air and water pollution standards are being met and that the highest reclamation techniques be applied to the lands that are being surface mined. The Secretary of the Interior as trustee for the Navajo and Hopi Indians has participated in the contracts for development of nearly all of the coal which will supply the plants. Some of the plantsites are located on Indian reservations, and transmission lines traverse Indian and public lands as well.

In the Colorado River Basin, the Secretary has unique authority to act as water master in the appropriation of a scarce and essential resource. Nearly all of the water used by the existing and proposed powerplants will involve contracts with the Secretary, and most plants will divert water from works on Federal reclamation projects. Finally, the Secretary is an actual participant in the Navajo steamplant now under construction near Page, Ariz. One-fourth of the plant's capacity or 561 megawatts will be financed and used by the Bureau of Reclamation for pumping power for the Central Arizona project. This participation was authorized by the Congress in the Colorado River Basin Project Act of 1968—82 Stat. 885—as an alternative to the construction of hydroelectric dams in the Grand Canyon.

In view of all of the Federal interests and responsibilities involved in the Four Corners region, the Interior Committee considers it essential that hearings be held on the status of these various proposals, the actual effects of existing projects, and the measures which are being taken to control the impacts of proposed projects. I am extending an invitation to the Senators from the States of Arizona, Colorado, New Mexico, and Utah, who are not members of the committee to participate in the hearings. In addition, I am inviting the chairman of the Public Works Committee, the senior Senator from West Virginia, Mr. RANDOLPH, to designate representatives of his committee, which has handled the Federal air and water quality legislation, to participate in the hearings.

The hearings will be held in the following locations:

Albuquerque, N. Mex., May 24; Farmington, N. Mex., May 25; Salt Lake City, Utah, May 26.

## NOTICE OF HEARING ON THE INTERSTATE ENVIRONMENT COMPACT

Mr. McCLELLAN. Mr. President, on behalf of the Committee on the Judiciary, I desire to give notice that a public hearing has been scheduled for Monday, Tuesday, and Wednesday, April 19, 20, and 21, 1971, at 10:30 a.m., in room 2228, New Senate Office Building, on S. 907, a bill to consent to the Interstate Environment Compact.

At the indicated time and place persons interested in the hearing may make such representations as may be pertinent.

The hearings will be held before the full committee.

## NOTICE OF HEARING ON REORGANIZATION PLANS

Mr. RIBICOFF. Mr. President, the Subcommittee on Executive Reorganization and Government Research will hold a hearing on S. 878, on Wednesday, March 24, 1971. The hearing will be held in room 1202 of the New Senate Office Building at 9:30 a.m.

## NOTICE OF HEARING ON A NOMINATION

Mr. McCLELLAN. Mr. President, the following nomination has been referred to and is now pending before the Committee on the Judiciary:

John Finley Witherspoon, of Maryland, to be an examiner-in-chief, U.S. Patent Office, vice James E. Keely, resigned.

On behalf of the Committee on the Judiciary, notice is hereby given to all persons interested in this nomination to file with the committee, in writing, on or before Tuesday, March 30, 1971, any representations or objections they may wish to present concerning the above nomination, with a further statement whether it is their intention to appear at any hearing which may be scheduled.

## APPOINTMENTS BY THE VICE PRESIDENT

The PRESIDING OFFICER (Mr. STEVENSON). The Chair, on behalf of the Vice President, pursuant to Public Law 84–1028, announces the appointment of the following Senators to the Board of Visitors to the U.S. Air Force Academy: The Senator from Montana (Mr. MANSFIELD), the Senator from North Dakota (Mr. YOUNG), and the Senator from Oklahoma (Mr. HARRIS). The Chair also announces the appointment, by the chairman of the Committee on Armed Services, of the Senator from Colorado (Mr. DOMINICK) to be a member of the same Board.

## ADMINISTRATION CRITICISM OF NEWS MEDIA

Mr. BYRD of West Virginia. Mr. President, the administration is apparently carrying criticism of the media to new heights. I am referring to the reports that claim the White House blamed ABC's the Dick Cavett Show with contributing to the defeat of the SST in the House of Representatives. These reports state further that the administration pressured the Dick Cavett Show into canceling a scheduled debate on the SST and presenting, instead, just the supporter of the project.

Mr. President, I cannot see where a debate between SST Project Manager William Magruder and the distinguished Senator from Wisconsin (Mr. PROXMIRE) would have been "unfair." I happen to believe that the United States should proceed with research on the SST; but I also believe that opponents of the project should have an opportunity to meet, in face-to-face debates, with advocates of the SST—especially on television, where debates do more to involve the general public than they do here on the Senate floor.

In my limited experience of watching television, I have found the Dick Cavett Show to be among the fairest and most informative programs on the air. Advocates of the SST, for instance, appeared opposite both the distinguished Senator from Wisconsin (Mr. PROXMIRE) and the able Senator from Indiana (Mr. BAYH) on earlier shows.

Mr. President, I have today sent a telegram to Mr. Cavett, urging him to resist any pressure to present only one side of any issue.

I ask unanimous consent that the telegram be printed in the RECORD.

There being no objection, the telegram was ordered to be printed in the RECORD as follows:

MR. DICK CAVETT,
*American Broadcasting Co.*
*New York, N.Y.:*

As a supporter of the SST, I commend you for the fairness you have shown in presenting both sides of this very important issue. I hope you will not be pressured or intimidated into presenting only one side of this, or any other, issue.

Your responsibilities to the public are as great as are the responsibilities of elected public officials. There are no options available to us in meeting those responsibilities.

ROBERT C. BYRD,
*U.S. Senator.*

## ADDITIONAL STATEMENTS

## ABUSES OF THE METHADONE PROGRAM

Mr. BYRD of Virginia. Mr. President, for the past 3 weeks, I have been engaged in an attempt to obtain an answer from the Food and Drug Administration and the Department of Health, Education, and Welfare, concerning a grave situation imperiling the youth of a northern Virginia community.

For some period of time, the Food and Drug Administration has been issuing licenses to physicians in the District of Columbia, and elsewhere, to dispense a drug called methadone. This powerful and addictive substance is utilized in an attempt to cure heroin addiction, the theory being that the heroin addict's dependence is shifted to methadone addiction. The methadone addict is able to obtain this synthetic drug cheaply and legally, and thus is not forced to engage in crime to support his habit. The effect of methadone upon the body is said to be far less incapacitating than is that of heroin.

Unfortunately, this grim cure has led to some disastrous side effects.

Methadone produces its own "high," which, while not the euphoria of heroin, is nonetheless appealing to those who seek to experiment with drugs.

During the last 17 months, five northern Virginia young people have died from overdoses of methadone, after obtaining this drug from so-called treatment centers in the District of Columbia. Within the last 10 days, one more Fairfax County youth has been critically ill from an illegally obtained overdose of methadone.

The Commonwealth Attorney of Fairfax County, Mr. Robert F. Horan, has informed me that "Fairfax County does not have a heroin problem; it has a methadone problem." I know of few law enforcement officials in this country as dedicated and knowledgeable in the field of drug abuse as Mr. Horan. He has worked untiringly for the last 3 years in coping with northern Virginia's drug problem and has been totally frustrated by the current Food and Drug Administration inaction.

For the past several months, various law enforcement agencies in this area have been aware of the traffic in methadone, which is spreading from the District of Columbia to the suburbs. The crux of this problem is that the Food and Drug Administration has licensed certain physicians to dispense methadone as part of their treatment programs for heroin addicts. That the licensing procedures have failed to incorporate worthwhile standards of supervision seems obvious.

Several months ago, a reporter for a northern Virginia newspaper entered the office of a physician in the District of Columbia and stated to the doctor that he was addicted to heroin. When the doctor commented upon the absence of needle scars on the arms of the reporter, the reporter informed the doctor merely that it was his practice to inhale the heroin. Based upon this information and no other, the doctor proceeded to sell to the reporter an ample supply of the drug methadone. No investigation of any value was conducted.

Law enforcement agents, operating clandestinely, have added to this tale of insufficient, or nonexistent, investigation by certain physicians who would appear to be more interested in charging high prices for the methadone dispensed, than they are in curing addicts.

Upon being informed of this situation, I directed a member of my staff to obtain information for me concerning this problem.

The Bureau of Narcotics and Dangerous Drugs informed my office that they were aware of the problem of the abuse of methadone dispensing privileges, and that several months ago, they had forwarded to the Food and Drug Administration a set of proposed regulations which would provide for strict enforcement procedures surrounding the dispensing of methadone.

In contrast, comments given to my office by the Food and Drug Administration can on no account be said to be satisfactory.

The Food and Drug Administration stated that a physician may be licensed to dispense methadone as part of an experimental treatment plan; that the physician's records would be reviewed annually.

I repeat, the FDA at this time requires only an annual review of the doctor's records. This policy of the FDA was still in effect, even after five young people had died, and after well-documented news stories concerning the criminal abuses of the methadone program in the District of Columbia were published.

On February 26, I wrote Dr. Charles E. Edwards, Commissioner of the Food and Drug Administration, expressing my dismay and dissatisfaction with this program. I asked him at that time to take some immediate action to implement the enforcement regulations which had been forwarded to him by the Bureau of Narcotics and Dangerous Drugs.

I received no reply to my letter to Dr. Edwards, nor have I ever received a letter from Dr. Edwards himself. On March 4, I received what can only be described as an "interim" letter from the Director of the Office of Legislative Services of the Public Health Service of the Food and Drug Administration. That gentleman stated in his letter than "an investigation of this matter has been initiated."

In subsequent discussions with a member of my staff, the Office of Legislative Services of the Food and Drug Administration stated that they could not understand why there would be a legal problem in applying sanction to a physician who abused his license to dispense methadone. This position was adhered to even after the FDA spokesman was informed that law enforcement officials in the District of Columbia and the surrounding jurisdictions are agreed in their view that as long as a physician is licensed to dispense methadone, that he has a perfect defense, even if he abuses the provisions of his license.

I fail to see why this is not apparent to the officials of the Food and Drug Administration. They need only to consult with the Justice Department to have it explained to them.

On March 12, 1971, having received information from the Food and Drug Administration that the Secretary of Health, Education, and Welfare was considering this matter, I telegramed Secretary Richardson and stated that I had been informed that the Bureau of Narcotics and Dangerous Drugs has been ready for months to effect a law enforcement program, and I asked Secretary Richardson to make a decision to implement a law enforcement program immediately. To this date, I have received neither an answer nor an acknowledgment of the telegram.

Mr. President, I feel that this intolerable situation has proceeded long enough. Young people are being exposed to a lifetime of misery and possible death, while the bureaucracy of the Department of Health, Education, and Welfare slowly attempts to understand a problem which has been explained to them time after time by knowledgeable persons.

Mr. President, I ask unanimous consent to have printed in the RECORD the text of Mr. Horan's letter to me of February 22; a letter addressed to Virginia Attorney General Andrew P. Miller, dated March 2, from Mr. F. John Kelly, executive director of Virginia's Council on Narcotics and Drug Abuse Control; and a letter to me from the attorney general of Virginia dated March 15. Each of these gentlemen has sought my assistance.

There being no objection, the letters were ordered to be printed in the RECORD, as follows:

COMMONWEALTH OF VIRGINIA,
COUNTY OF FAIRFAX,
*Fairfax, Va., February 22, 1971.*

Senator HARRY F. BYRD, Jr.,
*U.S. Senate,*
*Washington, D.C.*

DEAR SENATOR BYRD: As you know on February 20, 1971, a sixteen year old Fairfax County youth succumbed in this County from an overdose of the drug methadone.

This youngster represents the fifth methadone fatality in this jurisdiction in the past sixteen months and he is the second sixteen year old to die of a methadone overdose in the last five months. The drug methadone (dolophine hydrochloride) is presently being used in a great number of narcotic addict rehabilitation programs in the metropolitan area of Washington.

The Fairfax County Police Department and myself have become increasingly concerned over the past twelve to eighteen months over the easy availability of this narcotic in the Northern Virginia community. Investigation reveals that a substantial percentage of this drug being found in drug abuse circles in this area has been prescribed for supposed addicts by private practitioners in the District of Columbia. The Commonwealth of Virginia has absolutely no control over the method of dispensing this drug in the District and it appears that two major problems are being presented here because of its easy availability. Problem number one concerns the diversion of this drug into channels whereby a compound that was originally prescribed for a particular person as a rehabilitative measure is then being sold or delivered to others illegally. Problem number two concerns the fact that an increasing number of Northern Virginia youngsters have begun using this medical narcotic as the abuse drug of choice. The recent subcommittee report of Congressman Pepper speaking for the House Select Committee on Crime made the following comment:

"There is no question that methadone is an addictive drug. Every precaution against diversion must be observed. While we believe the drug should be reclassified, we do not believe that individual private practitioners should be allowed to prescribe methadone for prolonged maintenance of individual heroin addicts." In a footnote to that particular passage, the Committee had this to say: "Methadone maintenance must be accompanied by proper psychiatric, social and vocational services. Single practitioners dispensing methadone are obviously not equipped to provide these additional and necessary support services." To that comment of the Committee, I can only add a fervent amen.

While on the one hand I support properly run and controlled methadone maintenance programs, I cannot stand idly by and continue to see a growing abuse of this drug. The Fairfax County Police and myself have banged our heads against a brick wall for a substantial period of time attempting to cope with a source of supply that is outside our jurisdictional limits. This being so, I now ask for the help of your good offices to attempt to compel Federal guidelines for the methadone rehabilitation programs existing among private practitioners in the District of Columbia. To my knowledge there are Federal agencies with a vital interest in this problem, one being the Bureau of Narcotics and Dangerous Drugs and the other being the Food and Drug Administration. Guidelines from these agencies must be revised to cope with the increasing availability of this physically addictive narcotic. I would appreciate very much any aid or assistance that you might give us in this regard.

I would be happy to discuss this matter with you or any member of your staff if you deem it proper.

With best regards, I am

Sincerely,

ROBERT F. HORAN, JR.,
*Commonwealth's Attorney.*

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COMMONWEALTH OF VIRGINIA,
OFFICE OF THE GOVERNOR,
*Richmond, Va., March 2, 1971.*

Hon. ANDREW P. MILLER,
*Attorney General of Virginia,*
*Supreme Court Building,*
*Richmond, Va.*

DEAR MR. MILLER: As Director of the Drug Abuse Council, one of my official functions is to keep an extremely watchful eye on the drug trends for abuse in our State. As you probably well know, the Commonwealth has experienced its fifth death from methadone in Fairfax County, in the last eighteen months.

After talking with the Fairfax Commonwealth Attorney, Mr. Robert Horan, I find that the situation is even more severe than it seems on the surface—if, in fact, anything could be more severe than the death of five teenagers. The oldest was nineteen, two were eighteen, and two sixteen years of age. From what I can gather, the methadone is being acquired from "legal" sources in the District of Columbia. The drug controls in the District are not at all like the controls on our methadone program in Virginia. General practitioners are prescribing the drug under very loose conditions in D.C. Some of these conditions are radically reprehensible.

Mr. Horan said that he, using the services of a reporter from the Norhern Virginia Sun, had the reporter checked medically and his urine screened. Two of Mr. Horan's detectives took the reporter to a D.C. doctor. The reporter told the doctor he was an addict. The physician looked at his arms and asked him why there was no evidence of "tracks." The reporter's only comment was, he inhaled heroin through his nostrils (known as "snorting"). Upon this questioning and definitely inadequate physical, the doctor then sold the reporter fifteen dollars worth of methadone, a dosage level high enough to be lethal to approximately four average people.

The deaths of these children are tragic and cannot be reversed but certainly the conditions which led to these deaths can be alleviated.

When several doctors in the Roanoke area felt it was necessary to dispense methadone to addicts, the Federal Government quickly stopped them because they did not have an IND Stamp (Investigative New Drug). Dr. George Bright flew to the Roanoke area where he helped set up a methadone clinic in one of the hospitals on a temporary federal permit.

We have a program, of which I am sure you are aware, in Richmond in the Medical College of Virginia, Department of Pharmacy Services, which is working under strict federal and State guidelines. The Federal Government was quick to close down an operation which was illegal in the State and rightly so. The State corrected these conditions with a good program but unacceptable conditions still exist in the District of Columbia which has tragic effects on Virginians. Is there some direction the Commonwealth can take to convince the District of Columbia that its methadone practices must be strengthened according to their own federal guidelines? Mr. Horan tells me that he has exhausted his attempts in trying to get the Bureau of Narcotics and Dangerous Drugs or the Food and Drug Administration to take an active role in the District.

If there is any way I may support or facilitate you in this, please do not hesitate to call.

Sincerely yours,

F. JOHN KELLY.

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COMMONWEALTH OF VIRGINIA,
OFFICE OF THE ATTORNEY GENERAL,
*Richmond, Va., March 15, 1971.*

Hon. HARRY F. BYRD, Jr.,
*U.S. Senate, Senate Office Building,*
*Washington, D.C.*

DEAR SENATOR BYRD: I am enclosing a copy of a letter from Mr. F. John Kelly, the Executive Director of the Governor's Council on Narcotics and Drug Abuse Control of the Commonwealth of Virginia. His letter reflects growing concern in the Commonwealth over the lack of control of the drug, methadone, in the District of Columbia. We fully understand the extent of the heroin problem in the District. Virginia communities are unfortunately also experiencing an increase in heroin addiction. However, we feel that methadone can be used as a valuable tool in the treatment of the heroin addict only when proper controls are implemented and enforced.

As you know, methadone is itself an addicting drug and subject to great abuse. Treatment programs for addicts throughout the country that have utilized methadone are subject to strict federal controls. When these restrictions are observed, there has been significantly low incidence of the abuse of this drug. Tragedies such as our citizens in Northern Virginia have recently experienced in this regard result from loosely controlled programs. It is quite apparent that the strict federal controls are not adequately enforced in the District of Columbia, with the result that serious abuses occur both in the District and in the surrounding localities. The risk to our citizens and those of the District is unnecessary.

I would strongly urge you to investigate this particular situation and take the appropriate steps to assure that corrective action is immediately implemented. If this office can be of any assistance, please call on us.

With kindest regards, I remain,

Sincerely yours,

HON. ANDREW P. MILLER,
*Attorney General.*

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## DANGEROUS RESIDUES IN IMPORTED MEAT PRODUCTS

Mr. HRUSKA. Mr. President, my name has been added as a cosponsor of S. 571 relating to dangerous residues in imported meat products, sponsored by my friend the senior Senator from Kansas (Mr. PEARSON).

The bill is designed to strengthen the inspection of foreign meat which is imported into the United States. It would do so by requiring foreign meat suppliers to maintain the same rigorous standards for chemical and metal residues set for meat produced in the United States.

It seems imperative to me that if we are to protect our consumers from economic poisons such as pesticides and herbicides in our food products, we must place foreign and domestic producers on the same requirement base as far as residue standards are concerned.

The legislation also will eliminate whatever competitive advantage a foreign supplier might gain because his country maintains less stringent health and environmental standards than we do.

In his introduction, the Senator from Kansas pointed out that the Foreign Review Board established by the Wholesome Meat Act of 1967 is not equipped to perform adequate tests on foreign meat. The present sampling program is not so effective as inspection procedures imposed on domestic producers.

While the Wholesome Meat Act gives the Consumer and Marketing Service authority to strengthen the program, it seems to me infinitely better that these changes be dictated by appropriate legislation.

I am pleased to join the Senator from Kansas, therefore, in sponsorship of this measure to close an important loophole in an act which has proved to be an invaluable tool in the process of insuring safe and reliable meat products for the Nation.

## ROOTS OF INVOLVEMENT

Mr. SYMINGTON. Mr. President, two able members of the Nation's news media, Marvin Kalb, of CBS, and Elie Abel, formerly of NBC and currently dean of the Columbia University School of Journalism, have now combined their knowledge, their experience, and their talents to write a book entitled "Roots of Involvement."

This absorbing volume is not yet published but will be out shortly; and now that I have seen an advance copy, I can say without reservation that anyone interested in the present position of the United States in this fast-moving world of today—where we are now and how we got there—will find it a difficult book to put down.

With the publisher's permission, I quote two paragraphs from the introduction as contained in "Roots of Involvement." They summarize, and illustrate well, the penetrating thoughtfulness of its contents, not only in connection with our current status in Southeast Asia, but also with respect to the formulation of the foreign policy of the United States during the present century.

The Vietnam involvement was undertaken in massive American ignorance of Southeast Asia, compounded by failures of military and political judgment, questionable intelligence, dubious and frequently overblown Presidential rhetoric, together with a steadfast refusal to recognize that the national interest of the United States cannot be stretched to encompass the whole of the great blue globe without risking disaster at home. (p. 10)

We found no substantial evidence that the United States was driven by imperialist motives—as the neo-Marxists would have us believe—to search for markets and raw materials—i.e., profits—in Vietnam. Instead, we found a rich, generous, and powerful nation stumbling step by downward step, into the longest, most costly, and most disruptive war Americans have ever fought, in the misguided belief that when things go wrong anywhere in the world the commitment of sufficient American dollars and—if need be—of American soldiers, must surely put them right. (p. 11)

## BUILDING A MEDICAL DELIVERY SYSTEM SUITABLE FOR THE 20TH CENTURY

Mr. SCOTT. Mr. President, the Philadelphia Inquirer says in an editorial that—

President Nixon has put the emphasis where it belongs—on building a medical delivery system suitable for the 20th Century.

It is my opinion that the Federal Government and the President have for the first time placed their backing behind basic reforms in the national health care system, aimed at transforming this system into an organization whose business is keeping people well. The President spelled out the details in his recent health message to Congress. I am encouraged by thought-provoking articles like this one, and I believe it reflects the views of many Americans.

I ask unanimous consent to have printed in the RECORD the Philadelphia Inquirer editorial of February 21, 1971, entitled, "The President's Health Plan Is Aimed at the Right Target."

There being no objection, the editorial was ordered to be printed in the RECORD, as follows:

THE PRESIDENT'S HEALTH PLAN IS AIMED AT THE RIGHT TARGET

President Nixon's health proposal is the beginning of a revolution in American medicine.

For the first time, the power of the Federal Government and the prestige of the President have been placed behind basic reforms, aimed at turning the medical system from a cottage industry, composed of independent practitioners, into modern organizations, whose business is keeping people well.

While the insurance aspects of this comprehensive prosposal have won earliest attention—because of their obvious importance to the millions of Americans who have no medical coverage—the President's message makes it clear that the U.S. medical crisis will be solved not by insurance but by reform.

As a first step in that direction, President Nixon has proposed pre-paid group practice, which he calls Health Maintenance Organizations, as the basic unit in the medical system.

Most authorities view these organizations as the wave of the future because they integrate doctors and facilities into efficient systems offering cradle-to-grave health care for a fixed fee, paid under contract to the health plans.

Under the new systems, doctors no longer charge individual fees for their services, thereby shifting the emphasis from the treatment of sickness to preventive medicine. As the President pointed out in his message, the doctor's income "grows not with the number of days a person is sick, but with the number of days he is well."

About eight million Americans are already enrolled in such plans, and the Administration would stimulate the growth of HMOs throughout the country with planning grants and federally guaranteed loans.

His proposal will be welcomed in Philadelphia, where several hospitals have launched an embryonic HMO without much help so far.

Other basic reforms in the President's message are also aimed at improving the medical delivery system.

One provision requires insurance coverage of office care, thus discouraging excessive use of the hospitals, the most expensive unit in the health system.

Another shifts regulation of insurance companies from the state to the Federal level. Minimum standards set by the administration are actually quite inclusive, ranging from well body care, to outpatient care and catastrophic insurance coverage up to $50,000 of medical expenses.

To increase the supply of health personnel, the Administration would expand the training of health assistants by 50 percent and infuse new money into hard-pressed medical schools for the purpose of turning out more doctors.

Obviously such sweeping programs as these and other provisions require detailed consideration both inside and outside Congress. And we may be sure it will be forthcoming, thanks not only to the impact of the plan but to the political momentum the health issue is generating as 1972 approaches.

There will be ample time, then, to the specifics as the legislation is introduced and debated.

The important thing for now is the President's recognition that the answer to the problem is not simply to pour more money into the existing medical delivery system. Medicare and Medicaid have already demonstrated that this can fuel the inflation of health care costs by increasing the demand for services without corresponding increases in the supply.

The answer, rather, also calls for fundamental changes in the system itself. With those he has proposed, President Nixon has put the emphasis where it belongs—on building a medical delivery sytsem suitable for the 20th century.

## A SOUND APPROACH TO THE PHYSICAL ENVIRONMENT

Mr. HUMPHREY. Mr. President, I ask unanimous consent to have printed in the RECORD some remarks by Professor René Dubos, made at a recent seminar of the new Woodrow Wilson International Center for Scholars, of which I have the honor to be chairman of the board of trustees. The Center, as many Senators will know, is the Nation's official "living memorial" to the 28th President, located in the Smithsonian Institution building in Washington.

Professor Dubos is a most distinguished biologist on the staff of the Rockefeller University and an occasional participant in Center seminars. More than that, he has in recent years become one of the Nation's most thoughtful and articulate spokesmen for a sound approach to our physical environment. Well known for his many books, Dr. Dubos is a deeply committed humanist, reflective yet activist, realist but optimist, a rare blend of scientist and philosopher. I commend these remarks, which are typical of his insight and approach, to the attention of Senators and to all concerned citizens.

There being no objection, the remarks were ordered to be printed in the RECORD, as follows:

REMARKS OF RENE DUBOS, WOODROW WILSON INTERNATIONAL CENTER FOR SCHOLARS, JANUARY 25, 1971

I decided to focus my remarks today on an approach to environmental problems which is perhaps not very fashionable and is likely to be criticized by ecologists. Rather than speak about cities I am going to address myself to the problems of the country—nature—as created by man. If you wish to have some awareness of the prejudice with which I approach this subject, let me remind you that I was born and raised not in Paris, but in the inner French country; a countryside which has been occupied and used by man for 4,000 years; a countryside in which the forests were destroyed by man 4,000 years ago, and in which agriculture—very intensive agriculture—has been conducted for 40 centuries.

My origins have helped me to acquire the conviction that man can occupy and use the land without destroying its intrinsic qualities. There is no doubt that much of the land of inner France is richer now than it was 4,000 years ago, when it was covered by the primeval forest. Moreover, there is no doubt that the inner French country has continued to be the site of a rich and continuously growing culture, which has been transforming itself while retaining some of its original characteristics.

What I say about inner France applies, of course, to many other parts of the temperate world. It applies to practically all of Europe. It applies to large parts of Asia. It applies in this country too, though the time frame is shorter. For example, certain parts of the Atlantic Coast, like the Pennsylvania Dutch country were created out of the forest more than 300 years ago and have been under constant cultivation ever since. Yet the countryside has remained esthetically pleasant and economically profitable.

I think this demonstrates that even though many of the older civilizations have died as a result of the wearing out of the land, this is not an inescapable consequence of human occupation. It is possible for man to transform the land completely, use it continuously and yet maintain it in a desirable condition. This is what I would like to speak about, and it is almost the opposite of conservation. Conservation means trying to maintain the earth in unaltered form; that is, unaltered by man. I believe there must be conservation of certain parts of the earth; but I will not speak about that.

I am going to speak about man transforming the world. The largest number of human beings and the most prosperous ones among them live in parts of the world which have been completely transformed by man. After all, the whole temperate world used to be covered by forests, and man has from the beginning of time been an enemy of the forest. Man's earliest struggles were against the forest, and civilization as we know it emerged with the beginnings of the agricultural revolution; that is, when man began to cultivate plants that could not live in the forest.

So if you will accept with me for the moment, the fact that man has created the natural environment in which he lives, let us consider the transformations that have taken place. It is perhaps easiest to look at these in Europe, not because the European situation is different than it is in a large part of this continent, but because Europe has a longer history and has gone through a wider range of changes.

Parts of the European forest have been transformed into highly managed state forests. Some of them have been under state control for some 1,000 years and are vastly different from what they were in primeval times. Some of the forests have been transformed into an immense variety of farm lands, adapted in each area to prevailing climatic and geological conditions.

In this country, even the prairie is very likely the creation of man. My friends who are experts in the natural ecology of the United States tell me that a large part of the prairie is the result of fires set by pre-agriculture Indians, beginning as far back as ten to fifteen thousand years ago. Wherever the forest is allowed to come back, the prairie disappears.

Then, there is another still more extraordinary kind of change that has been brought about by man: the kind of landscape found in the moor country of Scotland and eastern England. All of us have read about the moors and have a vivid mental image of them even if we have not seen them. But I suppose few of you know—I certainly did not until a couple of years ago—that the moors are entirely a creation of man. The moor country became established through a progressive process which began in the Bronze Age and culminated in early Medieval times. Recently some English ecologists did an excellent study of the ecological origin of the moor country and demonstrated that the trees that used to cover began to be destroyed by Bronze Age man. Then followed a period of grazing. When Medieval monks began to establish their farms and started raising sheep on a major scale, there came into being a new ecological situation which we now consider the natural one for that part of Britain. England is one of the most telling demonstrations of the shaping of land by man. All of the charming landscape that we consider characteristically English—the "enclosure" type of landscape—dates from the early 18th century.

So we can accept the fact that much of the temperate world has been shaped by man. Man never leaves nature undisturbed. If we want to see undisturbed nature we have to go to the very few parts of the world in which man has never lived. There are very few of these. It seems clear to me that what man has done, has in many cases resulted in the creation of healthy ecologies. More than that, man has been able to bring out of the land qualities that were inherent in it but were not manifest. What man did was to existentialize, so to speak, some of the potentialities inherent in the temperate world. In most cases, in my opinion, this has resulted in an improvement in the quality of the land as judged from the vantage point of man—and this is the vantage point which I am using without apology throughout this presentation. Man has improved the land in a manner that has created fairly stable ecological systems.

One may ask—one always asks—"Well, this is the situation that has applied for the last 2,000 years—in parts of Europe for 4,000 years; but can it last? Are not the kinds of transformations that are going on now destructive due to the impact of modern technology on the land?"

First of all, we are all aware, I am sure, that the impact of technology is not in and of itself destructive. What we object to is the impact of the *mis*management of technology. But I shall not elaborate on this here because I believe there is a more important consideration which should be recognized when we speak of the impact of technology on landscape and on nature in general. This has to do with the fact that the quantitative increase in technological impact that we have witnessed during the past 150 years is not likely to continue for very long. I do not believe it *can* continue for very long—not because of technological failures, but because the laws of physics will impose a ceiling on technological development.

In my opinion the crucial factor is not a shortage of natural resources; nor is it a shortage in the potential supply of energy. It is the limit in the amount of energy that can be fed into natural systems. As you all know, in this country the population is increasing at the rate of approximately 1 percent a year, whereas the consumption of electric energy is increasing at the rate of approximately 7 percent a year. This means that energy consumption is doubling every ten years. It is probable that we can double the amount of electric energy. Perhaps we can even have another doubling of it; but I doubt that we can go very much beyond that—not, as I stated, because of limitations of sources of energy, fossil or nuclear, but because no matter how sophisticated the technology, it is impossible to produce energy without producing heat. I am convinced that the production of heat is going to introduce ecological disorders that will very soon, within 20 or 30 years, put a ceiling on the amount of energy we can use.

When I state this conviction most persons feel that this means technological development is coming to an end; that we are entering a period of stagnation and perhaps, even probably, a period of decadence. Well, I feel just the opposite. I believe that once we have reached a ceiling in the amount of energy we can use and in the production of industrial goods, we can use our technological inventiveness to change from a preoccupation with the quantitative increase in technology to a concern with an increase in its quality. I believe this is going to demand much more inventiveness—technological and social—than we have exhibited during the 150 years when we have been concerned only with an increase in quantity. I believe in other words, that we are going to enter a phase of steady state—but of dynamic steady state because there will be enormous changes within it.

There are, of course, many pessimists around today who feel that it is all too late; that the destruction and degradation of the environment has gone so far that we are beyond the point of possible return. I am sure all of you have heard that it would take so many hundreds of years even to try to bring back the Great Lakes or the Hudson River to an acceptable state. Well, I believe that those who make these statements are not aware of the fantastic resiliency of nature. As I have looked around—and I have not done this for very long; it is only in the past few months that I have begun to concern myself with this—I have had no difficulty in finding example after example where a situation that appeared to be lost has been completely reversed and the environment has been brought back to a very desirable state.

The simplest and perhaps the most telling example, and the one that can most readily be studied and has in fact been studied is the story of Lake Washington in Seattle. Ten years ago Lake Washington was at least as polluted as any of the Great Lakes. Many people felt at that time that it was done for. But eight or nine years ago, after some political difficulties, a control was established over the pollution of Lake Washington; this kind of control did not depend upon purifying the lake, but simply preventing further pollution. By last year, Lake Washington had returned to a state essentially as good as it was when the white man settled in Seattle.

Some of you may be familiar with what is happening in Sweden. The Swedish Government has undertaken a systematic program of trying to save some of the lakes which were being spoiled by drainage or by the wood pulp or other industry, and the reports I have had from the Swedish Embassy indicate that here again, movement has taken place, and several of the lakes are being restored to their initial state.

Then, of course, all of us are familiar with the case of London, which for 200 years has been the most polluted city in the world, with regard to both air and water pollution. After the smog of 1952 in which some four to five thousand persons died, certain stringent measures were enacted to prevent and minimize air and water pollution, with the result that as of last year insolation in London was at least 50% higher than it was twenty years ago. We have all heard about the return of the songbirds to the parks of London. We all have read that for the first time two years ago one could again catch fish in the Thames.

I was in Kalamazoo the day before yesterday and the Kalamazoo River has been one of the worst polluted rivers in the Middle West. But a few years ago, upstream from Kalamazoo, some beginnings were made at controlling the pollution. Last year, some of the most beautiful pike were caught in the Kalamazoo River where before one could catch only carp.

The last example I shall discuss will be Jamaica Bay. To me, Jamaica Bay is the symbol of what can readily be done and an example of a whole social philosophy of nature management. As you all know, Jamaica Bay is just adjacent to the Kennedy International Airport and is part of the wonderful wet land ecology that has made the Long Island area such a paradise for certain forms of water life. But as you know the City of New York has used Jamaica Bay as its garbage dump for many years. Day after day, year after year, tremendous trucks of garbage have been dumped into the Bay, creating islands of garbage. I need not tell you the consequences of this on the destruction of wildlife in the wetland ecology, and I need not tell you what an unsightly condition it created near the airport. A few years ago, an employee of the park department, Mr. Herbert Johnson, who was there simply to act as a supervisor of the garbage dumps, decided on his own, essentially without financial help, almost single-handed, to start planting grasses, shrubs and trees of the kind which he knew were adapted to that part of the country. Those grasses, shrubs and trees began to grow, have grown beautifully so that now one is no longer aware of the garbage,

but sees a natural kind of vegetation that has improved considerably the physical appearance of the Bay. But then there followed something else. As soon as this new vegetation began, and became established, birds began to settle on it and on those artificial garbage islands—an immense variety of birds including some very valuable ones that had been thought to be extinct, or at any rate to have disappeared from that part of the coast, such as the snowy egret, the glossy ibis and the snowy owl. As a result, Jamaica Bay is now one of the richest bird sanctuaries on the whole Atlantic Coast.

This seems to me to be an extraordinary example; one that should be publicized. I have said time and time again that I believe Herbert Johnson should be made one of our national heroes, for he has done a most important thing for our time. He has demonstrated that man can create something positive and desirable even out of an ecological disaster if he is inventive enough. On top of that, he has illustrated once more the important fact that such things can be done by private, individual enterprise. I strongly suspect that had there been a committee appointed by the City of New York, the same result would not have been achieved for many years.

Jamaica Bay faces us as a society with a problem that I consider very typical: the importance of value judgments in deciding what to do with nature. Jamaica Bay, as we know, is adjacent to Kennedy International Airport. It is no secret that Kennedy is overcrowded and needs additional runway facilities. There has existed for several years a plan to expand the Kennedy runways into Jamaica Bay. The National Academy of Sciences has been asked to organize a committee to study the effect of building the runways on the ecology of the Bay. That is fine as far as it goes. I am in favor of all the ecological studies one can make of Jamaica Bay or any other place. But an ecological study alone cannot resolve the issue. Suppose the National Academy's study shows that an extension of the runways *will* do damage or destroy the bird sanctuary, as is likely. At that point, the people of the City of New York, the State of New York, and, possibly, the Federal Government, are confronted with a choice, a set of value judgments: Do they want to improve traffic at Kennedy for a few years, or to build a new airport, or to preserve a bird sanctuary in the Bay? To these questions the National Academy can provide no ready answer. So it is with so many questions in this area. Objective scientific evidence is useful, but only up to a point. It cannot give us a ready-made set of values or make for us the critical decisions we must make, and which our values will dictate.

I believe that this general principle applies just as well to that aspect of natural history which I dismissed at the beginning of my remarks: the conversion of wilderness. It is certain that we cannot defend the conservation of wilderness only in terms of scientific value. There are other values involved, humanistic ones, which are certainly as important, and probably far more important, than those based on natural history. Only in the past ten years or so have we become quite clear about the kind of problem that confronts us. Not only must we use nature to create environments that have value for biological man, but we must be responsive to another set of values which are much more difficult to weigh but which certainly are as important in human life, and which incorporate an esthetic, even a subtle spiritual quality.

Let me end by *not* apologizing for taking a purely anthropomorphic view of the environmental problem. I do not need to apologize because, in fact, for four thousand years, in all the temperate world in which man has lived, there is not, figuratively speaking, one blade of grass which is not manmade.

## MAYOR GRIBBS SUPPORTS PRESIDENT'S REVENUE-SHARING PLAN

Mr. GRIFFIN. Mr. President, the Honorable Roman S. Gribbs, mayor of Detroit, has declared that he will "actively and vigorously support" President Nixon's general revenue-sharing plan.

In a statement delivered before the Common Council of Detroit on February 23, 1971, Mayor Gribbs said:

The proposed General Revenue Sharing is an indication of the establishment of new national priorities and an opportunity to prove the value of the concept. For these reasons I am supporting this proposal.

Because he is a member of the Legislative Action Committee of the U.S. Conference of Mayors, the endorsement of Mayor Gribbs carries added significance.

I ask unanimous consent that the text of Mayor Gribbs' statement be printed in the RECORD.

There being no objection, the statement was ordered to be printed in the RECORD, as follows:

STATEMENT OF HON. ROMAN S. GRIBBS, MAYOR OF DETROIT

Gentlemen, yesterday I began the annual series of budget hearings which lead to the presentation of the proposed 1971–72 Budget to you. The most perplexing problem I have faced as Mayor was evident throughout the discussions yesterday. Simply stated that problem is dollars. How do we get enough of them, and from where, and when? It is a problem that we will face together in the next few months.

Our 5-year financial forecast indicates that Detroit is faced with a revenue shortage of $43 million in 1971–72. New revenue sources must be found to provide that money. 43 million dollar bills laid end to end would stretch some 4,167-miles. I am sure that I have traveled at least twice that far in order to appear before State and National leaders to explain Detroit's financial plight. You have made similar trips in order to focus attention on our problems and to help generate support for their solution.

The fiscal condition of Detroit is connected with the problems of other Michigan cities and to urban areas across the nation. If these problems are to be solved the solution must come from State Legislatures, and especially from Congress where a real power of taxation rests.

I have examined a number of proposals and programs for tax reform and revenue sharing which offer a prospect of successfully resolving our fiscal dilemma. We must immediately begin to support those proposals which have a legitimate chance for success and which logically address the fiscal problems of urban areas.

I am here today to inform you that I will actively and vigorously support the President's General Revenue Sharing Plan. I believe that a joint effort on the part of the Council and the Mayor's Office will be a valuable tool in securing passage of this proposed program. I would like to explain a number of logical and practical reasons for supporting this program and for initiating this joint effort.

Let me begin by repeating some statistics and information that I am sure you are familiar with but which are significant enough to warrant re-emphasizing. According to our most recent estimates, Detroit faces a revenue gap of $43 million in 1971–72. We have exhausted all local revenue sources and without State Legislative approval, it will be impossible to significantly increase local financing. The magnitude of our fiscal problems is such that we cannot expect the State to solve it alone. But, the State of Michigan along with the Federal Government can together provide the kind of revenue sharing program which will be sufficient for the task.

The President's plan contains two basic elements. First, the proposal for General Revenue Sharing which I vigorously support and secondly, the proposal for Special Revenue Sharing about which details are not yet available.

The main features of the General Revenue Sharing Plan provides a good foundation for an equitable and effective program for "revenue return" to State and Local governments in the future.

This plan provides that the appropriation for revenue sharing will be funded in an amount equal to 1.3% of the federal individual income tax base. This means that the allocation of funds will automatically grow as this base increases.

Using this formula the first full year appropriation would be $5 billion. It should be noted, however, that only $3.75 billion will be available in the 1971–72 fiscal year because the plan will not be operative before October 1, 1971.

Most importantly, perhaps, is the fact that this money is not earmarked for any particular program or project. This means that local governments can use these dollars for those needs which have the highest local priorities.

The only conditions which must be met in the use of these funds is that: current state-local sharing efforts must be maintained, and reports of expenditures must be made in order to prevent the discriminatory use of these funds.

Two criteria are used in apportioning the shares allocated to each state. Population is considered first. Then tax efforts are evaluated in order to allot additional funds to those states where the maximum effort is being made to support expenditures with local tax revenues. Michigan will benefit from this formula because our local tax effort is above the national average.

Under this formula, the State of Michigan would receive $229 million in the first full year of the program, or almost $172 million in the 1971–72 fiscal year. This assumes, of course, that the state and local governments can agree on a sharing formula to divide the full portion of the federal fund. Without this formula, Michigan would receive only 90% of our federal allotment. It would be totally inappropriate to fail to arrive at an equitable sharing formula on the state level when such a significant step has been taken by the Federal government.

Because we lack the necessary information, it is difficult to estimate how much revenue this program will generate for the City of Detroit. But I am assuming that it will be large enough to provide a significant initial step toward alleviating our financial crisis.

More importantly though, this General Revenue Sharing Program exemplifies a change in direction by the federal administration. It means that the problems of America's urban areas are, at last, being recognized. And it means that a start is finally being made to return to urban areas the financial resources they are entitled to, and must have, to solve their problems.

For these reasons, I am enthusiastically supporting this General Revenue Sharing Program, and will continue to seek the support of other large city mayors. I think it is a step in the right direction, a first step which is long overdue. Once this program has been allowed to function for a time, I am confident that the results will answer the present critics of this kind of approach to urban finances. Then we will be able to proceed toward a goal of adequately funding all phases of urban government.

The other portion of the President's program for revenue sharing is termed Special Revenue Sharing. The details of this plan are not fully formulated nor as readily available as the details of the General Revenue Sharing Plan. I wish to emphasize that a more de-

scriptive title for this proposal would be "Grant Consolidation Program" rather than revenue sharing. I have some reservation about this proposed program which may be understood better in the context of the following information about the program.

The program provides for appropriations of $11 billion in 1971–72 for these "Consolidated Programs." Of this amount, $10 billion is obtained from already existing activities and $1 billion is new money.

The process of combining existing programs, their consolidation into a single bloc grant mechanism is almost totally unclear at this time. This lack of information requires us to be cautious in our appraisal of the program. There are too many questions about the level of funding, the distribution mechanism and the possible restrictions on expenditures which must be answered before a definite judgment can be made.

We do not know what existing categorical programs are to be combined and in many instances we do not know why this will be done.

Until we have this information, we will be unable to determine whether Detroit is receiving more, the same, or even less funds than we were under the former, categorical programs.

As an illustration of the size of this plan, three major federal programs, Model Cities, MC–HRD and Urban Renewal, which are presently operating in Detroit are included as part of the new consolidated structure.

There is no information about the distribution of these funds, either the formula or the procedure. This means that we will not know what units of government will share the funds and to what extent that sharing will be.

While General Revenue Sharing is scheduled to start October 1, 1971, the Special Revenue Sharing Plan will not begin until January 1, 1972. Such a delay only intensifies the already crucial problems of planning for the activities of the comig year. This is especially critical because of the lack of details concerning the program. This will force action without sufficient planning not only about the potential revenue from this program but also with regard to the cutbacks in existing programs.

There has always been a certain amount of congressional opposition to the very concept of revenue sharing. Questions have also been raised about the equity and effectiveness of the President's proposals for General Revenue Sharing. The growing doubt about the specific programs for Special Revenue Sharing could, in combination with the other opposition, effectively defeat all sharing proposals, the good and the bad.

In this connection, I should comment on a proposal offered by the United Auto Workers and others to the effect that the Federal government should assume the welfare burden of the states and some cities rather than engage in revenue sharing.

I heartily agree that the Federal Government should finance the welfare function. I have long held that view. But I do not see it as an alternative to revenue sharing. The two concepts are certainly *not* mutually exclusive. If we allow attention to be diverted to the welfare proposal or to any of several other equally fine ideas we will be losing the impetus and the momentum that now exists.

I firmly believe that this would be a tragic mistake. The concept of General Revenue Sharing is a good one. We must work to increase the proposed $5 billion appropriation to at least the $10 billion level which it is estimated is required. Ten billion dollars is the sum that is needed to effectively attack the problems of modern urban life. But because our problems are such that we need $10 billion nationally, it does not mean we oppose the present plan to fund at a level of $5 billion per year. Perhaps the $10 billion need can be met by coupling the General Revenue Sharing proposal with the assumption of the welfare function by the Federal government. The proposed General Revenue Sharing is an indication of the establishment of new national priorities and an opportunity to prove the value of the concept. For these reasons, I am supporting this proposal.

I propose that a coalition of Michigan Mayors be established to support the General Revenue Sharing Proposal. Support from both large and small cities across the State could have a decisive effect on, at least, the Michigan Congressional delegation.

I believe the Council could provide valuable assistance in gaining what I feel is critical legislation. By passage of a resolution in support of this proposal and by exerting your influence wherever possible, you could be a critical force in obtaining Federal Revenue Sharing.

## DESIGNATION OF LINCOLN BACK COUNTRY AND SCAPEGOAT MOUNTAIN AREA AS WILDERNESS

Mr. METCALF. Mr. President, I am pleased to have received from the Montana State Legislature a joint resolution of the Senate and House urging that Congress approve Senator MANSFIELD'S and my bill to designate as wilderness the magnificent Lincoln Back Country and Scapegoat Mountain Area.

Mr. President, this proposal has the nearly unanimous support of the people of Montana, of their Representatives in Congress, and their State legislature.

The Senate approved our bill, S. 412, in the last Congress and Senator MANSFIELD and I hope for early action by the Senate as well as by the House in this Congress on the current bill, S. 484.

Other memorials which I have received urge consideration of improved rules to provide for reclamation of lands that have been explored for minerals, a hearing by the Interstate Commerce Commission in Finance Docket No. 26486—abandonment by the Chicago, Milwaukee, St. Paul & Pacific of a portion of its line between Roy Junction and Roy in Montana—and measures to improve the aquatic environment in Fort Peck Reservoir for the production of game fish.

These resolutions all reflect Montana's needs. I hope they will have the attention they deserve.

I ask unanimous consent that the joint resolution of the Montana Legislature be printed in the RECORD.

There being no objection, the joint resolution was ordered to be printed in the RECORD, as follows:

JOINT RESOLUTION

A joint resolution of the Senate and House of Representatives of Montana to the Honorable Mike Mansfield and the Honorable Lee Metcalf, Senators from the State of Montana; to the Honorable Richard Shoup and the Honorable John Melcher, Representatives from the State of Montana, urging that parts of the Lincoln Park Country and Scapegoat Mountain area be enjoined with the National Wilderness Preservation System.

Whereas, parts of the Lincoln back country and Scapegoat Mountain area lie within the national forest system and are in a natural wilderness condition at the present time; and

Whereas, the area is presently being heavily utilized as a natural recreation area for horseback riding, hiking, fishing, hunting, camping, photography, and observation of wildlife; and

Whereas, there is a growing population of Americans seeking high quality outdoor recreational opportunities; and

Whereas, the Lincoln back country and Scapegoat Mountain area contain some of the most spectacular scenic and recreational opportunities to be found in the United States; and

Whereas, these outstanding recreational areas, and the wildlife and scenic opportunities therein are of the highest value in attracting people to Montana for the enjoyment of these areas; and

Whereas, Montana is one of the few states where this type of outdoor recreation containing a complete wildlife community in its natural environment can still be enjoyed; and

Whereas, the grizzly bear, the majestic elk, the native cutthroat trout, the Rocky Mountain goat and various other species, some of them endangered, abound in this area; and

Whereas, these areas should be preserved and protected for the enlightment, education, and enjoyment of future generations.

Now, therefore, be it resolved by the Senate and House of Representatives of the State of Montana:

That the forty-second legislative assembly of the state of Montana urges the congress of the United States to take the appropriate action necessary to identify those parts of the Lincoln back country/Scapegoat areas best suited to optimum recreational purposes and include them in the National Wilderness System.

Be it further resolved, that the secretary of state is instructed to send copies of this resolution to each member of the Montana congressional delegation.

## THE BALANCE OF PAYMENTS

Mr. BROCK. Mr. President, I recently read a highly provocative article concerning the balance-of-payments situation. The article, entitled "A Passive Balance-of-Payments Strategy for the United States," authored by Dr. Lawrence B. Krause of the Brookings Institution, makes a number of stimulating observations about this situation. While I may not share all of the positions taken in this piece, certainly many of the points appear to be quite valid and deserving of close consideration.

In arguing for a passive balance-of-payments policy, several benefits of such a policy are claimed: such a policy is seen as both more helpful than current policies to the performance of our domestic economy and also as improving the international adjustment mechanism. The study also persuasively argues against the effectiveness of controls such as those on foreign direct investment.

Such benefits could be particularly important now. As the study points out:

Relief from balance of payments constraints on monetary and fiscal policies may be of particular importance for the economic situation in which the United States now finds itself—underemployed domestic resources combined with a possible balance of payments deficit, a classic conflict situation.

Our current balance-of-payments policies certainly deserve a good, long look. In an effort to aid such analysis, Mr. President, I ask unanimous consent that the article, published in the Brookings Papers on Economic Activity, be printed in the RECORD.

There being no objection, the article

was ordered to be printed in the RECORD, as follows:

A PASSIVE BALANCE-OF-PAYMENTS STRATEGY FOR THE UNITED STATES

(By Lawrence B. Krause*)

While the international monetary system is constantly evolving, most changes are relatively minor so that certain periods of history can be characterized by a particular monetary standard. The best description of current monetary arrangements is the dollar standard. The dollar standard may well be the best arrangement for the international monetary system of today, but there is little reason to expect or to desire it to be maintained indefinitely into the future. The purpose of this paper is to examine the proper balance-of-payments policy for the United States during the period of the dollar standard.

At the outset it might be useful to clarify what is meant by a U.S. balance-of-payments policy. A balance-of-payments policy measure is a governmental action whose primary purpose is not related to a domestic economic need and that would not be undertaken except for a perception of a disequilibrium in the balance of payments. This negative approach to a definition is necessary because all economic policies in one way or another influence the balance of payments; motivation rather than consequence must, therefore, be the distinguishing characteristic. Thus the 1968 tax surcharge was not a balance-of-payments policy by this definition even though it had substantial impact on the U.S. external position and was even described as a balance-of-payments measure by the President.[1] On the other hand, the program of mandatory controls on foreign direct investment administered by the Office of Foreign Direct Investment (OFDI) is a balance-of-payments measure.

Not all policies are easy to classify. The timid monetary policy pursued by the Federal Reserve in the years following the 1960–61 recession may have contained elements of a balance-of-payments policy. However, one can fully explain monetary conditions in those years in terms of the inflation-unemployment preferences of the Federal Reserve System as revealed after the 1953–54 and 1957–58 recessions.[2]

It is also necessary to consider more explicitly the objective of U.S. balance-of-payments policy. Under existing international monetary arrangements, other countries can exhaust their international reserves and must, therefore, take policy actions to avoid that contingency. All balance-of-payments measures of other countries can be considered attempts to defend a fixed exchange value of their currencies—either the existing rate or a new rate. Canada, during both the past and current periods of a flexible exchange rate, is an obvious exception.

In contrast, the United States cannot run out of international reserves as long as the world stays on the dollar standard. The dollar is the world's principal reserve currency for other countries and the United States itself. Deficits on official settlements can be financed by increases in U.S. liabilities and, therefore, the finite size of U.S. reserve assets is not an operative constraint on the United States. To be sure, at some hypothetical rate of accumulation, other countries will exercise their legal right to convert their official dollar holdings into gold. Significant official conversions of dollars to gold would mark the end of the dollar standard. The apocalyptic nature of dollar-gold conversions is well understood by industrial countries and this knowledge prevents large-scale conversions. Flexible exchange rates are an alternative to the dollar standard or any standard based on fixed exchange rates, and their adoption (even on the crawling peg-automatic formula basis) would end the present arrangement. The United States is the central figure in the dollar standard system, and its balance-of-payments objective is to maintain the viability of the system.

The dollar standard is quite different from what was intended by the framers of the Bretton Woods agreement and in some respects differs from the system actually in operation during much of the postwar period. The Bretton Woods agreement viewed the United States as another country in the system—different in dimensions but not in kind. The United States was considered able to control its balance of payments and was to be held accountable for it. The reserve position of the United States was thought to constrain U.S. policy, either through a loss of reserve assets or through a deterioration in the ratio of reserve assets to liquid liabilities to foreigners, like the United Kingdom and France. In the event of a fundamental disequilibrium, the dollar was expected to be devalued or appreciated. In fact, the system never worked in this manner. The problem of recovery from World War II proved too great for the International Monetary Fund (IMF) and the International Bank for Reconstruction and Development (IBRD), and the United States stepped into the breach, accepting the responsibility for the recovery of the entire noncommunist world. Even after production exceeded prewar levels and the recovery period per se had ended, the United States continued to bear the responsibility for the viability of the system and continues to do so. Thus despite the fact that the U.S. balance of payments was in deficit for much of the 1950s, the prevailing view was that a dollar shortage was present because the system required the dollars resulting from the deficit. If the United States had been like other countries, the balance-of-payments results would have been interpreted as a weakness requiring correction.

Nevertheless, gold still had an important role in the system. If other countries on balance accumulated more dollars than they desired, they were expected to convert the excess into gold—the ultimate reserve asset of the system—and the U.S. loss of reserve assets would indicate to the United States the necessity of restraining the dollar outflow. There was always some ambiguity in the signal since actual gold conversions depended as much on which countries were reserve accumulators—central banks had noticeably different reserve preferences vis-a-vis gold—as on the aggregate of the outflow. Nevertheless, the United States did respond to gold losses, both to official and to private speculators (following the reopening of the London gold market in 1954). For many years the system was adequate, as most newly mined gold ended up in U.S. monetary reserves or in the IMF as a part of the periodic quota increases. As long as there was a substantial and steady increase in the aggregate of monetary gold, other countries could ask for and obtain gold conversions from the United States without weakening the system. Even if the United States was a net loser of gold, the system was still viable because U.S. losses could be recouped from increases in subsequent years. Thus the arrangement could be properly described as a gold-dollar standard.

The system was converted into an unhyphenated dollar standard when gold no longer could adequately perform its monetary role. If a commodity is to be useful as money, its nonmonetary value in the absence of monetary demand must be nil or at best much below its officially supported monetary value. This condition no longer exists for gold. Rising money incomes, new industrial uses for gold, and the constant rise in the money costs of mining have fundamentally altered the private demand-supply relation so that gold is no longer in excess of private supply and has become unstable as money.[3] This condition was anticipated by private gold speculators, who through their own accumulation of gold helped further to undermine the usefulness of gold as money. The change took place in the early 1960s, but was not recognized until later because of substantial Russian gold sales during 1963–65. The conversion to a pure dollar standard evolved as the United States became less and less willing to sell gold to central banks; it was codified by the Washington gold accord in March 1968, which set up the two-tier gold market.

If the United States is the central country in the dollar standard, what is its proper balance-of-payments policy stance for preserving the system? I believe the United States should pursue a passive policy. By this I mean policy makers should refuse to take any measure in response to the usual signals of trouble from the balance-of-payments accounts—persistent change in the net reserve position—but they should display a willingness to shore up the system when it is threatened.

To avoid misunderstanding, I wish to make clear my belief that the United States, because of its relative wealth, has a responsibility to provide real resources to other countries. The policy actions required to do this are straightforward: appropriations for foreign aid and a willingness to permit and possibly even to encourage the outflow of long-term private capital. But these are not balance-of-payments measures.

TYPES OF BALANCE-OF-PAYMENTS POLICIES

One can view countries as choosing between two courses of action in response to balance-of-payments difficulties, and within each of them, between two major variants of policy. They can either adapt themselves to disequilibria or attempt to correct them. If adaptation is chosen, then the country can either finance the disequilibrium (reduce or increase net international reserves) or suppress it, by acting directly or indirectly on international transactions. If it pursues suppression, the balance-of-payments benefits are not sustainable once the policy measure is relaxed.

If correction is desired, then countries can follow either expenditure-reducing or expenditure-switching policies. Expendtiure-reducing policies require reduction of aggregate demand below full capacity levels and the maintenance of this condition until competitive improvement occurs. Expenditure-switching policies require measures to change relative prices directly so that domestic resources are utilized rather than foreign resources.[4]

As with most classification schemes, the distinctions between these courses are not as sharp as they may seem at first. All balance-of-payments difficulties under fixed exchange rates require some financing, because time is required for corrective measures to become effective, even if they are begun immediately upon discovery of the problem. Thus only when financing is not associated with any corrective measure is the approach adaptive. There is also some ambiguity concerning measures to suppress disequilibria. Some, like temporary border charges, quotas, capital controls, and the like, are fairly straightforward. But another class of measures that act on aggregate demand to suppress a disequilibrium, like the British "stop-go" policies of the mid-1960s, is not easily distinguished from expenditure-reducing corrective policies. The difference lies in the effect that management of demand has on international competitiveness (and illustrates yet another instance of the way international economics is hampered by the inadequacy of economic theory—in this instance, inflation theory). In response to a balance-of-payments deficit, a country might reduce the level of domestic economic activity through monetary and fiscal policies,

Footnotes at end of article.

causing greater unemployment than it usually considers desirable. The purpose of the action would be to reduce domestic absorption of tradable goods and services and to improve the international competitiveness of the economy by reducing the rate of domestic price inflation. If it turns out that no competitive improvement has been obtained after domestic economic activity recovers to a more normal level, then the policy has been adaptive rather than corrective.

Indeed, it is the uncertainty of obtaining corrective results from expenditure-reducing policies at tolerable costs that has elevated expenditure-switching policies to primary importance throughout the postwar period. Without question, exchange rate adjustments are the most efficient instrument for effecting a policy of switching expenditures from abroad to home. To be sure, exchange rate changes must be supported by appropriate monetary and fiscal policies. In a pure switching strategy, however, these measures are not undertaken to change the level of domestic economic activity, but to avoid a change resulting from the exchange rate move itself. It is because exchange rate changes are so important in maintaining and restoring balance-of-payments equilibrium that so much attention is now being given to improving the mechanism for carrying them out.

RATIONALE FOR A PASSIVE U.S. STRATEGY

A passive balance-of-payments strategy would involve only adaptive policies of the financing variety. One may well question whether this is a new strategy for the United States or why, if new, it is appropriate now. While financing has long played an essential role in the U.S. approach to the balance of payments, other policies—particularly those of a deficit-suppressing variety—have also been very important. While less emphasis has been placed on nonfinancing policies by the Nixon administration, new measures of this type are still being considered.

In previous periods of history when there was a well-functioning international economy with fixed exchange rates, one country clearly dominated the system. Outstanding examples are the periods before 1914 when the United Kingdom was dominant and after World War II when the United States was unchallenged. The dominant country was crucial to the functioning of the system because it operated the adjustment mechanism through direct measures. When other countries on balance were in deficit, it restored equilibrium in part by forcing the deficit countries to change their policies and in part by direct measures deliberately designed to weaken its own reserve position, such as income transfers abroad. When other countries on balance were in surplus, adjustment was brought about in part again by leverage on the policies of other countries and in part by a deterioration in the liquidity position of the dominant country. The United States is no longer strong enough to operate the system in this fashion and that is why a change in strategy is now required.

The weakening of the United States relative to other countries can be attributed to a number of factors. Probably in major part it is due to the natural catching-up process that goes on in the absence of calamities. This process may have been accelerated somewhat, however, by the operations of multinational companies and other developments. The relative weakening is also due to the much larger fraction of domestic resources devoted to unproductive military uses in the United States. Among industrial countries the relationship between proportion of income devoted to defense and rate of per capita economic growth is not very strong, but it is negative for obvious reasons. Finally the development of exclusive economic institutions like the European Economic Community (EEC) and the European Free Trade Association (EFTA) tends to promote the economic interests of member countries in part at the expense of nonmembers. These factors are in the main not reversible and it would probably be undesirable to reverse them even if it were possible to do so.

A passive balance-of-payments policy would improve the situation in two ways: First, it would tend to strengthen the United States directly and, second, it would improve the international adjustment mechanism and thus render other countries less dependent on the United States. An enumeration of U.S. balance-of-payments policies that could be eliminated with the adoption of a passive strategy hints at the possible cost savings to the United States. Some of these policies are of long standing and rather innocuous, like the export promotion activities of the Department of Commerce and the subsidized lending of the Export-Import Bank. More serious, perhaps, has been the requirement that U.S. development loans to less developed countries be spent only in the United States—so called "tying"—a practice that sustains economic inefficiency in the United States. The imposition of "additionality provisions," which require that aid funds be not merely substitutive for nonaided purchases in the United States, has intensified the impact of tying. Some U.S. military expenditures have been directed to domestic suppliers even in the face of a 50 percent differential in costs favoring foreign procurement. This practice, for instance, was estimated to have cost the government between $30 million and $40 million in fiscal year 1964 alone.[5] The generalized "Buy America" preferences at all levels of government are of a similar, if less extreme, nature.[6]

Since 1963, the United States has levied an interest equalization tax on portfolio investment which discriminates against investments in developed countries except new Canadian issues. Shortly thereafter the so-called voluntary program administered by the Federal Reserve was added to limit foreign lending by commercial banks. At that time the companion voluntary program on direct investment was initiated. In 1968, the voluntary program was converted into the mandatory OFDI program, with substantial controls over the operations of direct investors.

Even if all of the above policies and programs were to be abolished, the improvement in overall U.S. economic performance would be marginal. A further gain might come from improved management of fiscal and monetary policy if decision makers did not worry about the balance of payments. Even though no major shortcoming of demand management in the United States within recent years can be attributed to balance-of-payments considerations, some minor improvements might have been possible in the early 1960s.

Currently the administration has recommended a change in corporate tax laws to permit deferral of tax liabilities on export sales. It is also supporting on balance-of-payments grounds the expenditure of public funds for the development of a supersonic commercial aircraft. An even more far-reaching proposal, supposedly under consideration primarily because of its balance-of-payments effects, is the conversion of the corporate income tax and social security tax systems into a value-added tax along European lines. All of these proposals may have some merit on other grounds, but if they were enacted for balance-of-payments reasons, then some economic inefficiency could be engendered.

The second and more important rationale for a passive balance-of-payments strategy for the United States is the expected improvement in the international adjustment mechanism that would result. The most effective instrument for adjustment (as distinct from adaptation) has been exchange rate changes, but they have become more difficult to effect properly in recent years. The freeing of capital movements from government restrictions in the 1950's, plus the increase in private liquid asset holdings, has made currency speculation possible, and sometimes very rewarding, for private interests at the expense of governments, when they finally make changes in currency parities. Furthermore, exchange rate changes have come to be looked upon as reflections of failure of economic policy rather than as instruments for achieving greater economic efficiency. As has been widely recognized, an improvement in the mechanism is required.[7] Clearly the mechanism would work better if exchange rates were changed promptly in response to maladjustments; this would probably increase their frequency and reduce their average size.

A passive U.S. strategy will help improve the mechanism because the United States will no longer be suppressing its deficit or surplus and therefore will help expose maladjustments in the system so that they can be more easily corrected by others. Because of the basic nature of the dollar standard, the United States cannot change the exchange value of its currency and it need not do so to maintain the equilibrium of the system. The United States can change only the dollar price of gold and if a return to the gold-dollar standard or even to a pure gold standard were desired, then an increase in the price of gold would be needed. But the price of gold and the exchange value of the dollar are logically distinct and should not be confused. As is well known, in a system of $N$ countries, only $N$—1 exchange rates need be kept in equilibrium for the system as a whole to be in equilibrium.[8] If all other countries adjust their dollar exchange rates, then the United States need not exercise any control.

In his paper, Stephen Marris raises the possibility that the United States might initiate a change in exchange rates if it appears that a number of important countries ought to appreciate their rates simultaneously against the dollar (simultaneous depreciations have not been as much of a problem in the past).[9] He points out that a single country might be reluctant to appreciate against the dollar for fear that it might be alone in correcting its undervaluation and thus that its balance-of-payments surplus might be converted into a deficit if it appreciates unilaterally. Marris argues that if the U.S. initiates the change, then all the surplus countries might permit their rates to appreciate because it would not take a positive action on their part to go along.

The Marris argument is not very convincing to me. Obviously the economic consequences will be much the same no matter who takes the initiative as long as the same exchange parity is established. But U.S. action destabilizes reserve holdings, since a U.S. devaluation involves an increase in the price of gold, or special drawing rights (SDRs), or both. Furthermore, as was noted before, exchange rate adjustments require supporting monetary and fiscal measures. The countries involved should be able to pick the timing of the rate change so they can coordinate other policy actions. Indeed, if countries choose to adapt to disequilibrium by financing themselves, that should also be their prerogative. This form of adaptation, if it represents a long-term, consistent policy, would impose no burden on the system as a whole or on the United States in particular, if it is following a passive strategy. If the exchange rate mechanism is going to be improved, governments will have to get over their psychological hangups about initiating a change, although the United States may play a useful role.

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OPERATING CHARACTERISTICS OF THE SYSTEM

A passive balance-of-payments strategy means that in the event of large official settlement deficits—and likewise of large surpluses—the United States would refrain from any policy action. The United States could undertake special financing measures, and even call them military offset arrangements if that were thought desirable from a political point of view, but they would have no economic significance. In reality the United States may not have an alternative to a passive strategy and the only operative question may be whether such a strategy is utilized to its fullest advantage. As is seen in Table 1, annual changes in the official settlements balance since 1964 have been dominated by changes in the capital account, primarily by flows that are responsive to shifts in monetary policy. The experience of the United States in recent years dictates that the monetary instrument be available for domestic economic needs and not be encumbered by balance-of-payments considerations. Apart from monetary policy, anything that might be done to influence the balance of payments would be inconsequential. Thus an announced passive strategy merely makes a virtue of a necessity.

TABLE 1.—ANNUAL CHANGES IN BALANCES OF INTERNATIONAL PAYMENTS, 1960–69

[In millions of dollars]

| | Balances | | Annual changes | | |
|---|---|---|---|---|---|
| | Goods and services | Official settlements | Goods and services | Capital flows | Official settlements |
| Year: | | | | | |
| 1960 | 5,898 | −3,403 | | | |
| 1961 | 7,087 | −1,347 | 1,189 | 867 | 2,056 |
| 1962 | 6,688 | −2,702 | −399 | −956 | −1,355 |
| 1963 | 7,546 | −2,011 | 858 | 167 | 691 |
| 1964 | 9,920 | −1,564 | 2,374 | 1,927 | 447 |
| 1965 | 8,749 | −1,289 | −1,171 | 1,446 | 275 |
| 1966 | 6,302 | 266 | −2,447 | 4,002 | 1,555 |
| 1967 | 6,117 | −3,418 | −185 | −3,499 | −3,684 |
| 1968 | 3,296 | 1,641 | −2,821 | 7,880 | 5,059 |
| 1969 | 2,709 | 2,708 | −587 | 1,654 | 1,067 |

Source: U.S. Department of Commerce, Office of Business Economics, 1969 Business Statistics (1970), p. 14; Survey of Current Business, Vol. 50 (June 1970 and August 1970), pp. 35 and S–3, respectively.

However, the new virtue has concomitant obligations. When the United States sets its domestic economic objectives and fashions its policy instruments to meet them, it must keep the rest of the world in mind. If the United States is to be the fixed point in the system, its economic performance must be reasonably predictable. This means it must avoid extremes of inflation and recession. To reflect the interest of other countries in U.S. economic policy decisions, foreign governments should have a right—indeed, an obligation—to state what they believe are the best policies for achieving U.S. goals as determined primarily by the United States. Americans must welcome the advice of other countries both in public and in private and some institutional changes may be required to provide the proper forum for it. It should, however, always be kept in mind that the balance of payments is not a target of U.S. policy. Silence by other countries should be interpretable as assent to U.S. policies.

The obligations of other countries under this system would not be much different from what they are today. First, governments must recognize that their ability to use monetary policy for domestic stabilization purposes would be greatly circumscribed. They would need to adapt their rate of monetary expansion so that their interest rates would be compatible with those prevailing elsewhere, as determined primarily by U.S. monetary conditions. It has to be recognized that in any system of fixed exchange rates with freedom of private trade and payments, a great deal of monetary sovereignty has already necessarily been surrendered.[10] If individual countries or groups of countries require greater leeway for independent use of monetary instruments, then some institutional changes in both the structure of financial markets and their regulation, and greater margins for fluctuations in spot exchange rates, are required. Secondly, governments should be willing promptly to adjust their exchange rate parities to balance-of-payments disequilibria, in both an upward and a downward direction. If surplus countries choose to adapt rather than adjust to undervaluations of their currencies, they must be prepared to hold their accumulated reserves indefinitely.

What other countries can expect is that the United States will not suppress its balance-of-payments disequilibria as it does now. They would also be ill advised to try to suppress their own disequilibria, for such attempts are either ineffective or terribly expensive.

IMPROVING THE ADJUSTMENT MECHANISM

While following a passive balance-of-payments strategy itself, the United States has an obligation, beyond accepting policy advice from other countries, to do what it can to improve the adjustment mechanism and thereby strengthen the system. The United States must indicate to other countries when it thinks that their exchange rates with the dollar are becoming under- or overvalued. Both bilateral channels, and multilateral channels like Working Party 3 of the Organization for Economic Co-operation and Development (OECD), might be utilized. As the defenders of the system, the United States should initiate discussions of exchange rates if others do not, to ensure prompt attention to possible deviations from equilibrium. Multilateral discussions can provide the catalyst for consideration of, and action on, simultaneous appreciations or depreciations. Fear of encouraging speculation, which has hindered frank exchange rate discussions in the past, can no longer be permitted to paralyze the system.

Secondly, the United States has an obligation to do what it can to obtain creation of sufficient SDRs by the IMF since, in my view, all permanent increases in reserves should be through SDRs. If the United States is following a monetary policy suited to its domestic needs, and other countries on balance are accumulating dollars in official holdings (not matched by U.S. accumulations of SDRs above its allocated amounts), then insufficient SDRs are being created and the United States should press for increases in the allocations. It should urge a reduction in SDR creation if dollar holdings on balance are being reduced. Sufficient liquidity creation is a necessary condition for the viability of the system and, given its role, the United States must take the lead in the IMF in this matter. In the absence of alternative criteria, revealed liquidity desires can be utilized as the guide for "sufficiency," as described above.

Third, the United States must be prepared in extreme situations to take unilateral measures to shore up the system. It is easier to look backward for illustrations than to anticipate what will be required in the future. The kind of measures I have in mind include the unusual loan made to Italy during its crisis in 1963–64, the closing of the London gold pool in March 1968, and the January 1968 balance-of-payments package, including the OFDI program itself. Each of these measures was taken when the system was under extreme strain that called for forceful and immediate action. In all cases subsequent measures were required, but relieving the crisis was of immense importance and best handled unilaterally by the United States. In response to a crisis in the future, the United States might have to act on international reserves by buying or selling large amounts of SDRs for dollars or gold, or conceivably complete the demonetization of gold, or conceivably complete the demonetization of gold by refusing either to buy or sell monetary gold. Also, temporary direct intervention in either current account or capital flows by the United States might be the most effective instrument for stabilizing the system. Depending on the circumstances, the United States must be prepared unilaterally to initiate a wide range of measures for temporary relief, while forcing efficiency-promoting criteria to operate in the longer run.

VIABILITY OF A PASSIVE STRATEGY

Once the desirability of a passive balance-of-payments strategy by the United States is assumed, its viability becomes the question. The viability of any system of fixed exchange rates depends on the cooperation of all of the large countries—called "playing by the rules of the game" in a previous era. Such cooperation comes from a recognition that every country gains from the stability of the system. The viability of the dollar standard similarly depends on a belief by all countries that they gain economically from cooperating. The United States would, therefore, undermine the system if its actions and policies convinced other countries that cooperation is no longer justified.

Clearly the most important, and probably the overriding, consideration in this regard is the economic performance of the United States. Other countries will expect the United States to follow economic policies encouraging reasonably stable growth with price behavior that minimizes the number of required parity changes in the system. The price performance that fits this requirement would be about modal for the system; that is, price increases that are neither the greatest nor the least among the major countries. Such price performance implies a diminishing U.S. trade surplus, but a stable or growing current account balance. Excessive price increases by the United States will force other countries to appreciate their currencies too frequently for the system to maintain its stability over time. Likewise too "favorable" price performance by the United States will force too many devaluations on other countries. Exchange parities must also reflect differences in national growth rates not compensated for by offsetting marginal propensities to import and export; however, U.S. economic behavior cannot be expected to prevent needed adjustments of this kind. No reasonable government can expect the United States to keep to an average path without deviation. Errors of forecasting will obviously be made and misjudgments as to the efficacy of policy instruments cannot be avoided. But serious and continuing deviations will cause difficulties, particularly if they are combined with an official unwillingness to recognize problems that exist or to consider foreign recommendations for U.S. policy actions. If, for instance, Europeans felt that the United

Footnotes at end of article.

States needed an incomes policy to moderate its price increases and the U.S. administration refused to invoke one on the ground that it would do little good, then the system would be weakened. As long as policies suggested by foreigners are aimed at goals acceptable to the United States, the administration should go out of its way to accept them unless they are plainly and strongly counterproductive.

I think the prospects are rather good for the United States to experience the kind of modal price performance required to maintain the viability of the system. The United States has neither the large structural imbalances of the French and British economies, which require substantial inflation for full capacity growth, nor the emotional and political requirement of price stability that prevails in Germany, which makes moderate inflation hard to maintain. The condition of labor markets in the United States compared with those in other advanced countries is likely to be favorable for relative price stability in the foreseeable future. The natural rate of increase in the labor force is much larger in the United States than in other countries except Canada. Furthermore, Americans tend to be more mobile in search of job opportunities than Europeans, with the possible exception of certain Southern Europeans who accept temporary work in Germany. While the United States has a much smaller reservoir of misallocated workers in agriculture and small-scale retailing to meet labor shortages, it has more excess men in the armed forces and more unemployed who can be attracted to job opportunities wih relatively little inflation. Even if there has been an outward shift in the U.S. Phillips curve in recent years, the phenomenon has been quite general among advanced countries, and there is no evidence that the relative position of the United States has changed. The United States has had on average about the right amount of price inflation during the 1960s—a bit too little in the early years, and a bit too much in the later years. Both extremes might be avoided during the 1970s, thus maintaining the position of the U.S. average relative to those of other countries.

The viability of the system might be upset unnecessarily by a conflict between reserve assets—namely, dollars and gold. This does not mean a general rejection of dollars by many important countries, for that would be the last step toward the termination of the dollar standard. Rather, I refer to a situation in which the dollar is generally recognized as the most desirable reserve asset, but gold is still widely held by monetary authorities. It is conceivable that the two-tier gold market might begin to crack if the private price stayed much above the official price and was rising. Under these circumstances governments of some small countries might find a method for arbitrating between the official and private markets without excessive embarrassment. It is conceivable, furthermore, that another de Gaulle might come to power in a major country and see tactical political advantage in converting dollars to gold. Neither of these eventualities is very likely, but either could occur, to the embarrassment of the system. Under these circumstances, gold would have to be completely demonetized with the United States switching its obligation within the IMF to SDRs. Even without a crisis, the system would be strengthened if there were explicit recognition of the eventual demonetization of gold, possibly in a unilateral U.S. declaration.

A third route by which the viability of the system could be undermined would be a political rejection of the United States by other major countries. If, for instance, the foreign policies of the United States were so abhorrent to other countries that they no longer wanted to be associated with them, then they might stop cooperating in the international monetary system, even though they would suffer adverse economic consequences. Large conversions of dollars into gold might not make economic sense for a country, but they might silence the domestic critics who question "paying for another American Vietnam." If America were rejected by its traditional allies, the demise of the dollar standard would be among the least important consequences, but it might well be among the first.

COUNTER-STRATEGIES AVAILABLE TO OTHERS

The adoption of a passive U.S. balance-of-payments strategy would require only unilateral actions: a refusal to suppress disequilibria and a reversal of suppressing policies currently in force. But suppose other countries wanted the United States to continue to suppress or "correct" its disequilibrium, how might they respond? Some options would seem to be available. It might be best to think in terms of the current situation, in which the United States is believed to have a "worrisome" deficit. Other countries, for instance, might threaten to install or to reimpose their own (and probably harsher) restrictions on American direct investors as the OFDI program is dismantled. The legalities of discriminating solely against American investors might cause some problems, but discrimination can be carried out if it is sufficiently desired. Some Europeans are honestly worried about the strength of the dollar, but probably an even larger number are worried about the growing influence of American business in their economies and would welcome an excuse to restrain it.

Unless other countries are willing to initiate a massive international economic conflict, attempts to restrict American direct investors are highly unlikely to be very successful either in slowing the inflow of "unwanted" dollars or in limiting the scope of American business penetration. Capital flows can take many forms and cannot be effectively prevented without complete exchange controls; even their effectiveness is doubtful. The money flow aspect, therefore, can be dismissed out of hand. Many governments can easily prevent new direct investment, particularly if it involves the purchase of an existing enterprise, but such restrictions will not achieve the desired results. With the notable exception of Japan, American firms are already well established within the economies in which they want to operate.

Furthermore, with the freeing of international trade in goods, a market can frequently be served almost as easily from a neighboring country (or from the United States itself) as from within, and thus the restriction of new investment would come to nought. To affect the present situation greatly, many countries in unison would have to roll back the existing American presence; their actions would have to include restrictions on output, sales, and investment of firms legally incorporated as domestic citizens, as well as many new trade barriers. Reasonable governments will not want to embark on this course, for it is sure to lead to the strongest retaliation from the United States and undermine foreign investment everywhere.

Alternatively, other countries might threaten to restrict their exports to the United States to prevent the earning of unwanted dollars. The exports would have to be very special indeed for the United States to feel much deprivation from their absence. Furthermore, the exporting interests in the restricting country will be hurt directly and will probably force a change in government policy long before it forces the United States to consider suppressing its deficit. If countries are accumulating unwanted reserves, they can make the optimum response and appreciate their currencies.

If they are greatly dissatisfied with the U.S. strategy, the most likely response of other countries would be selective sniping at U.S. gold stock—not enough conversions to threaten the system, but enough to get the message across. No doubt this would cause some uneasiness at certain levels within the U.S. government, but the anxiety should be easily overcome. To maintain confidence, the United States must be prepared to use its reserve assets from time to time. Simple welfare considerations would suggest that the United States would gain from using SDRs that pay low interest to retire some dollar liabilities that pay higher interest. Furthermore, the credibility of the eventual demonetization of gold can be established only if the United States is willing to reduce its gold stock when it can gain an advantage from doing so. There may be opportunities for the United States to retire dollar liabilities, which, if initiated by the United States itself, would enhance foreign belief in U.S. self-confidence and thereby forestall sniping against the dollar. But if sniping should start, the passive strategy requires that the United States not respond adversely to small gold conversions, as sensitivity to losses can only encourage them.

The most effective tactic available to other countries to counter a passive strategy by the United States would be an appeal to the "better nature" of American officials. This is the strategy of negotiating from weakness frequently employed by friendly countries against the United States. The appeal begins with an explicit recognition that other countries will be forced to accede to U.S. desires even if they do not believe it is in their own self-interest. This is followed by a "however" paragraph: Doesn't America want to pay her own way in the world? Is it really fair for American firms to buy out European business with dollars that European central banks are subsequently forced to hold against their better judgment? Shouldn't the United States also bear some of the burden of adjustment when it is in deficit even though it bears less burden than other countries?

Such an appeal, when skillfully employed, is an effective strategy against the United States. Americans have a strong sense of moral conviction and many officials have believed in the past that deficits are sinful. After many years of preaching about the need to correct the U.S. balance-of-payments deficit, a failure to do so appears to reflect a lack of American will. Furthermore, the appeal is flattering to many Americans for it exaggerates U.S. power to bring about changes in the world economy. The vision of the early postwar years is re-created: If the United States can overcome a massive surplus, why not a modest deficit?

The proper response by the United States to this attack is to recognize the realities of the situation and to evaluate correctly its responsibilities and its ability to meet them. An American deficit, if it did exist, can be perpetuated only if other countries maintain undervalued currencies relative to the dollar. Unlike the United States, other countries can change their exchange rates. If they want to end a U.S. deficit, they can do so; but if they want to maintain undervalued currencies, there is no effective U.S. policy to force an end to their surpluses. Americans can buy foreign assets at bargain prices only because of a lack of competition by foreigners for their own assets or because of undervalued currencies. Both conditions are correctable only by foreign governments. The United States unquestionably will bear a burden when a deficit is adjusted, for Americans will be able to absorb fewer real resources from abroad; only the mechanism for effectuating the adjustment is in dispute. The real burden that the United States must shoulder should not be confused

with the problem of invoking the adjustment mechanism, which does fall to others. Finally, the United States must recognize its primary economic responsibility to maximize the economic welfare of its own citizens. It cannot do this for the entire world even if it wanted to try. If the United States can meet its domestic needs while avoiding extremes of economic performance, then it will also serve the rest of the world very well. If better economic policy will result from a passive balance-of-payments strategy by the United States, this strategy is to be greatly preferred.

EVOLUTIONARY DEVELOPMENTS POSSIBLE IN THE FUTURE

One can speculate on how the dollar standard might evolve in the future. It could be replaced by a flexible exchange rate arrangement as countries become more expert at, and comfortable with, parity changes, but this is quite unlikely. Alternatively, the dollar standard could evolve into a substantially different system of fixed exchange rates. The passive strategy, as I envisage it, implies a mechanism for evolution, as all reserve growth over time would be provided by SDRs; this development would soon lead to a dollar-SDR standard. There is no reason for the United States to impede this development since it is paying market rates of interest on its official dollar liabilities and is thus not earning any seigniorage on its own creation of international money. Forced replacement of dollars by SDRs in reserves might, however, involve undue windfalls to the United States.

As more and more SDRs enter the system, the IMF will have to take a more active role in advising individual countries on the management of their official reserves. This could be the mechanism whereby the IMF evolves into a real central bank, such as discussed by William McChesney Martin.[11] In time, the management of the IMF could become the controllers of SDR creation, reducing the role of the member countries to the establishers of guidelines for the IMF's managing director. The IMF could also easily expand its role in the determination of exchange rates within a system of fixed exchange rates. If its studies indicated that a currency was under- or overvalued, the managing director at his own initiative could open discussions with the country with the aim of effectuating a parity change. It is conceivable that the IMF could exert some leverage by making a parity change a necessary condition for use of its facilities. Even further down the road, the IMF could contemplate open market operations in financial markets of member countries for the purpose of reaching monetary targets cooperatively decided upon. At the end of this development, the world might have a pure SDR standard.

Another line of evolution might come in Europe with the development of monetary union within the European Economic Community. While the 1980 target date for the completion of monetary union seems totally unrealistic, particularly if the community expands to include the United Kingdom and other countries, real monetary union might be possible at some stage. If it should come about, the European currency would be as useful as the dollar for most international purposes and probably much better for the international trade of goods. By then the EEC will probably account for over 50 percent of world trade (inclusive of intra-community trade). While little can be anticipated at this juncture, nothing in these developments per se would adversely affect the welfare of the United States.

CONCLUSION: THE ECONOMICS AND THE POLITICS

The rationale for the adoption by the United States of a passive balance-of-payments strategy rests on two main economic arguments: It would lead directly and indirectly to somewhat better economic performance for the United States and it would help improve the international adjustment mechanism. Relief from balance-of-payments constraints on monetary and fiscal policies may be of particular importance for the economic situation in which the United States now finds itself—underemployed domestic resources combined with a possible balance-of-payments deficit, a classic conflict situation. Policy makers in the United States should design measures to meet its domestic needs—a very difficult task in itself—and let other countries control the international consequences. The international adjustment mechanism itself will be strengthened if the United States ceases its attempts to suppress its deficit, attempts that in any event are ineffective. The mechanism will be improved if the obligation to act is placed on those who have effective policy instruments at their disposal.

Some Americans are reluctant to endorse explicitly a passive balance-of-payments strategy or even to recognize the realities of the dollar standard. Their argument, based on political considerations, is that the United States would appear arrogant, irresponsible, and unconcerned about other countries if it took such a stand. It might anger our European friends, some of whom still cherish the myth that the international monetary system is or should be like the original Bretton Woods conception.

The concept of a passive balance-of-payments strategy did not grow out of the arrogance of the United States, but out of the recognition of its relative weakness. The mechanism essentially tries to match obligations with ability to act. It would appear suppressing a balance-of-payments deficit would be the irresponsible act, and exposing it the first important step toward correction. The United States does care about other countries; the totality of its policies amply demonstrates this truth. But it cannot let concern over foreign feelings prevent effective action that is generally desirable.

The difficulty involved in making the passive strategy understood and acceptable to other countries can, perhaps, be moderated by stressing the positive political gains to be expected from it. The United States need no longer subject less developed countries to aid-tying agreements. Aid tying, particularly with additionality requirements, involves the United States very deeply in the economic planning of aid recipients—to benefit itself, not the recipients. The demise of this destructive practice will improve international relations. Furthermore, U.S. security commitments abroad have been subjected to balance-of-payments constraints, particularly in Europe. While all defense expenditures should be subjected to the cost-benefit analysis of the budget process, they should not be judged in terms of their balance-of-payments impact. A passive strategy would bring this desired principle closer to reality and thus would improve political relations with European governments. No doubt other political gains would also follow, and, therefore, general acceptance of the policy may not be as difficult to achieve as it first appears.

FOOTNOTES

*I wish to acknowledge the valuable comments of Walter Salant on an earlier draft of this paper.

[1] "Balance of Payments," Statement by the President Outlining a Program Action, Jan. 1, 1968, *Weekly Compilation of Presidential Documents*, Vol. 4 (1968), pp. 20–26.

[2] Whether one uses the interest rate on Treasury bills, the growth of the monetary base, total reserves of member banks, or some adjusted concept of reserve growth as an indicator, monetary policy after 1960–61 was more expansionary than the policies pursued during the two previous periods of recovery, when the U.S. balance of payments was not an issue. Board of Governors of the Federal Reserve System, *Historical Chart Book, 1969*, and Federal Reserve Bank of St. Louis, "Triangles of U.S. Economic Data," Feb. 11, 1970.

[3] Milton Gilbert, *The Gold-Dollar System: Conditions of Equilibrium and the Price of Gold*, Essays in International Finance, No. 70 (Princeton University, Department of Economics, International Finance Section, 1968).

[4] See "Towards a General Theory of the Balance of Payments," Chap. 6 in Harry G. Johnson, *International Trade and Economic Growth* (Cambridge: Harvard University Press, 1958; London: George Allen and Unwin, 1958).

[5] Testimony of Charles J. Hitch, in *Balance of Payments—1965*, Hearings before a Subcommittee of the Senate Committee on Banking and Currency, 89 Cong. 1 sess. (1965), Pt. 1, p. 176.

[6] Some measures, like the reduction of tariff exemptions for tourist expenditures and the tax law revision against foreign tax havens, are fully defensible on the grounds of simple equity, but no doubt were taken only to alleviate balance-of-payments pressures.

[7] George N. Halm (ed.), *Approaches to Greater Flexibility of Exchange Rates* (Princeton University Press, 1970); International Monetary Fund, *The Role of Exchange Rates in the Adjustment of International Payments* (IMF, 1970); Stephen Marris, *The Burgenstock Communiqué: A Critical Examination of the Case for Limited Flexibility of Exchange Rates*, Essays in International Finance, No. 90 (Princeton University, Department of Economics, International Finance Section, 1970).

[8] Ronald I. McKinnon, *Private and Official International Money: The Case of the Dollar*, Essays in International Finance, No. 74 (Princeton University, Department of Economics, International Finance Section, 1969).

[9] Marris, *Burgenstock Communiqué*.

[10] Lawrence B. Krause, "The Role of Private International Finance in Transnational Processes," *International Organization*, forthcoming.

[11] See "Toward a World Central Bank?" paper presented by William McChesney Martin as the Per Jacobsson Foundation Lecture, Basle, Switzerland, Sept. 14, 1970.

## ALASKA NATIVE CLAIMS

Mr. HARRIS. Mr. President, one of my distinguished constituents is Miss Angie Debo of Marshall, Okla. Miss Debo, who is a very young octogenarian, is a highly respected historian of American Indian affairs and the author of "A History of the Indians of the United States," published last year by the University of Oklahoma Press. Miss Debo has won wide acclaim for her fine book, and her voice is especially to be respected as we turn our attention to Alaskan Native land claims settlement legislation.

Miss Debo is a strong advocate of a just and generous settlement of Alaskan Native claims—a settlement which recognizes the fundamental property rights of the Natives in Alaskan land, and assures them not only generous compensation for lands surrendered but an adequate land base for their future as proud and self-reliant Americans.

In this connection, I invite the attention of Senators to a statement submitted last fall by Miss Debo in response to Senate passage of S. 1830, which has been introduced as S. 35 in this Congress, and

which several Senators and I hope to improve very substantially.

Mr. President, I ask that Miss Debo's statement be printed in the RECORD.

There being no objection, the statement was ordered to be printed in the RECORD, as follows:

CONCERNING THE ALASKA NATIVE CLAIMS SETTLEMENT ACT OF 1970

(Statement of Dr. Angie Debo)

In my study of Indian history I have found an invariable pattern. (1) Take away the Indians' land, sometimes even paying them for it, but destroying their economic base. (2) Place their diminished property under Government control rather than their own collective management—i.e. paternalism. (3) Set a date for dividing their property into individual shares—and subsequent loss and impoverishment. (4) "Termination." This is the last blow. The Indians of the Lower 48 know what this means.

I had hoped history would not repeat itself with the natives of Alaska, but the bill passed by the Senate is an exact recapitulation of these three and a half centuries of exploitation or blundering. (1) These natives support themselves mainly by subsistence hunting, using eighty million acres of land. (It takes a lot of tundra to feed a caribou.) They are asking title to forty million, an absolute minimum, about one-tenth of the state for about one-fifth of the population. The Senate bill cuts this amount to about ten million. This simply will not support them. Why do they not find jobs in industry? Perhaps they will some day, but the jobs are not available now. (2) The Senate bill is said to be "generous" in its payment for the land taken away from the natives. But who implements it? An appointed Commission with a majority of non-native members. "Father knows best." (3) After fifteen years this corporate property will be divided into individual shares subject to sale. Why would they sell? To keep from starving, stripped of their land base. We have seen this happen, tribe after tribe, in the Lower 48. (Incidentally, how long would *our* collective property—national, state, local—remain intact if any citizen could claim his share and dispose of it?) (4) "Termination," after five years. Then comes the relief and welfare burden. After we have impoverished a people, we do not let them starve.

Why repeat this tragic cycle? We have a new chance to do it right. But the only hope lies with the next Congress, which may come up with a better bill.

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## EUROPEAN SECURITY

Mr. TOWER. Mr. President, I recently spent 2 days at the Eighth International Wehrkunde Conference on European Security. This is an annual meeting of men interested in the immense problems posed by East-West confrontation in Europe. Since this is not an official NATO meeting, these men are free to express their own opinions about how to best insure our collective security.

I shall place in the RECORD two papers that I feel are particularly useful to students of European security. The first by Lord Balniel is titled "European Defence and European Security"; the second, by Dr. Manfred Worner, is entitled "Strategic Balance and the Alliance." They are both helpful in understanding the European point of view on our common problem, a point of view that is in many cases similar to our own.

Mr. President, I ask unanimous consent that the articles by Lord Balniel and Dr. Worner be printed in the RECORD.

There being no objection, the articles were ordered to be printed in the RECORD, as follows:

8TH INTERNATIONAL WEHRKUNDE ENCOUNTER, EUROPEAN DEFENCE AND EUROPEAN SECURITY

(By Lord Balniel)

THE CHANGING WORLD

No one can consider the question of European security and European defence without taking account of three important ways in which the world has changed over the last few years.

In the first place, the days when the North Atlantic Alliance posessed overwhelming nuclear superiority have passed.

Immediatley after the second world war, and throughout the 1950's, NATO could rely upon the fact that the strategic nuclear might of the United States was so immensely superior to anything possessed by the Soviet Union that by itself it constituted a fully credible deterrent to any adventure by the Warsaw Pact. This is no longer the case and the advent of an era of nuclear parity presents the West with a series of problems different from those faced in the past.

Second, the peoples of the west feel a growing atmosphere of detente. The years immediately following the second world war are forgotten—or were never known—by a large part of the electorates of the western countries. Many peoples nowadays regard the threat from the Warsaw Pact as unreal—and this feeling is strengthened by the fact that east and west are seen to be negotiating or talking openly about many matters in a way which seems to indicate a relaxation of tension. The Strategic Arms Limitation talks, the idea of mutual and balanced forced reductions, the Ostpolitik, proposals for a European Security Conference—all these add to the general air of detente. And this feeling is reinforced by the ever increasing pressures upon governments in the West to increase their spending on social services and correspondingly to reduce defence expenditure.

Finally there is the prospective enlargement of the European Economic Community and, in particular, the accession of the United Kingdom. This will give added impetus to cooperation in many spheres, not least in defence, and is likely to encourage closer political and defence cooperation in the same way as it will clearly increase cooperation in the economic sphere. As the economic union of Western Europe becomes a reality, it is bound to point the way towards political and defence union in the longer term and to have immediate effects upon day to day defence cooperation in the shorter term.

All three of these factors are relatively new. Together they present a backcloth to the problems of European defence quite different from that which existed ten years ago. It is this new backcloth that we must use for considering European defence for the next decade at least.

STARTING POINT FOR LOOKING AT THE CHANGING WORLD

The days when individual European countries could defend themselves against all comers have long since passed—if they ever existed. No single country in Europe can hope to be able to defend herself alone in the modern world of the Super power. Quite apart from the degree of economic sacrifice that nations are prepared to undertake in peacetime, no country in Europe has the men or the money which would be needed to produce even the resemblance of self defense against a Super power. European nations can only hope to achieve security through a joint effort—as members of an Alliance such as NATO—where their combined efforts can enable them to live in a world of super power without either becoming satellites or lapsing into an insecure neutrality.

And although there is in some circles a tendency to disregard or even to denigrate the North Atlantic Treaty Organisation, this is the Alliance which exists today and to which the majority of the Western European nations belong. Moreover, it has existed for twenty one years and has in that time successfully provided security for Western Europe. 21 years ago not everyone would have wagered on that. What is more, NATO has just enjoyed what in many respects has been one of its most successful years for a long while.

Most of the year has been spent carrying out, against a very tight timetable, the Study of Alliance Defense Problems for the 1970s—known in NATO as AD70. This Study really stemmed from President Nixon's Statement on Foreign Policy to Congress in February of last year. In that Statement he urged that the time had come "to conduct a thorough study of our strategy for the defence of western Europe including a full and candid exchange with our Allies" and he went on to list some of the matters that needed study: the threat, a realistic analysis of NATO's conventional capability, the use of nuclear weapons, and so on. This was promptly taken up by NATO, and the first part of the AD70 study was completed in time for the NATO Ministerial meetings in December 1970. As followers of these events will know, there was a long communique giving the gist of this very comprehensive report.

Another question which President Nixon's Statement highlighted was that of the relative shares of the cost of NATO defence borne by the partners on the two sides of the Atlantic: "A more balanced association and a more genuine partnership are in America's interest. As this process advances, the balance of burdens and responsibilities must gradually be adjusted to reflect the economic and political realities of European progress".

These remarks placed new emphasis on an old problem and gave rise to the so called "Burden sharing" exercise which was carried out by the Eurogroup of NATO countries. In many ways this was the real baptism of fire for the Eurogroup. It ended successfully, in December 1970, with the announcement of the European Defense Improvement Programme (EDIP). This programme is to consist of a mixture of improvements to national forces declared to NATO and an increased contribution to NATO infrastructure funds to enable two important NATO defense projects—the NATO Integrated Communications System and the aircraft shelter programme—to be speeded up. Altogether it is reckoned that EDIP will cost about 1 billion over the next 5 years alone. Along with the announcement of AD70's conclusions and the European Defense Improvement programme came the announcement by the US Administration that "given a similar approach by the other Allies, the United States would maintain and improve its own forces in Europe and would not reduce them except in the context of reciprocal East-West action". This was a welcome and important pledge by the US. We must not lose sight of the fact that it is closely related to reciprocal action by Europe and therefore depends greatly on EDIP and further action of a similar kind: I shall return to this point below. But it has brought to an end—at least for the time being—continuing speculation that large scale US troop withdrawals were imminent. It was a courageous act by President Nixon in the face of Congressional pressure for reduction of the US contribution and it has bought valuable time for Europe.

Finally, along with these successes, we have seen the first fruits of the German Ostpolitik in the form of the Renunciation of Force Agreement and the German/Polish Treaty.

So it was a good year for NATO: AD70, the

European Defence Improvement Programme, the US guarantee on force levels in Europe, the first successes of the Ostpolitik. What then is there to worry about in European Defence? The most obvious cause for worry is the temptation to sit back and bask in complacent self satisfaction. Although NATO has kept Europe secure for 21 years and has just had one of its best years for a long time, it is not a time for complacency. In this era of nuclear parity, the Alliance faces what may prove to be its most critical test yet.

NUCLEAR PARITY AND ITS IMPLICATIONS

Nuclear parity between the US and the USSR now exists, in the sense that both the US and the USSR possess an assured second strike destructive capability. The west can no longer rely on the threat of massive nuclear retaliation against each and every aggressive act by the Warsaw Pact as we could—or so it was generally believed—during the 1950s.

The old strategy of the tripwire is now so discredited—because so incredible—that it has ceased to be an option worthy of consideration. No sane politician could ever undertake to agree to a full scale nuclear response to every incursion; and no one would believe him if he did. As a result there is at present no real alternative to NATO's current strategy of flexibility in response which envisages the Alliance taking from its comprehensive armoury the appropriate weapons and capability needed to meet an incursion of any kind.

Nuclear weapons form an essential part of our system of deterrence and defence and we must be ready to use them if necessary. But in present circumstances conventional forces have a much more important role than they had under the tripwire strategy. They must be able to defeat any minor probe or invasion, perhaps designed to test the determination of the Alliance, anywhere in the NATO area. They must also be able to cope for a reasonable period with an all-out conventional assault. We could not hope to defeat such an assault if it were maintained, and to restore the previous position, wholly by conventional means. But we must be strong enough to show an aggressor that we were determined and able to resist him no matter the scale of his attack, and to give him time to regain his sanity and recognise that he had miscalculated, before the moment arose at which we had to initiate the use of nuclear weapons.

Nor must we forget that the requirements of forward defence increase the level of conventional forces that we need. No matter at which points an aggressor attacked—and he would have the initiative in choosing them—we could not afford to give up large areas of ground. We cannot plan to trade the territory of NATO member countries for the time that we could need. Indeed, even if the conventional strength of the Warsaw Pact were greatly reduced, there would still be a minimum level of NATO forces, determined by geography, required for forward defence.

One can argue—and argue legitimately—that not all of the Warsaw Pact's enormous conventional capability is pointed toward the west: that much of it is necessarily needed to maintain the Brezhnev doctrine and that even more of it is pointed towards the east. But even when all the discounting is done—and he would, incidentally, be a brave military planner who was prepared to assume that the "Brezhnev doctrine" forces and the non-Soviet Warsaw Pact forces would not take part in any fighting against the West—the conventional superiority of the Warsaw Pact is substantial even if it is not subject to precise quantification. And it tends to grow rather than the reverse, for while Soviet and Warsaw Pact defence spending increases annually by about 6% in real terms, NATO spending falls—and the number of NATO forces has declined too. To some extent this is offset by improvements in the quality of NATO weapons systems—but of course the quality of Soviet systems is not static.

The road of precise comparisons is full of pit holes and I do not propose to try to follow it. Suffice it to say that NATO can ill afford to see any further diminution of its conventional capability other than in the context of mutual and balanced reductions.

It is not only on the mainland of Europe that Russian conventional power poses its threat. One of the more striking developments of recent years has been the impressive growth of Russian maritime power in the Mediterranean and in the Atlantic—both within and outside the NATO Treaty area—as well as further afield in the Indian Ocean and the Far East. At present, of course, the closure of the Suez canal inhibits Soviet naval deployment, but if and when the canal reopens, the situation in the Indian Ocean is likely to cause even more uneasiness. I do not believe that NATO can afford to take a complacent view of Soviet maritime expansion outside the NATO area any more than it can about the Russian fleet in the Mediterranean. We are all concerned with stability in the world and we are all in some degree dependent on vital trade routes leading to and from the NATO area.

It is certainly important that NATO should do all it can to strengthen its conventional capability, and AD70 has made a valuable start in drawing attention to the deficiencies which exist at present. But saying what is wrong—although an important ingredient—is not the whole recipe for putting the shortcomings right. And that is the important task which now faces the Alliance. The European Defence Improvement Programme is a start. As Mr. Laird said at Brussels in December it is an historic step in the history of the Alliance. But even historic steps can be small ones—even when they cost 1 billion—and a great deal remains to be done. And it will need, very largely, to be done by the Europeans, for there can, I think, be no doubt that Europe will need to take on an ever increasing share of the burden of NATO defence in the future.

We are all deeply appreciative of the President's pledge to maintain and improve the current U.S. force capability in Europe. But we cannot depend on—or indeed reasonably expect—U.S. support of this magnitude forever. The days of the late 1940's and early 1950's when we in Europe depended on the U.S. not only for our defense but for our economic survival as well are now far away, but we have been slow to assume the defense burden that our restored economic capability would allow. At last, Europe has realized the challenge and begun to do something about it. But EDIP is not the end of the road, only the beginning of the process whereby Europe must increasingly take on added responsibility for Western defense. The conclusions and recommendations of the AD70 study need to be followed up with vigor and a sense of urgency, and we European countries will need to show by deeds and not just words that we are in earnest about remedying the deficiencies in our own defense to which this study has drawn attention. And in doing so, we must be very clear in our minds regarding the form that our responsibilities will take in the atmosphere of detente engendered by West Europe's own efforts to reach an understanding with the countries of the Warsaw Pact.

DETENTE AND ITS IMPLICATIONS

At this point I am particularly anxious to make my meaning quite clear. The British Government shares fully in the general and genuine desire of the NATO countries, exemplified by the Federal Government's Ostpolitik, to reach an accommodation with the Warsaw Pact powers. Nor am I suggesting that we should not continue to look for any opportunity for genuinely balanced reductions that will preserve, at a lower level of forces, the balance of security between NATO and the Warsaw Pact. Any such suggestion would be absurd. NATO is a defensive alliance of peaceloving states. Its essential aim is to prevent war. At present it seeks to achieve this through a strategy of deterrence. But we should naturally prefer to seek security by more civilized means if we felt it safe to do so. So an agreement with the Warsaw Pact powers which allowed all of us to reduce the level of our forces would represent a large step towards achieving NATO's ultimate aim. The saving of money would be almost the least of the rewards. Obviously we would all like to spend less on defense and more on social programs which would enable us to eliminate poverty and allow our peoples to live fuller lives; and a significant reduction of the level at which the East-West military balance is now held would help us to do this. But far more important, a genuine and lasting relaxation of the tensions and stresses which have distorted our lives for the past quarter of a century would represent an achievement of which we could be proud and for which we might even ask the next generation to be grateful.

However, experience has taught us that in this area it is fatal to confuse ends with means. It would be an act of folly to attempt to prove our desire for peace by reducing unilaterally our capacity for self-defense. We are dealing with adversaries who see no inconsistency between amiable words and hostile actions. Four power talks on Berlin are conducted to the accompaniment of harassment on the autobahn. It is platitudinous (which is another way of saying that it is incontestably true) to say that we cannot expect to negotiate successfully with the Russians if we first weaken ourselves. It is equally true that negotiations without point, purpose or prospect of success will achieve nothing. And it should go without saying that the members of NATO must in advance be clear in their minds, and united, about the outcomes of negotiations that they could accept as being genuine moves toward peace and toward greater, not less, security.

These are the key considerations on which NATO must base its approach to the issue of Mutual and Balanced Force Reductions (MBFR). Certainly we would be glad to join with the Warsaw Pact countries in working out means of ensuring peace in Europe. But first we need some tangible sign that the Warsaw Pact would enter these consultations with the honest aim of securing a peaceful solution of our problems.

While the Eastern bloc talks peace it devotes a high proportion of its resources to widening its already formidable lead over the West in conventional armaments and, of course, to catching up with the United States in nuclear armaments—not to mention the establishment of a new, world-wide and truly formidable naval capability. We are entitled to ask what is the purpose of this growing array of military strength.

MBFR present a problem of enormous difficulty because the Soviets start with all the advantages on their side; so that almost any proposition which is compatible with the essential security requirements of the West almost inevitably presents the appearance of being weighted agianst the East. For precisely this reason we must be careful not to make the mistake of trying to take a leaf out of the Warsaw Pact book by making offers, or starting negotiations, for propaganda purposes. That is a game we cannot win, because in the free and independent societies of the West we have to take account of public opinion to a much greater extent than the Warsaw Pact countries do. If we launch some kind of disarmament campaign we must be ready to see it through to the end. Public opinion, here in W. Europe, would not countenance a cynical into life. For my

part I am glad that, so far, NATO has shown a firm disposition to be guided by these facts of life, awkward and unwelcome as some of them may be; and the signs, as I read them, are that we shall continue to pursue our search for peace along the hard paths of reality, refusing to be tempted into easier roads that lead nowhere.

E.E.C. AND ITS IMPLICATIONS

So far I have painted a rather gloomy—though I would prefer to say realistic—picture and I must add a further sombre tint. There is a disposition in some quarters to argue that while it is true that we must aim to maintain an effective military balance with the Warsaw Pact countries, we can achieve this painlessly—that is, with no increase in our present defence efforts—if only we will pool our resources and rationalise our equipment procurement programmes. We will then reap the benefits of shared research and development costs, and of long production runs of standardised equipments.

I should not like to be misunderstood. I subscribe fully to the aim of moving towards progressive integration of the defence efforts of Western European nations and the establishment of a European Defence Community. This must be part of our long term thinking. Nor do I question the undoubted attractions of integrated effort. To do so would ignore everything that modern technology and modern financial and management techniques have to teach us. But I do beg leave to doubt whether, in the course of the next 3 or 4 years, this kind of approach is going to provide all the answers. It is easy to underestimate both the length of the lead that the Warsaw Pact countries have established in conventional armaments and the obstacles that have to be overcome before properly integrated defence production programmes can be established. Certainly improvement and rationalisation in procurement and logistics must be our aims and we must spare no effort to surmount the obstacles that stand in the way of their achievement. But while schemes for rationalising West European defence are coming to fruition, there will be no effective substitute for improving Western Europe's present defence effort and making better use of our defence resources within the NATO framework that exists at present.

I suggest—and I imagine that this is an aim to which we can all subscribe—that the first and most obvious step towards strengthening the defence of Western Europe is to work for closer co-operation between France and other members of the North Atlantic Alliance. France is indispensable to the defence of Western Europe, and with goodwill on both sides I am sure that some way will be found of achieving this. The improved atmosphere that we hope will result from enlargement of the European Economic Community should help.

I am not though one of those who believes that enlargement of the EEC will lead automatically to the establishment of a defence community. It would certainly simplify some of the problems which at present bedevil our attempts at defence co-operation. I hope that some useful progress in co-operation will be possible quite rapidly. However, I suspect personally that the path towards defence integration will lead by way of closer political co-operation. Establishing some identity of political aims and political policies must, I thnk, come first. It is no use starting at the bottom—i.e., with defence projects—and trying to work upwards. Fully effective defence collaboration must depend on the merging and harmonisation of wider political aims. When that has been achieved I think we can begin to talk realistically in terms of the twin pillars—Western Europe and the United States—which the late President Kennedy saw as the essential supports of Western defence.

CONCLUSION

In short, I am saying that I see no soft options for the Defence Ministers of Western Europe today. We shall get what we are prepared to work for and pay for. NATO must continue to provide the framework of security for our way of life. And although NATO has withstood all the stresses and strains of the past 21 years in a way which would have seemed the height of optimism back in 1950, it faces perhaps its severest test today. The Warsaw Pact countries have achieved nuclear parity while retaining a formidable lead in conventional armaments. In the West impatience with an apparently permanent state of confrontation and demands for reductions of huge expenditures in armaments continue as strong as ever.

However, in the last 12 months there has been heartening evidence that the Alliance is ready to take the measure of its tasks and apply itself to solving them. We have reached agreement in the identification of the major deficiencies in our military forces and dispositions; we have set in train a programme of studies designed to rectify them so far as this is feasible within our resources; we—the Europeans—have launched a defence improvement programme involving substantial extra expenditure over the next 5 years; and we have reached a cordial agreement with our American friends that reciprocity of effort must be the keynote for the future.

Our object now must be to steer a middle course between complacency and impetuosity. We must preserve what is good in our present European defence arrangements (where the good already far outweighs the bad) but be ready to adjust them to the evolutionary changes which are undoubtedly going to take place in Western Europe over the next 10 years. We must think hard and imaginatively about the changes which we want to make in NATO to reflect these wider developments; but at the same time we must grapple with the problems which confront us in the short term and which I have described in the earlier sections of this paper. Above all we must not deceive ourselves that imaginative ideas about the future of the Western Alliance are any substitute for the positive action that has to be taken to cope with its immediate problems. As with national defence policy, effective action at the international level depends on striking the right balance between grappling honestly and realistically with present problems and providing for what is foreseeable in the future.

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EIGHTH INTERNATIONAL WEHRKUNDE ENCOUNTER, STRATEGIC BALANCE AND ALLIANCE

(By Dr. Manfred Wörner, MdB)

STRATEGIC BALANCE AND THE ALLIANCE

In our days, peace depends on the balance power. The main future threat to that balance is going to emanate from Europe. New technological advances, the conventional superiority of the Warsaw Pact and the offensive policy of the Soviet Union threaten that balance and thus jeopardize peace. This situation calls for intensified political and military efforts on the part of the Atlantic Alliance if balance is to be maintained and peace remain to be ensured. In the present situation it would, in particular be irresponsible to reduce the American forces in Europe and to diminish the defense burden of the Western World. The military efforts must be accompanied by the acceleration of political, economic and military integration.

*The Strategy of the United States*

The foreign policy of the United States since the end of World War II can be subdivided into three distinct phases of strategic planning:

From 1947 to 1959 the foreign policy was one of the containment of Communism in pursuance of the Truman Doctrine and the attempt at "roll back" envisaged by John Foster Dulles on the basis of US nuclear monopoly. From 1960 to 1969 US foreign policy was characterized by the concept of bipolarity on the basis of the nuclear parity between the USA (including NATO) and the USSR (including the Warsaw Pact). Since 1969 we have been witnessing a reorientation of US foreign policy in the direction of multi-polarity (in pursuance of the Nixon Doctrine) which takes account of the restrictions imposed on the freedom of action of a super power. Among the most important factors, which occasioned that reassessment of American policy ultimately leading to the Nixon Doctrine of July, 1969, we must above all list the following:

The absolute priority accorded to the prevention of war by nuclear deterrence restricted America's freedom of action and resulted in a clash of interests with the European allies (the critical stage in German-American relations from 1961 to 1963 and the crisis in the Franco-American relations from 1961 to 1968). The rigid bipolarity of that conception brought in its train the accentuation of hegemonial structures within the two systems of alliance and—by way of reaction—a renewed emphasis on national independence in France and Roumania.

The Soviet Union showed a readiness to cooperate only if its agreements necessitated merely insignificant concessions to the USA, whereas the American compromises aroused the suspicions of her allies (as in the case of the non-proliferation agreement).

The Soviet Union has always endeavoured to change the strategic situation in her favor. Russia shortened the deployment distance by occupying Czechoslovakia and tries to outflank western Europe at sea.

The Nixon Doctrine can be reduced to a simple formula: America no longer wants to be one of two world powers but merely one among several. The changed attitude towards international politics underlying the Nixon Doctrine and the reassessment of the role the USA is to play in this world naturally have a long-term bearing on the relationship between the USA and Europe.

First of all, the USA has the comprehensive desire for a further diminution of the nuclear risk.

The more the Americans feel that their own territory is threatened by the strategic arms of the Soviet Union the less probable will it be that American nuclear arms will be employed in the defense of Europe. The nuclear threshold in Europe is on the rise. This situation practically also entails a reduction of the conventional efforts and capabilities of the NATO countries so that the resulting security gap might in the long run jeopardize the strategy of "flexible response".

Second, there is a growing tendency in the USA to withdraw additional troops from Europe. It is quite true that the present American Administration has unequivocally declared its firm resolve to undertake no further reduction of the US-forces stationed in Europe. There can be no doubt as to the sincerity of that pledge and its fulfillment. But in my mind there is equally no doubt that the tremendous domestic and foreign burdens of the USA are in the long run more likely to strengthen than to lessen the pressure of American demand for a reduction of US commitments in Europe. In view of the present state of Europe it is more than doubtful whether Europe is willing and able to close the long-term security gap through an intensification of her defense efforts.

*The Strategy of the Soviet Union*

While the world-wide objective of American policy is either disengagement or the preservation of the status quo (such as in Europe), the political and military policy of the Soviet Union is of a dynamic nature and aims at changing the status quo. This policy is screened by written and oral statements paying lip service to détente. It must, of course, be admitted that the Soviet Union has some

justification to expect that the readiness of the western democracies to defend themselves and that the cohesion of the Alliance diminish at the same rate as the fear of aggression. In the last analysis, the so-called co-existence policy of the Soviet Union is nothing but a continuation of its offensive policy by other means. The opponent's readiness to resist is lulled while one's own position of power is systematically reinforced in a double-handed attempt to change the international balance of power in one's own favour.

The idea of a European Security Conference is a perfect case in point. It amounts to a large-scale attempt on the part of the Soviet Union to replace the European conception of the West by the Soviet one, and to supersede the Atlantic security system by an exclusively European system within which the Soviet Union might perpetuate its predomination and even rise to an unchallenged hegemonial position.

The Soviet Union's endeavour to assert her own European conception dates back to the declaration presented by the Polish Foreign Minister, Rapacki, to the United Nations General Assembly in December, 1964 and which contained the first plan for a European conference. The first clear statement of that policy was found in the declaration of the Warsaw Pact countries on European security of July 6, 1966. It defined the European conception of the Soviet Union and imposed the joint pursuit of that policy on all east European countries in the following terms:

"Recognition of the territorial and political status quo in Europe, i.e. recognition of all existing frontiers, of the existence of two German States and of the separate political entity of West-Berlin as defined by international law; dissolution of the military alliances in East and West, or at least dissolution of their military organisations; convocation of a conference of all States interested in the discussion and solution of European problems."

The political principles of this declaration substantially still form the basis of Soviet foreign policy today. As evidenced among others by its Berlin policy, the Soviet Union has carried forward its diplomatic offensive in Europe without the least readiness to compromise in practical issues. With the aid of the inexorable Breshnev Doctrine the Soviet Union makes her own power system air-tight within. The "Policy of Delimitation" which is at present loudly and with growing insistence proclaimed by the propaganda machinery of the GDR is designed to immunize the East German population against the undesirable effects of détente policy.

The principal object of Soviet European policy is to impair the cohesion between the USA and Europe, to isolate the USA and—in the long run—cause America to withdraw from Europe which would then be controlled by the Soviet Union.

Even though Moscow has dropped its initial objections against the participation of the USA and Canada in the envisaged Security Conference, it still tries to persuade the Europeans that the Security Conference might present an opportunity to free themselves from American tutelage. The Soviet invitation to intensify the contacts and cooperation among all European nations is the positive paraphrase for their intention to sow discord between the USA and Europe. "European security" in the Russian understanding of that term is synonymous with the "battle against all outside influence and intervention." It is really quite remarkable to observe how often the Soviet Union is described as a "European power" in Russian speeches and publications.

At the same time the Soviet Union attempts to prevent a more comprehensive political, economic and military integration of the West. Among others Russia contrasts the strict prerequisites for accession to the Common Market with the possibilities of European collaboration without discrimination. The neutral nations are advised to give preference to the "energetic advance of economic scientific and technological cooperation without discrimination on an all-European basis" rather than to join the "politico-economic bloc of the West." The European Security Conference is designed to destroy once and for all the "myth of a threat from the East" and thus to eliminate the psychological motivation for the existing or future union of Western Europe and the cohesion of the Alliance. Nevertheless the Soviet Union will not permit the European Security Conference to prejudice Russian preeminence in Eastern Europe. Quite on the contrary, Russia regards the "unity and close cohesion of the Socialist community" as a prerequisite for European security and détente. Soviet policy in reference to Germany, such as it finds expression in the Moscow Agreement and in the attitude towards Berlin, fits most snugly into the overall conception of the Russian diplomatic offensive in Europe. Whereas the Soviet Union had in the past been trying for a long time to denigrate and thus isolate the Federal Republic among the other nations of Western Europe as an enemy of détente and the main cause of tension, it now uses its policy of rapproachement as a means to form closer ties with the Federal Republic with a view to impair the cohesion of the West. In doing so the Soviet Union builds on those Germans who are still fascinated by the vision that some day the Federal Republic might once more serve as a bridge between East and West. The Soviet Union moreover plans to set the nations of Europe against one another in the course of bilateral talks and negotiations and to imitate a sort of race to Moscow in an attempt to shift the Western European nations' political center of gravity from the West to the East.

And finally Moscow's policy regards the German-Soviet agreement as a gateway to interference with the domestic policy of the Federal Republic. Today, already, those who oppose the above agreement for reasons of domestic policy are attacked as violators of the spirit of this Moscow Treaty.

The recognition of the Soviet possessions, the indirect confirmation of the Soviets' hegemonial position in Eastern Europe, and the absence of any equivalent concession on the part of the Soviet Union provided in the Moscow Agreement tend to strengthen the Russian position and to shift the balance of power.

The present situation in Berlin clearly shows the extent to which the hopes of the German Federal Government for a real readiness on the part of the Soviet Union to relieve existing tensions have been deceived. Quite evidently the Soviet Union is not even inclined to acknowledge and guarantee the present realities in Berlin insofar as they favour the West. Its declared intention remains the establishment of an "independent entity of West-Berlin" and the gradual abolition of the political presence of the Federal Government, a process which would dry up the life-blood of Berlin. If anybody anywhere had still needed proof that the political objective of the Soviet Union is by no means the status quo and its perpetuation but that the Soviet Union regards the recognition of the status quo merely as a welcome opportunity to advance its position—well, that proof is being furnished in Berlin, and no one ought to delude himself that Berlin occasions fundamental divergences or even clashes of opinion between Ulbricht and the masters of the Kremlin.

Moscow's consistent coupling of its policy towards Germany and its plans for a European Security Conference also emerged in the combination of the two issues during the Moscow negotiations. In Section 10 of the so-called "Bahr Paper" both Governments welcome the plan for a conference on questions relating to the consolidation of security and cooperation in Europe and declare their intention to do everything within their power to prepare and ensure the success of such a conference.

I am grateful that the NATO resolutions in Brussels of December, 1970 have meanwhile brought about a clarification of the positions and conditions which I deem both necessary and useful.

Over and above the conditions listed in the above resolutions it would seem to me that a conference on European security will be useful only, if first, there are indications for a satisfactory solution of SALT, second, if the readiness of the Soviet Union for a fair solution of MBFR seems reasonably guaranteed, third, the Soviet Union shows her readiness to discuss the political causes of existing tensions and possibilities for their elimination.

The Soviet Union undertakes purposeful efforts to build up the strength necessary to carry out its political intentions. The consistent expansion of Soviet military power bespeaks the offensive objectives of the Soviet Union more distinctly than anything else. Russian armaments do not aim at preserving the status quo but rather at advancing beyond it. The Soviet Union undertakes gigantic efforts to break the nuclear stalemate and to gain absolute nuclear superiority as the world's nuclear power No. 1. The intensified enlargement of Soviet naval power, which has been observed in recent years, stands in the service of a global naval strategy which is in full accord with the Soviet Union's worldwide political aims.

A military inventory at the beginning of the year 1971 shows that the strategic balance between East and West still exists on a precarious margin but is in extreme jeopardy.

In the nuclear area, the USSR quadrupled its megaton capability and quintupled its carrier capability between 1965 and 1970. During the same period the megaton capability of the USA decreased by a relative 40%. The capability score of IBM's is at present 1,300 to 1,054 in favour of the USSR but the multiple warheads make accurate comparison increasingly difficult. The Polaris capability of the USA will preserve nuclear parity for another three or five years at the very best. The U.S.A. will not only have to maintain nuclear redundancy like the USSR but must also enter the next race: To improve the carrier systems with a view to achieve greater target precision and better penetration of enemy defense systems above all through the use of multiple warheads. The Soviet Union enjoys unquestioned superiority in the field of intermediate range missiles. It has 700 of them (630 of which are aimed at Europe) which have great bearing on the military situation in Europe because NATO has nothing equivalent to show on the European theater.

A second race for strategic nuclear superiority will place a huge financial burden on NATO and above all the USA. The United States already curtailed the funds earmarked for conventional armament in 1971 in favor of strategic armament. But the official NATO Doctrine of "flexible response" is based on conventional armaments ever since the USSR closed the gap of strategic nuclear capability and forced NATO to give up its strategy of massive retaliation.

Let me add only a few remarks on the comparison of conventional capabilities here in Europe:

On the northern flank of NATO the Soviet Union has in the past few years built up a strong and still growing military capability on land, at sea and in the air which is based on the peninsula of Kola, i.e. on its own territory. At present the Soviet ground forces

and naval forces outnumber the NATO forces stationed in that area while Russian air superiority is seven-fold. That is all the more remarkable by the fact that the Norwegian territory bordering on the Russian frontier is practically devoid of human habitation so that the Norwegian side of the border is practically unfortified.

Similar efforts are being undertaken by the Soviet Union, Poland and the USSR in and on the Baltic Sea. The NATO fleet faces there a naval superiority of more than 1,000 units, from the heavy cruiser down to the minelayer. If NATO sums up the situation correctly we should have to expect that a concentrated and combined action carried through by the army, navy and air force of the Warsaw Pact would result in opening the way out of the Baltic and into the Atlantic Ocean. Today, the Soviet Union is already the second largest naval power of the world and only about one percent of its vessels are older than 20 years.

In the Mediterranean, too, the Soviet Union has been able to strengthen its position quite considerably. Although the 6th U.S. Fleet still has the situation under control, the Soviet array of forty surface units and a dozen submarines presents a serious challenge.

Central Europe presents a similar picture of strong Eastern conventional superiority: the East has three times as many tanks and twice as many tactical aircraft and divisions as the West. NATO judges that the fire powers and mobility of the Warsaw Pact forces are twice as great as its own. Since 1965, the number of Soviet troops stationed in the countries of the East Bloc have increased by 170,000 men.

The Warsaw Pact has assembled the strongest conventional military power known to history.

The Warsaw Pact forces facing the Federal Republic are today stronger than at any other moment since the end of the war, and the exercise "Companions at Arms", which took place some weeks ago, was the biggest so far undertaken by the Warsaw Pact.

The full import of that situation becomes clear only when one considers that by virtue of their strong air and amphibian component, of their high degree of mobility, the existing infra-structure and the logistic facilities, their training and strategic conception the forces of the Warsaw Pact bear not a defensive but an offensive character, and when one moreover remembers that the high combat readiness and excellent training of those units reduces the time span in which the West can prepare its defense. The total strength of the Warsaw Pact exceeds many times over the military power necessary to ward off a theoretical NATO attack against the territory of the Warsaw Pact. 25 years after the end of World War II a full 80% of Soviet military power is still facing against the West.

The picture becomes even darker for NATO when one remembers that the countries of Western Europe earmark a steadily diminishing share of their gross national income for defense purposes. According to the assessments of the NATO communiqué of December, 1970 the decrease of the defense expenditure of the European NATO member states amountd to a real 4% from 1964 to 1969. In contrast to these figures the same communiqué evaluates the real annual increase of the direct and indirect defense expenditure of the Soviet Union at an average of 5% to 6% for the period between 1965 to 1969.

This means in other words that the NATO Alliance has in the course of the last years engaged in a continuous—and, what is more, one-sided—process of disarmament through the withdrawal of troops and the slackening of its defense efforts. Expansion and improvement of the Warsaw Pact forces on the one hand—diminution of the defense efforts in the West: when one regards those contradictory tendencies of armaments in East and West one will soon come to see that the juncture is imminent at which the only alternative remaining to the Alliance will either be relinquish its strategy of deterrence or else to intensify its defense efforts if it should prove impossible to achieve a reasonable agreement on armaments limitation between East and West.

Even now Europe has reached the lowest point of conventional capability which still furnishes a minimum of justification for our conception of "flexible response." Therefore, a further thinning-out of our troops cannot be tolerated if we are to preserve at least a semblance of credibility for strategy of deterrence.

But there is still another conclusion to be drawn from the comparison of the present capabilities of the East and the West. A massive conventional attack against Europe cannot either now or in the foreseeable future be warded off with conventional means alone. Deterrence in Europe is, therefore, not credible without a nuclear component. The nuclear element alone provides a chance for defense at whatever level necessary and confronts an aggressor with an incalculable risk. The presence of real nuclear weapons in Europe is, therefore, wholly indispensable.

The two above-mentioned factors justify the conclusion—that for the foreseeable future—a defense of Europe and a policy dedicated to the preservation of peace can be pursued successfully only on the condition that a sufficient presence—and that means full present complement—of US forces with nuclear weapons is maintained. There is an indissoluble connection between the conventional and the nuclear commitment of the USA in Europe. A further withdrawal of US-troops or the reduction of the nuclear component would inevitably have devastating consequences for the Alliance and would necessarily entail a new orientation of the foreign policies of the European States which are exposed to the tensions of the conflict between East and West. An active policy of maintaining peace by disarmament can be engaged in only as long as there is a reasonable balance of power. All member states of NATO must be aware that the chances for disarmament—which are small enough as it is—diminish along with the weakening position of the Alliance and the sinking "exchange value" of deterrence.

As regards MBFR, I must call attention to the following problems: A purely schematic reduction of troops expressed in percentages would be bound to endanger balance of disarmament. And so NATO will have to strive for an arrangement which reduces armaments bilaterally without shifting the relative proportions. For the above-listed reasons one will have to exclude the tactical nuclear arms of the West at least from the first few phases of MBFR. An inclusion of those weapons systems will be possible only if and when—

a) the relation of conventional capabilities ensures the successful defense against any sort of conventional aggression regardless of scale and thus guarantees the continued existence of deterrence,

b) the danger of nuclear blackmail of Europe through the USSR is excluded.

This statement sheds light on the close interconnection between SALT and MBFR. Without a satisfactory conclusion of SALT there can be no hope for the successful talks and negotiations on MBFR.

At this moment it is impossible to predict whether SALT will produce results which are equally acceptable for both sides. There is a vast divergence between the objectives of the two negotiating parties. While the USA strives to perpetuate the present strategic balance it would at present seem that the USSR rather treats SALT as a means to raise hopes, to heat up the conflict between contradictory views on domestic issues in America and thus to gain time for impairing or even eliminating the "capacity of second strike" of the USA.

In this context the medium-range missiles of the USSR present a particular problem. After all one has heard it would seem that the Soviet Union excludes those missiles from the talks, particularly since Washington has no adequate article of exchange to offer. Should the Americans consent to agreements, which would prevent them from neutralizing those medium-range missiles, they would expose themselves to the risk of nuclear blackmail in Europe. For this reason the interest of joint NATO defense demands that medium-range missiles be included in the disarmament talks.

At the beginning of the 1970's there was still bright hope that the era of confrontation might gradually make room for a new era of cooperation. But the disappointments of the past year have done much to dim those bright expectations. It would, of course, be premature to say that this political aim has proved unattainable although there are many who fear that the world is once more headed for a period of hard confrontation and mounting tensions. In one respect, however, there can be no doubt it will be long before the second dimension of NATO—the maintenance of peace by political means—will be able to supersede its first dimension of military defense and deterrence.

But, inversely, it must also be clear that the uneasy balance of military power makes a political approach to the problem of the preservation of peace imperative. And that all the more so as the future development of nuclear systems is likely to unsettle the system of deterrence to a dangerous degree. Advances in the field of nuclear military technology will rather be to the detriment of security policy. Therefore, it appears indispensable that the whole Alliance should engage in an active policy of détente. But this policy will only be successful if it is based on:

a) the principle of "do ut des",

b) on the strengthening of the European component of NATO

c) a common political conception of NATO for a European peace order which embodies the Western ideas of a future European way of life.

Elements of such a conception are present in Section 12 of the final communiqué of the meeting of NATO Ministerial Council in December, 1970.

In the face of the persistently totalitarian structure and political administration of an opponent who has clearly defined ideological aims and who in their pursuit activates—if need be, with sheer force—all his capacities and resources, it remains a vital question for the free world how many efforts, sacrifices and burdens it can impose on a society constituted in freedom and based on the free will of its citizens.

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## WASTED PEOPLE

Mr. CHURCH. Mr. President, Americans are agonizingly aware of the terrible loss of American blood and treasure in Indochina. Too often, however, we have failed to see the even greater toll that has been taken among the Indochinese people themselves.

Much of the information available on this important subject has been developed through the sustained efforts of the chairman of the Judiciary Subcommittee on Refugees, the distinguished senior Senator from Massachusetts (Mr. KENNEDY). Through the subcommittee's work, we now know something of the total human cost of the Indochina war—and we know something about the mas-

sive task of relief and rehabilitation that confronts the entire region.

More important, Mr. President, we know by the continued high level of refugees and civilian victims of the war in Vietnam, Laos, and Cambodia, that the war in Indochina is not winding down for the native people involved. The return home of thousands of American combat troops does not in itself reduce for the Vietnamese, or the Laotians, or the Cambodians, or the various hill peoples of the area, the continuing destruction caused by our bombs and ordnance. These human costs cannot be wished away, reclassified or ignored. Mr. President, the subcommittee's reports and a series of recent newspaper articles have again focused our attention on the indiscriminate slaughter that brands the continuing war.

I ask unanimous consent that the following selected newspaper articles on this subject be printed in the RECORD.

There being no objection, the items were ordered to be printed in the RECORD, as follows:

[From the New York Times, Mar. 15, 1971]

THE "WASTED" PEOPLE

(By Herbert Mitgang)

WASHINGTON.—Because of the ground invasions into populous areas of Cambodia and Laos and the poundings from the air that have reached a tempo of a thousand sorties a day, a new vale of tears is flowing across Southeast Asia.

Senator Kennedy's Subcommittee on Refugees estimates that the conduct of the war in the last two years has resulted in an additional half-million civilian casualties and generated three million refugees. Supporting evidence for these figures can be found in audits by the General Accounting Office and certain secret field reports from several sources in Washington.

The precise numbers of these "wasted" people (to borrow a grisly word from the Mylai trial) can never be known. Their welfare and whereabouts are not of prime concern in the Vietnamization program; nor do the three nations living under American bombers keep track of families attempting to flee the main business of war. But even if these numbers are arbitrarily cut in half, the displaced persons still exceed by far the million Palestinians who have been stumbling-blocks to peace in another sensitive area of the world for two decades.

American casualty figures are imbedded in mind: 45,000 dead, 300,000 wounded. But foreign nonmilitary losses are overlooked and buried officially. The Senate Subcommittee on Refugees says that there have been one million civilian casualties and five million refugees in South Vietnam; tens of thousands of civilian casualties and nearly one million refugees in Laos; tens of thousands of civilian casualties and more than one and a half-million refugees in Cambodia.

In Washington, officials have attempted to show that the refugee problem in South Vietnam is nearly solved. But unfavorable documents from the battle areas not shared with the American public about bombed-out civilians indicate otherwise. Villages are uprooted so that "unrestricted military strike operations" can be carried out by American bombers. People themselves are in a sense military objectives: the phrase actually is "to deny population resources to the enemy."

Semantic games have been played to make hundreds of thousands of refugees disappear so that budgets could be cut for their health and rehabilitation. Some have stopped being refugees and emerged as "war victims." No longer are they "resettled"; instead they are "resettled in place." When this phrase was disputed by the subcommittee counsel as a misnomer describing the actual conditions under which refugees lived, "resettled in place" became "resettled in place, with deficiencies."

One phrase that is no longer heard around Washington is "voting with their feet." That referred to the scores of thousands of refugees who had fled from the North Vietnamese and Vietcong supposedly to reach the democratic havens of the Saigon Government. But after the war was extended into Cambodia and Loas, refugees "voted' to go anywhere, including some Communist-held areas, to escape United States B–52s, fragmentation bombs, gunships and napalm. Looking skyward, they have become human shuttlecocks.

Ironically, while the General Accounting Office confirms Senate Subcommittee staff reports findings that "official statistics on refugees and civilian war casualties have been misleading and grossly understated," their treatment has been placed in "the lowest category" of American A.I.D. health concerns. The new budget of the one Government agency directly concerned with public health and social welfare of the war's victims faces severe cuts.

In his office a few days ago, Senator Kennedy described the refugees, civilian casualties and destroyed homes as "a regional crisis of millions of people." He urged that such centers as those of the World Rehabilitation Fund in Saigon, Danang and elsewhere to rebuild limbs and lives be multiplied. South Vietnam's civilian population of fourteen million has only 400 of its own nonmilitary doctors. Senator Kennedy envisions an international war relief under United Nations auspices.

Long after the B–52 vapor trails have disappeared in the deceptive skies and defoliation of the countryside has ended, millions of civilian casualties and refugees will remain as testimony to the human destruction caused by the great engines of war. Right now, however, these wasted people are (to borrow another Mylai phrase) "no big deal."

(NOTE.—Herbert Mitgang is a member of the editorial board of The Times.)

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[From the New York Times, March 15, 1971]

KENNEDY PUTS VIETNAM CIVILIAN DEAD AT 25,000 IN 1970

(By Neil Sheehan)

WASHINGTON, March 14.—Senator Edward M. Kennedy has estimated that at least 25,000 civilians were killed in the war in South Vietnam last year and that 100,000 were wounded.

The Senator's estimate, which was based on official figures, is not disputed by Government officials.

"By this yardstick alone, we can see that the war in Indochina is not 'winding down' for the peoples of the area," Senator Kennedy said.

He gave his estimate recently in response to a reporter's inquiry. He questioned how much the general level of violence had declined in South Vietnam and, in effect, how much real physical security the South Vietnamese have today.

In his State of the World Message two and a half weeks ago, President Nixon said that "roughly 80 per cent" of South Vietnam's population of 17 million people lived in secure, Government-controlled areas. He cited the figure to support a statement that there has been major progress in the pacification program in South Vietnam since he took office two years ago.

"Now, while there are still many dangerous pockets," the President said, "the vast bulk of the country is secure."

Mr. Kennedy and the staff of his Senate Subcommittee on Refugees do not dispute that the war has diminished over the last year. Official admissions of wounded civilians to hospitals declined by about 25 per cent from the 1969 total, and the Senator's staff believes the decline in the civilian death rate from 1969 has been even greater.

Staff members say the death rate was probably reduced by half in 1970 as a result of the diversion of American bombing raids from South Vietnam into Cambodia and Laos. Bombing has always accounted for a sizable proportion of the civilian war casualties in the South.

But Senator Kennedy and his staff assert that the level of violence continues high and they question precisely how solid the reported pacification gains have been.

Senator Kennedy arrived at his civilian casualty estimate by extrapolating from official figures on the number of civilian war wounded admitted to hospitals in South Vietnam last year—50,882. He used one of several formulas he and the staff subcommittee have worked out over the years to calculate the full extent of civil casualties.

ESTIMATE OF CASUALTIES

This formula consists of counting one civilian war wounded not admitted to a hospital for each one who is, and then calculating that a quarter to a third more civilians were killed outright or died before they could reach a hospital. By this reckoning, for about 50,000 hospital admissions, there would be about 50,000 wounded not tabulated and at least another 25,000 dead.

The rough over-all toll for 1970 is 125,000 to 150,000 civilian casualties from military action by both sides, including 25,000 to 35,000 dead, the Senator says.

Official hospital admissions for 1969 ran to 67,767 civilian war wounded.

The Agency for International Development, which compiles the statistics on hospital admissions, has declined to estimate total civilian war wounded and dead ever since the chief of its civilian medical program in Vietnam made an estimate in 1967 and aroused the displeasure of senior officials in the Johnson Administration. His estimate, based on a formula similar to the one used by Senator Kennedy, was 26,000 dead for 1967.

Over the years, A.I.D. officials and doctors in Vietnam have privately not disputed Senator Kennedy's estimates. One official with wide experience in Vietnam privately estimated civilian war dead last year at 30,000.

After a field study of the problem in Vietnam last summer for Senator Kennedy, the General Accounting Office said that hospital admissions misleadingly understated the extent of civilian casualties.

While down significantly from 1969, the number of admissions of civilian war wounded to hospitals in 1970 was still reported to be slightly higher than the 1967 level.

"Nothing more accurately documents the intensity of warfare or the level of military operations better than the little reported numbers of civilians killed or wounded by the war," Mr. Kennedy said in a statement.

It is impossible to ascertain what proportion of the civilian casualties is inflicted by each side in the war. The allies have been considered responsible for the majority because of their greater firepower. But the enemy proportion is believed to be rising as a result of mortar and rocket attacks on Government-held centers.

TOLL IN LAOS RISES

The subcommittee staff said that the intensification of air raids in Cambodia and Laos had increased civilian casualties in those countries. They estimated that civilian casualties in Laos, a country with a population of about three million, were now exceeding 30,000 a year, including more than 10,000 dead.

Other official statistics gathered from the Pentagon showed that the number of South Vietnamese soldiers killed in action last year, and the number of Government officials and

supporters killed by the Communists in terrorist acts, also continued at a high rate in the South.

Pentagon officials said that 20,914 South Vietnamese servicemen died in combat last year, nearly equal to the 21,833 killed in 1969. Officials estimated that the extension of the ground war into Cambodia accounted for only about 1,000 of the 1970 combat deaths.

The number of Government officials, supporters and innocent bystanders killed in terrorist attacks last year amounted to 5,951, Pentagon officials said, nearly the same as the 6,202 reported killed in 1969. Kidnapings by the enemy in 1970 increased slightly from those in 1969, from 6,289 to 6,872.

Meanwhile, American war deaths, reflecting the reduction of United States forces, declined from 9,367 in 1969 to 4,183 in 1970—about a sixth the number of the civilians Senator Kennedy estimated were killed in South Vietnam last year.

"STILL HAS A WAR"

A Defense Department spokesman said he could not readily explain why reported gains in pacification did not appear to reflect far greater physical security for the South Vietnamese.

"We would not claim from here just from the pacification figures that everything is rosy out there," he said. "The ARVN (Army of the Republic of South Vietnam) still has a war on its hands."

He noted that while actions of battalion size or larger had declined in the South, smaller-scale clashes in the countryside were continuing "and the level of terrorist attacks is still up." But "there is greater Government control and greater security from the big war," he said.

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[From the Boston Sunday Globe, Mar. 14, 1971]

A GREAT AWAKENING

In an exclusive intervew granted C. L. Sulzberger of the New York Times, President Nixon expressed wonder as to the change he has detected in the American people's view of the war in Indochina.

"I am certain," he said, "that a Gallup Poll would show that the great majority of the people want to pull out of Vietnam." (The President is correct in this, but it is probably too much to hope he will be governed by it. A January poll showed that 73 percent want the troops home by the end of the year, a dramatic increase from last September's 55 percent. The percentage probably would be higher now, inasmuch as a Feb. 28 polls shows that the people, by two to one, fear the Laos invasion will lengthen the war. And it is not only the deaths of US GIs that is sickening Americans. It is also the mindless killing of others on the apparent theory that an Asian is something less than a human being.)

Mr. Nixon, ruminating on what he views as a phenomenon, asked at one point, "Why has this happened?" And again, "Somewhere a great change has taken place." And still again, as he thought aloud about the public attitude, "I am not talking about my critics, but about a basic, strange sickness that appears to have spread among those who usually, in this country, can be expected to see clearly ahead into the future."

But perhaps it is the President who does not see clearly. There is no "strange sickness" spreading amongst the people. The reverse is true. The American people are recovering, at long last, from the malaise which had blinded so many to the terrible wrongs being done in their name to the people of three small countries, the two Vietnams, Cambodia and Laos, none of whom could, would or did threaten the United States in any way at any time.

It has taken more than a decade for the majority of the American people to pick their way through the official fiction that this nation's vital interests were at stake in Vietnam and that we were legally there. But they finally have arrived at the awful judgment that the war is not only foolhardy from every point of view, but, infinitely worse, a grossly immoral act in the performance of which more than 53,000 of their own young have been sacrificed so far—with more awaiting their turn on the altar.

And for what?

There have been more than a million casualties, more than 300,000 dead peasants in South Vietnam alone, a nation of 16 million. A third of the people are refugees, with more being "generated" at the rate of 30,000 a month as American-dictated "free fire zones" devastate the land.

None can say how many died or are homeless in North Vietnam.

In Laos, no one bothers with casualty lists. There isn't time, and no one seems to care. They are just more "gooks." But one-third of the peasants are now refugees, and one tribe of 400,000, the Meo Tribe, a CIA tool, has been almost wiped out.

In Cambodia, one-fourth of the 6 million population are refugees, and here, too, no one has bothered to count the dead and wounded as our unrestricted bombing over the whole of Indochina continues apace with more than 1000 sorties on an average day, leaving the countryside pockmarked with craters, and leaving the "friendlies" despising us as much as does "the enemy."

Enemy? We had none there until we arrived brandishing the sword, putting the torch to peasant villages, asserting a feudal right to determine who shall govern, who shall live, who shall die.

"When you kill enough people," retired Air Force Gen. Curtis LeMay has said, "the other side quits."

But how many more do we have to kill, not including our own, but just "Oriental human beings," as the first reports on the My Lai massacre described the innocent victims?

There are no estimates, according to Daniel Ellsberg, who for six years was one of the high level decision makers in Washington and is now one of the war's most outspoken critics.

"The President does not have an estimate," Mr. Ellsberg has written in the March 11 New York Review of Books. "He has not asked Henry Kissinger and Kissinger has not asked the Pentagon, and none of these officers has ever seen an answer . . . and none of them differs in this from his predecessors. Systems analysts make estimates as best they can of factors pertinent to policy: 'costs,' 'benefits,' 'inputs,' 'outputs.' The deaths of 'noncombatant people' have never been regarded as being relevant to any of these categories."

It is this cavalier approach to the wholesale slaughter of human beings, Asians as well as American soldiers, that Americans have come to view as unspeakable butchery. Immoral, too, was the President's decision, upon taking office, to continue the war for seeming political reasons. The shocking disclosure was made by The Nation in its report of what were supposed to be off-the-record remarks by Mr. Kissinger at a recent "backgrounder."

"If Mr. Nixon had withdrawn immediately from Vietnam," Mr. Kissinger is quoted as saying, "the domestic response from the right wing might have been overwhelming."

The late President Kennedy was reported to have made a similar decision, planning, as reported by one of his intimates, Kenneth P. O'Donnell, to withdraw the troops after he had been re-elected, but believing it to be politically unwise to do so before that.

Such is the crisis atmosphere in which Mr. Ellsberg says Presidents are required to make decisions, especially new Presidents who are handed "position papers," as Mr. Kennedy was on the Bay of Pigs, even before they have a chance to sit down at the presidential desk in the oval office.

All of this, but especially the senseless killings, is part of the immorality of the war. It is unjust by all of the criteria put forth by the great theologians all the way back to Saints Augustine and Aquinas and the 16th century's Francisco de Vitoria. It is in violation of international law, as put forth by Brig. Gen. Telford Taylor, US chief counsel at Nuremberg.

And it is immoral, also, for the reasons so tellingly set down by retired Marine Col. James A. Donovan:

"The highly trained career officers of the Army and other services have found the Vietnam war a frustrating but fascinating professional challenge. The very size and scope of the American military force has generated unceasing pressures to satisfy such military demands as trying out new weapons and using the war as a military testing ground and laboratory. Helicopter assault theories, air mobile operations concepts, new helicopter types, new weapons and organizations and counterinsurgency tactics were all ready for trial by the Army in Vietnam. It is not a life-or-death war in defense of the United States, but rather a remote and limited conflict where training and equipment can be tested and combat experience renewed or attained by professionals."

It is not "a strange sickness" when the American people are revulsed by all this. It is a great awakening. We hope the new focus of the anti-war forces will be on the immorality of killing people. Asians or Americans, they are human beings.

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## WILLIAM C. FOSTER ON ARMS CONTROL

Mr. PERCY. Mr. President, on March 11, 1971, William C. Foster, the distinguished former director of the U.S. Arms Control and Disarmament Agency, made an important address in the Department of State auditorium to the Organization of Diplomatic and Counsellor Officers Retired.

In his address, Mr. Foster urged negotiation of a ban on all nuclear testing and a zero level of ABM. He also stated that it might be possible to ban the testing, production, and deployment of MIRV.

I commend his address to the Senate and ask unanimous consent that it be printed in the RECORD.

There being no objection, the address was ordered to be printed in the RECORD, as follows:

ADDRESS BY WILLIAM C. FOSTER

A few days ago it was my privilege to meet with students and faculty at Fairleigh Dickinson University to explore the probabilities of arms control and the possibilities of ultimate disarmament. As you know, there is a fairly large school of those concerned with our young people who believe that a major reason for their unrest is the question of survival. They ask whether they have any future—any physical future to say nothing of moral and economic future—in a world armed to the nuclear teeth, and in which many of the elders in the various nations are eyeing the outside world with a gaze which at any moment could turn into a glare.

So I was under compulsion to sort out the labyrinth of arms control positions and disarmament negotiations and to try and come up with some hope. And I must confess that in this sorting out process I did not myself emerge too full of cheer.

Yet as I reviewed the picture several things stood out:

First, the leaders among the superpowers know vividly well the potentials of a nuclear holocaust.

Secondly, nobody knowing those potentials

could possibly want, under any circumstances, to release nuclear war. Nobody could win.

Third, there already exists among the superpowers an almost infinite potential of overkill now. Further buildup can have no justification in even the worst human designs.

So, I went back to the drawing board, as the saying goes, and sought for a reasonable solution. A very simple one occurred to me, and I mentioned it—mentioned it almost in passing—at Fairleigh Dickinson; the results were surprising. The news media carried it around the world. The noted columnist, Roscoe Drummond seized upon it as one of the brighest ideas he had come across in recent times.

The New York Times considered it important enough to check with a high official of the U.S. Government, not otherwise identified, who in effect poo-pooed the idea, saying it was not official policy, which of course it isn't, and that I was speaking only from a personal viewpoint, which indeed is true. It is one man's idea, and so let it stand.

However, all this interest encouraged me to round out the idea a little more for you tonight, because I confess a familiar human failing, the more I reflect on my idea the better I like it.

I won't keep you in suspense. My suggestion, shorn of elaboration, is simply this: BAN ALL NUCLEAR TESTING.

We already have agreed with the Russians and many others to ban nuclear testing in the atmosphere, under the sea, on the surface of the ground; but not underground. Let us now ban it underground. *Ban all nuclear testing.*

Now, that is the bare bones. With your permission I shall try to flesh it out and to demonstrate for you why I think this simple answer may be THE answer that will assure Youth, to say nothing of ourselves, a future.

There are a number of arms controls ideas being considered at this time. I could mention the idea of updating Geneva Protocols, limitations on Chemical and Bacterial weapons, limitations on herbicides, limitations on sales of arms to developing countries, mutual balanced force reductions, etc. They are all timely important and constructive.

However, it is clear that the major threat to human survival lies in the advanced technological capacity for massive destruction inherent in nuclear weapons. Therefore, I conclude that a comprehensive test ban can have the broadest effect.

Let me begin by examining the American approach to arms control, and then compare this with Russian attitudes.

The American approach has of course evolved a good deal.

In the late 1940's we placed our hopes in wide-ranging conceptual planning for peace—as exemplified by the Baruch Plan. And despite the magnitude of the disappointments which we experienced in those early days of the United Nations, this "comprehensive" approach, as you might call it, continued even into the early 1960's. As late as 1962, you may recall the United States followed the Soviet Union in presenting at the Geneva disarmament conference, an outline plan for "general and complete disarmament."

We in the Arms Control and Disarmament Agency had a good deal of mud slung at us over that one. The John Birch Society thought that it was some sort of plan for unilateral disarmament—a sellout; while more moderate opinion inclined to regard the plan as utopian. The first view, of course, was absurd, since the agency has always stood against unilateral disarmament. And even the second was a bit over-drawn .

Our plan was not quite as Utopian as some people thought. Let me remind you, as I remind myself not without remembered pain, that U.S. proposals for arms control pacts face a difficult trip through U.S. security representatives before it can have Presidential approval for presentation to our Allies and ultimately to the Soviets and other interested nations for consideration.

It isn't easy for the United States to lay something on the table, and perhaps this contributed to the propaganda success the Russians enjoyed with the "general and complete disarmament" proposals. It took us some time to work through the process and come up with alternatives.

Our document was not just an exercise in cynicism. It is and was a serious and thoughtful piece of work, which has proven its worth over the years as a frame of reference for long-range planning.

In fact, most of the arms control measures which have either been negotiated or are now current will be found in Stage I of that 1962 plan. Finally, as the name we gave to it suggests, we did not conceive of this plan as a device for the instant sublimation of world realities. We called it: "Outline of Basic Provisions for a Treaty on General and Complete Disarmament in a Peaceful World." The words "in a Peaceful World" should be emphasized. We recognized that the world would have to be quite different, politically, before such a sweeping plan could be carried out.

However that may be, our 1962 Outline was the last example of wide-ranging conceptual planning for peace which had characterized the early years after World War II. One still hears fairly frequent references to "general and complete disarmament" in the multilateral arms control negotiations in Geneva and New York; but I think it has come to be widely recognized as most improbable that we could bring about world peace through the negotiation of such a single, all-embracing instrument. Long before 1962, in fact, we had begun to evolve a quite different school of thought in arms control, which was to become dominant in our approach to the subject during the 1960's and up to the present.

I would say the key word is describing this new school of thought in arms control, which emerged in the late 1950's, was "pragmatism." It resulted in a shift in emphasis from great wide-ranging schemes to the negotiation of more limited measures which seemed ripe for negotiation.

At the same time, major emphasis was placed unabashedly on national security, with both defense measures and arms control being viewed as complementary means for promoting national security objectives.

In this contest I would like to add that over the years the Arms Control and Disarmament Agency—ACDA—has had increasingly good and productive relationships with members of the military establishment. Although in the beginning, as was natural, military people tended to regard us as "rivals," I would say it has now come to be widely understood that defense and arms control are simply two means to the same end: National security. The fact that arms control studies are now offered in the curriculum of our service war colleges would seem to attest to this.

Anyway, it has been under the banner of "pragmatism" that we have achieved the actual results in arms control which have been scored up to now: the Antarctic Treaty, the Limited Test Ban Treaty, the "Hot-line" connecting Washington and Moscow, the Outer-space Treaty, the Non-Proliferation Treaty, the Seabed Arms Control Treaty, and finally the beginnings of the Strategic Arms Limitation Talks.

"Pragmatism" of course, is something that sits well with us as Americans. Owing to early conditions of life on this continent, it was an outlook already well entrenched when Benjamin Franklin became its exemplar—although I gather that, curiously, the *word* "pragmatism" was unknown until William James put it into circulation early in this century, calling it "a new name for some old ways of thinking."

Now, let us look for a moment at the development of Russian attitudes. I think our concept is quite foreign to the Russians—as indeed it is to many other peoples on this earth. I do not think the Russians really know what pragmatism means: just as I understand that in their language there is no way of expressing the term "arms control" as we mean it. Again like some others, I would say, the Russians tend to think, or at least to express themselves, in terms of general and sometimes lofty ideas—even when they don't believe them.

When we think we are being practical, therefore, they are apt to think we are just offering crumbs—or worse, stalling. This also means that even when American and Russian negotiators, after much close contact, have arrived at an understanding, the Russians still have a problem in communicating the idea to their own people. And this problem is compounded, of course, by the tightly group-conscious ethos of Soviet society, wherein new ideas are not accorded an automatic welcome, to say the least.

There is, however, a way to penetrate this cultural barrier through human emotions—and I use the term advisedly. I am not suggesting that we should add a musician, poet, and painter to the American arms control delegations. I *am* suggesting that when our thoughts and proposals are of such a nature as to *catch the human imagination*, and when it is apparent that we *sincerely mean them*, we have a good chance of getting through—to most people, but perhaps especially to the Russians.

But I can think of another reason for having the United States take bold initiatives in arms control; and that is that if we don't it is hard to see who else will. When you consider the relative political sophistication of the United States—where there is free discussion, a free press, and tolerated political opposition and compare it to the mental stagnation of Soviet orthodoxy, can there be any doubt as to which is the country that should take the lead?

So much for the development of American and Russian attitudes, and where they have brought us, let me turn now to a review of SALT and where we are, and why I feel a dramatic breakthrough is needed at this time.

Two main considerations appear to loom at SALT. Both concern the latest weapons in the arms race. These items of hardware and contention and grave concern are the ABM's—anti balistic missiles—and MIRV's—multiple independently-targetable re-entry vehicles. Another item which the press states has concerned the Russians has to do with our tactical aircraft in Europe. But more about that later.

In your newspapers, you have noted that together with certain about SALT, occasionally there has been some statement of fact by constituted authority. One such statement emanated from a White House briefing last summer, when it was revealed that the United States had expressed willingness to go either to low-level ABM or to zero-level—in other words, no ABM—if the Soviets in turn would accept this and also accept limitations on giant missiles, like their SS-9.

While the arguments for having a limited ABM system have been forcefully stated on a number of occasions, the case for having no ABM's on either side has received less public attention. However, there have been set forth by certain qualified scientists the advantages which might accrue from a zero-level ABM.

First of all, they say, the zero-level idea ought to be negotiable. The Soviets have come a long way from their original views on ABM's, when they apparently regarded theirs as a purely defensive weapon which need call for no reaction on our part. It is true that in accepting a zero-level they would

have to scrap their existing ABM system around Moscow—and it is always politically difficult to junk something in which reputations, careers and economic interests have a lingering investment. At the same time they must realize that their existing ABM doesn't really enhance their security very much. Moreover, under a zero-ABM agreement we also would have to write off our ABM investment, which is not inconsiderable.

In this connection, both sides could save enormous expenditures in going to a zero-ABM, thereby releasing resources for badly-needed social programs.

A zero-level ABM would give both sides maximum confidence in the long-term maintenance of their deterrent retaliatory capability, and would thereby remove an important incentive for further development of offensive forces.

It would seem from my outside viewpoint that a complete ban on ABM deployment, production and testing would be a clear, unequivocal expression of intent, requiring no complex fineprint.

Now let us turn to the question of MIRV's. There are some who believe we have reached a point of no return—developments on both sides having carried us to the point where a MIRV ban would no longer be possible. However, there are a few experts who believe it is not too late to consider the possibility of a ban on testing, production and deployment of MIRV's.

The main point in this question is that the American MIRV program is more advanced than the Soviet program and we have actually begun MIRV deployments.

In view of this, it would seem possible for us to monitor a halt in the uncompleted Soviet program by means other than on-site inspections, through a ban on MIRV tests. The Soviets could monitor a halt in our MIRV deployment through a ban on production. Needless to say, they could learn of any American violation of a production ban by simply consulting the American press or the Congressional Record.

It is obvious that trying to negotiate a MIRV ban runs into obstacles. From the Soviet view point, we would be asking them to forgo a program in which they have not yet carried out nearly as much testing as we have. And on our side there is a whole series of emotional and academic interests of the kind I referred to earlier. Nevertheless, there is at least a chance, that we have not yet reached the point where a MIRV ban should be ruled out without a vigorous try.

As to Forward Based Aircraft, which as Senator Percy rightly points out is a matter of great moment to the Soviets: They say that our tactical nuclear aircraft are strategic since they can strike Soviet territory. These aircraft are also perhaps strategic in the opinion of our Allies in Western Europe since they are some off-set to the Russian IRBM's and MRBM's which are not strategic as far as the U.S. mainand is concerned.

The Senator has emphasized the importance of this subject in his broader proposals, and his suggestions deserve careful consideration.

No doubt you heard President Nixon the other night emphasize the need for having limits on both offensive and defensive military hardware.

I don't wish in any sense to minimize the exhaustive studies referred to in the President's "State of the World" message, and most certainly I do not wish to take away one iota from the arduous and even brilliant work by Ambassador Smith and his fine team in developing their positions, explaining them and working with the utmost dedication to ease the nuclear threat.

Undoubtedly the U.S. negotiating position has been assisted by President Nixon's plan of, in effect, supplying Ambassador Smith with a certain number of building blocks which can be arranged, or re-arranged, to suit the needs of the talks. But there is a problem in that while these blocks are fine as they emerge from the White House, the fact is that the scientists are constantly coming forth with situations that require new blocks. So far the developers of new weapons have kept a little ahead of the designers of new controls.

I have talked about all this in detail because I know this is what you have been reading about in your newspapers and hearing about over the TV and radio. But I suspect that you are agreeing with me that it is a "pretty complicated kettle of fish."

Moreover, we are talking about hardware, when the clear fact is that we must deal with motives and objectives; for once in our lives we must deal with ends and not just the ways and means. This brings us the proposal that I mentioned earlier—a complete ban on all nuclear testing.

I develop the proposal now, here tonight, because I feel that the time has come for a break through. It takes no semantic exercise of the Englis language, or the Russian, to propose a complete, comprehensive nuclear test ban. It is impossible to misstate and misunderstand.

This proposal is not new. We have long been committed to work toward a comprehensive test ban by the language of two treaties which we have ratified, the Limited Test Ban Treaty and the Non-Proliferation Treaty. Some have predicted that it may become possible if there are positive results from the SALT talks.

Well, my idea is that we should not wait for that. First of all, because I believe a comprehensive ban on nuclear tests could be a stimulus to the SALT talks. Let me try to explain why.

It was agreed between the United States and Soviet Governments that they would not discuss the substantive aspects of the SALT talks publicly. This is a sound idea from the standpoint of negotiations; for when negotiating parties go public they then have to dig in their heels and defend their public positions, thereby losing negotiating flexibility. From another viewpoint, however, this privacy is not an unmixed blessing, for it means that to a considerable extent these vital but highly complex talks become the private reserve of technicians, civilian and military, who are not answerable to the public. And given the mistrust which has grown up between the Soviet Union and the United States over the years, this means that adversary technicians thus have an opportunity to nibble away at whatever proposals are made and almost literally to study them to death, while a concerned public is left in the dark.

I am not saying that this is happening; but I am saying that it could happen, and I think that one way to prevent this would be to inject—publicly—a new note of moral uplift and purpose into the whole arms control picture. I believe that if the U.S. and Soviet governments, at the highest level, I repeat, at the *highest level*, could agree fairly quickly on a comprehensive test ban, it would provide a valuable uplift to the climate which underlies all of our arms control negotiations, including SALT.

Let me emphasize this, it is fully within our scientific competence to monitor adequately such a total test ban.

It is true that for many years I strongly insisted to my Soviet and other conferees that the U.N. and the ENDC that for the U.S. to accept a comprehensive test ban we needed an agreement allowing us, on a limited basis to inspect the suspicious underground event, so we can determine whether it was earthquake or clandestine nuclear test. This has always been resisted by the Soviet representatives, who said inspection was not necessary for two reasons; first, that if they signed a treaty forbidding such tests of course they would adhere; second, they believed our national means of observation would protect us.

As to the first reason, it is clear that on a matter of basic national security we could not take for granted that they would adhere strictly to the treaty. On the second, they were obviously ahead of our technological developments. However, the U.S. has had for the past 15 years or so a vigorous program of seismological research. This has steadily improved our capability to detect and identify underground phenonomena. While I concede that with a great deal of preparation and considerable risk it might be possible for the Soviet Union to conceal one or two or three very small nuclear explosions underground our risks of their attaining a significant military or scientific advantage from this would, in my opinion, be insignificant.

Our risk in failing to reach agreement to limit nuclear arms development in my opinion would be infinitely greater based on the progress that has been made in seismology.

That is why my present view is in favor of a comprehensive ban without inspection.

I believe that a ban on all nuclear testing, in addition to serving the immediate purpose I referred to, would also deal a blow at the very heart of the nuclear arms race. In the near term it might have relatively little effect on the on-going weapons programs of the United States and the Soviet Union; but in the long range, it would slow down and ultimately end innovations in nuclear warheads. For it would be like taking the test tube away from the chemist.

Furthermore, it lifts the responsibility for making moral decisions from the shoulders of the scientists. Just as Clemenceau once remarked war was too important to leave to the generals, so I think it is unfair and unwise to burden scientists with the decisions and the job of producing ever more murderous weapons.

By this one simple step, which would be readily comprehensible to all, we could ring down the curtain on many further wasted investments in mass destruction.

When Averell Harriman was talking about arms control to Khrushchev one time he said, "Mr. Chairman, the way for you to get more things for a better life for your people is to sign the Test Ban Treaty."

Khrushchev banged the table (not with his shoe) and exclaimed, "You are right."

In other words—as Mr. Khrushchev seems to have realized—there is much that can be accomplished through forthright ideas that immediately catch the imagination. As one consequence, we got the Limited Test Ban Treaty.

Maybe we need another summit.

We have been working towards realistic arms control for many years, but up to now we have many times been diverted by undue emphasis on technical detail. Perhaps it is time for us to demonstrate that we are not just expert technicians but that we are also human beings—that we have the moral courage and imagination to get off this moving train which is taking us nowhere but to oblivion.

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## REVENUE SHARING—REMARKS BY SENATOR MUSKIE

Mr. METCALF. Mr. President, on March 22 the Senator from Maine (Mr. MUSKIE), chairman of the Subcommittee on Intergovernmental Relations, spoke to the leaders of our Nation's cities about revenue sharing. The Senator is no stranger to the subject. Last year the subcommittee held hearings on his revenue-sharing proposals. In this speech, Senator MUSKIE outlined proposed legislation to be submitted this year. I commend it to the attention of the Senate and ask

unanimous consent that it be printed in the RECORD.

There being no objection, the remarks were ordered to be printed in the RECORD, as follows:

REMARKS BY SENATOR EDMUND S. MUSKIE TO THE CONGRESSIONAL-CITY CONFERENCE OF THE NATIONAL LEAGUE OF CITIES AND THE U.S. CONFERENCE OF MAYORS

Some years ago, a resolution was said to have been introduced at a town council meeting in my state. Its provisions were these:

1. That our town build a new jail.

2. That our town build the new jail from the materials of the old jail.

3. That our town continue to use the old jail until the new jail is built.

If any one group has heard that kind of resolution before, it is the mayors of America.

In the 1960's, Americans embraced the cause of reaching the moon. In the 1970's, we must embrace a cause of equal vision, perhaps of even greater challenge—the cause of reaching each other.

Nowhere is that cause more urgent than in and around our cities. For if we fail to provide the public services people need in urban America, if we allow worn and dilapidated neighborhoods to go unredeemed, if we stand passively by while cities breed crime and deprivation and despair, then we will become two societies—the suburban affluent and the urban poor, each fearful and suspicious of the other, each bitter and hostile toward the other.

Plato once wrote, "Until the philosophers are kings . . . cities will never have rest from their evils . . ."

That may or may not be inevitable. But you know as well as I that if that is to be avoided, cities today need more than philosophy. Cities need more than expressions of concern for the so-called "urban crisis." Cities need money, and they need money now.

Money may not be the answer to all the problems of our cities. But without money, none of the talk of a so-called "New American Revolution" will bring anything but further frustration and disappointment.

I know many of you support the concept of revenue sharing, and so do I.

But I do not support a revenue sharing plan which would gut essential categorical aid programs.

I do not support a revenue sharing plan which fails to allocate funds for the cities which need them the most.

I do not support a revenue sharing plan which provides inadequate safeguards against the use of funds to perpetuate discrimination.

Therefore, the Administration's revenue sharing proposals, as they are presently constituted, do not meet my objectives and do not have my support.

Under the Administration's general revenue sharing bill, Beverly Hills would be entitled to twice as much per capita as New York, and four times as much per capita as Cleveland.

Under the Administration's Law Enforcement revenue sharing bill, no provision is made for the pass-through of funds to the cities, where the greatest crime problem exists.

Under the Administration's general and special revenue sharing proposals, reliance is placed on Title VI of the Civil Rights Act for protection against discrimination. But that reliance is not enough, certainly not when we have an Administration whose enforcement of Title VI has left something to be desired.

Revenue sharing which overcomes these objections would be sound, it would have my support, and we can work together toward that end.

However, as a practical political matter, I have serious doubts that a meaningful program of revenue sharing has as good a prospect in this session of Congress as other measures which are also worthwhile.

I therefore urge you to consider federal assumption of welfare—which is another form of revenue sharing, and a good one, as a viable political objective in this session of Congress, which we can adapt to your needs if we work at it.

Federalization of welfare, even under the present inadequate system, would relieve the states and cities of 7½ billion dollars in welfare costs they will spend this year. That figure is expected to climb in the next fiscal year above 9½ billion dollars.

But even more important, federalization of welfare can give us the opportunity to reform and to humanize, our archaic welfare system, under which payment levels vary from state to state, and are inadequate for all. It can give us the opportunity to improve the lot of 9 million persons who presently receive some form of federal welfare assistance, and of millions of others who do not but should.

Federal assumption of welfare costs should include welfare reform. It should provide for a decent minimum annual income for every family receiving welfare assistance. In addition, it shouldd provide that Washington will ultimately pay for the cost-of-living supplements which states and localities now provide.

Granted, there is no assurance that States, which pay most welfare costs, would pass on their savings to hard-pressed cities and towns. But we must devise incentives for having them do exactly that.

There is no single answer to help the cities, and we should not pretend there is. But the federal government must do much more to save the most vital places on the face of our national map.

The only answer available to most cities acting by themselves does not work anymore. The cities can continue to increase property taxes and business taxes and income taxes, but as they do, they will be emptied of the white, the affluent and the young, and of the businesses which are so vital to their health.

That is a trend this nation cannot long endure. Nor can we expect our cities, large or small, to reverse that trend by themselves. They have been the step-children of the federal system for too many years, and they simply lack the resources to improve their inheritance.

Part of the answer may lie in a rational revenue sharing plan, or federalization of welfare.

Part of the answer clearly lies in getting our economy back on its feet. In a growing, vigorous economy the States and cities can generate more of the revenue they need to meet their rising costs.

Only last year, the combination of unemployment, inflation and a stagnant economy placed an additional burden of 10 billion dollars on State and local governments, $4 billion in lost revenues, $3 billion in increased costs for welfare and unemployment compensation, and $3 billion in extra expenses due to inflation.

The economic policies of the Nixon Administration have added two and a half million people to the ranks of the unemployed. They have added a full point to the rate of inflation. They have caused corporate incomes to fall in 1970, 9.6 billion dollars below what they were in 1969.

That is why the welfare rolls are longer. That is why wage settlements are harder. That is why city and State finances are weaker.

I believe we must take these initial steps:

First, we must invest the 600 million dollars which Congress appropriated last year for housing, for water and sewer improvements, for urban mass transit, but which the Administration continues to withhold. This is not a new commitment the cities seek, but an old promise which the Administration has not kept.

Second, we must keep other old promises for Federal support of community programs.

You don't keep old promises by wiping out of law enforcement assistance legislation the only provision that assures the cities a fair share of Federal funds.

You don't demonstrate commitment to the cities by gutting Model Cities, one of the new Federal programs which deals with the most blighted parts of our urban areas.

You don't demonstrate commitments to the cities by failing to appropriate the hundreds of millions of dollars for air and water pollution legislation.

You don't demonstrate commitment to the cities by reducing summer job funds for young people by 32 million dollars, or by doubling the proportion cities will have to pay under these programs.

And above all, you don't demonstrate the commitment that must be made to our cities by continuing and expanding a disastrous war in Indochina or by adding 4.2 billion in new obligational authority to the defense budget.

Third, we must accelerate some of the personal income tax cuts now scheduled for 1972 and 1973, to increase consumer buying power and to encourage the creation of at least half a million jobs.

Fourth, we must enact an on-going program of public service employment. Jobs in public safety and health care and pollution control are not leafraking jobs. They deserve not to be characterized as "dead end", certainly not by a President who insisted on jobs for welfare recipients.

So I intend to support a rational system of revenue sharing and federalization of welfare.

But I shall work as well for making good on our old promises and for continuing the categoried programs which direct assistance to people who have been left out in the past.

I intend to submit the following proposals to the Congress:

First, I will submit a revenue sharing bill similar to one which I proposed in the last Congress. That legislation allocates Federal assistance to states and cities on the basis of relative need. It provides an effective way to reduce the imbalance in revenue distribution, and it improves the chances for equal opportunity without regard to geographic location. In addition, the legislation I will offer could encourage tax reform at the state and local level, shifting the tax burden from regressive sales and property taxes to the progressive income tax.

Second, I will submit an intergovernmental cooperation bill, similar to the one I introduced last year. This bill would provide for consolidation and joint-funding of grant-in-aid programs, for establishing uniform reporting procedures, and for periodic Congressional review to determine if these programs are accomplishing their purposes.

The need for this kind of legislation is obvious. A governor or mayor should not have to deal independently with a dozen or more Federal agencies before he can get a comprehensive program of assistance approved for his state or city. Nor should he have to hire a specialist to steer him through complicated application and reporting procedures every time he seeks to obtain a new Federal grant.

Third, I will submit a bill to create a state and urban fellows program, for the purpose of attracting outstanding young people into state and local government in greater numbers. This legislation would expand the benefits of the Intergovernmental Personnel Act which we enacted last year.

Fourth, I will support federalization of welfare assistance. Cities need help, not just to make people more affluent or less discon-

tent. Cities need help to give people who live and work there a sense of freedom in a healthy environment.

We think of the environment as air and water and natural resources, which it is and which we must conserve and improve. But a healthy environment for man is also something else. It is a tenement house free of rats. It is a neighborhood free of deprivation and decay. It is a city street free of fear.

I believe no matter how long it may take or how much money, we must not lose sight of the ultimate goal—where we have cities of lively promise, of beauty, of spaciousness, where men and women are truly free to determine how they will live.

The freedom to escape to the suburbs is not a real choice. People will live in the cities if they are placed which bring out the best in man and not the worst. People will live in cities if they are places of confidence and not of uncertainty.

This much is certain. The goal of urban revival in the 1970's must be our goal as a nation. The goal of providing a more hopeful life in our cities and a more tolerable environment for our people must be our goal as a nation.

There is no other choice. Let us be able to say by the end of this decade that we recognized the choice and acted upon it. Let us be able to say with a sense of achievement and continuing purpose what Thomas Wolfe once said:

"To every man his chance—to every man, regardless of his birth, his shining golden opportunity—to every man the right to live, to work, to be himself, and to become whatever thing his manhood and his vision can combine to make him—this . . . is the promise of America."

## THE SEARCH FOR A CANCER CURE

Mr. TAFT. Mr. President, approximately 870 people in the United States will die of cancer each day this year. It is probably the most feared disease in the country. President Nixon in his recent health message has called for an all-out offensive against this cruel killer. The President is asking for an effort similar to those of our moon landings.

A newspaper editorial in Cleveland states:

The Federal government is the only entity with the financial resources to back the effort and it is good that the President has called for an all-out push.

I ask unanimous consent to have printed in the RECORD the Cleveland Plain Dealer editorial of February 23, 1971, entitled "Seaching for a Cancer Cure."

There being no objection, the editorial was ordered to be printed in the RECORD, as follows:

SEARCHING FOR A CANCER CURE

All America welcomes anything that will help hasten the day when there is a cure for cancer. Thus, we are glad that President Nixon has committed the federal government to a massive program of cancer research.

Eight hundred and seventy people in the United States will die of cancer each day this year. It is undoubtedly the most feared disease in America.

It is not as though there has not been cancer research until now. There has been and there has been some progress. Advances in detection, diagnosis, surgery, drugs and radiation therapy have made it possible for 40% of those in whom a malignancy is found to survive at least five years.

But medical scientists still have much to learn about cancer. New research funds may help them.

We say "may." This is because there is no assurance that spending an extra $100 million, as Mr. Nixon proposes, on top of the $300 million that is already scheduled to be spent will produce a cure. People should not have false expectations.

As Fraser Kent, Plain Dealer medical writer, stated in an article, cancer is the least understood disease and each type of cancer has its own characteristics. Should researchers be successful in conquering one type of cancer, their methods may prove totally inapplicable to some other type.

Moreover, there is no guarantee that spending a lot of money on intensive research devoted to a single objective will mean that the objective will be reached. Many of the most significant research discoveries have been made by accident by researchers trying to solve an unrelated problem.

But this does not mean that the search for a cure (or cures) should not be continued and intensified. The federal government is the only entity with the financial resources to back the effort and it is good that the President has called for an all-out push.

## A NEW ECONOMIC COMMANDMENT

Mr. HUMPHREY. Mr. President, the New York Times of March 7, 1971, contained a letter to the editor signed by Dr. Erwin Miller, associate professor of finance, Wharton School of Finance and Commerce of the University of Pennsylvania.

Dr. Miller invites our attention to the moral side of present economic policy which has burdened the Nation and all too many of our people with the crushing blow of unemployment.

I commend the reading of this letter to every Member of Congress. Professor Miller's letter to the editor suggests a new ethical commandment. It should read:

Under present institutional arrangements, thou shalt not cause another to be unemployed to keep prices from rising.

Professor Miller's letter is a thoughtful and penetrating analysis of both the economic and psychological damage of unemployment. I ask unanimous consent that the text of the letter be printed in the RECORD.

There being no objection, the letter was ordered to be printed in the RECORD, as follows:

FEBRUARY 25, 1971.

The EDITOR,
*The New York Times*
*New York, N.Y.:*

A high Federal Reserve official was reported to have said recently that the best economic recovery would be a gradual one, which might even involve unemployment rising for a while before falling slowly. At about the same time a former high official of the Nixon Administration was reported to have warned against a too rapid recovery planned by the Administration.

Both of these speeches (as reported in the press) point up a commonly-held position of government officials, one shared by many business executive and academic economists as well as others in relatively unemployment-proof occupations, namely, that unemployment is a legitimate weapon with which to strike at inflation. A full rebuttal to such a position must be multi-faceted, ranging from impersonal, aggregative economic analysis to examination of personal, human consequences. At the aggregative economic level the issues are complex. For example, are the costs of losses of output from substantial unemployment really less to society than the costs of inflation at, say, 5% per year? Is it sensible to put people out of work, giving them money from the public till (unemployment compensation and relief) to do nothing when society's needs are great and they might have been paid for producing?

Setting aside discussion of impersonal aggregative economic analysis, let us turn to some human aspects of using unemployment as a vehicle to control inflation. First, it is almost never a serious threat to the authorities who propose it and to their supporters. They may or may not suffer some reduction in income as a result of it, but their standard of living is not significantly threatened. They essentially are on the firing line, while on the target line are those least able to bear it.

At the human level, to those significantly affected, the costs range from minor to bitter. There is the belt-tightening in acquiring luxury goods. More important, there is belt-tightening in necessities, e.g., clothing, medical attention, and food. Of more permanent character, children are deprived of a college education because one or both parents are made fully or partially unemployed. Indeed, even after re-employment, it may take a long time for a family to regain its full economic health and children reaching college age even then may also be deprived of further education. How many teen-age citizens have had their futures permanently impaired as a result of the unemployment of 1970–71?

It is immoral to use unemployment as a device to overcome price-behavior ills under present institutional arrangements. No one should have the right to require another and his family to eat less, to have poorer health, to have less clothing, to accept less education and a permanently lowered position in the socio-economic scale for the sake of inhibiting price rises. Everyone should have equal right to life, liberty, the pursuit of happiness, and a job to make the last of the preceding possible. A new ethical commandment is needed: *Under present institutional arrangements, thou shalt not cause another to be unemployed to keep prices from rising.* If one nevertheless is a party to the use of unemployment to combat inflation, he has the moral duty himself to lead the way, relinquishing his job or alternatively contributing his income to the support of the involuntarily unemployed. His supporters too should work vigorously to change the present institutional arrangements and require society to contribute massively to those on the target line. Indeed, if to the moral aspects one adds the psychological costs of unemployment and the possible damage to skills of those involved, one probably should conclude that the entire monetary cost of unemployment should be borne by those who remain employed, or have adequate incomes, with no monetary cost to those involuntarily unemployed.

ERVIN MILLER,
*Associate Professor of Finance.*

## J. WILLARD MARRIOTT: A WASHINGTON LEGEND

Mr. BENNETT. Mr. President, Washington has long been famous for the legendary political leaders who have risen to power here. However, living today in the Nation's Capital is a businessman who invested a little money and a lot of faith in this same city more than 40 years ago and today is a Washington legend in his own right. I am speaking of J. Willard Marriott, Sr., founder and board chairman of the Marriott Corp.

The unique thing about Bill Marriott—a good personal friend whose roots, like mine, began in Utah—is not that he is a self-made man who has built a business

empire, though certainly this is true. Rather, it is in his marvelous philosophy of life and his dedication to using his financial assets not as an end in themselves, but as a means to enrich the lives of others.

A recent article sheds some light on J. Willard Marriott and how he has put into practice this philosophy. I ask unanimous consent that the article, published in the March issue of Nation's Business, be printed in the RECORD.

There being no objection, the article was ordered to be printed in the RECORD, as follows:

J. WILLARD MARRIOTT, SR., OF MARRIOTT CORP.: MONEY AS A MEANS TO AN END

There's one thing that's immediately obvious about J. Willard Marriott, Sr. He's an innately kind man.

And fate has been kind to Mr. Marriott.

The company he founded and has guided has become one of the largest feeders of people in the United States—largely, he believes, because of good employee and customer relations.

"I am a people-oriented fellow," he's fond of saying.

After 20 years in the Marriott Corp., an employee may well retire with an income in excess of his regular salary. This is because Mr. Marriott has for long shared handsome profits with his employees, maintained a retirement plan of grand proportions, sold stock to employees at cheap prices and provided many another benefit.

Marriott Corp. has had few moments of serious trouble with those who work for it.

The company began in 1927 with a tiny root beer stand in Washintgon, D.C.

Today, it has 25,000 employees, and its annual sales exceed $300 million. Its enterprises include Marriott In-flite Services, Fairfield Inns, Hot Shoppes and Jr. Hot Shoppes, Big Boy Coffee Shops and Roy Rogers Family Restaurants, a string of Marriott Motor Hotels, the elegant Essex House in Manhattan, the Camelback Inn in Arizona and the Marriott Acapulco in Mexico.

Mr. Marriott, who is tall and slim, is 70 but looks 15 years younger.

That isn't because things have always gone smoothly for him.

There was the time, for example, when circumstances forced him to borrow money from his mother-in-law before he could go on his honeymoon.

He tells about this incident, and others beginning with his boyhood in Utah and running right up to the present, in this NATION'S BUSINESS interview conducted on the sun porch of his comfortable but unostentatious home in Washington.

Mr. Marriott, have you ever stopped to think that you would need a full year to eat your way around the Marriott circuit—that is, have one meal in each of your own and your franchised restaurants?

I suppose I have been too busy to actually realize how much we have grown. That's one thing about America: When you start out you never know where you are going to end up. This is a great country with unlimited opportunities.

When I finished college my friends said there were no more opportunities because all the land had been homesteaded and the frontiers were gone. But the potentials were like huge icebergs hidden beneath the surface. I might add, the situation is no different today. I didn't dream of any great empire when I started. What I was interested in was finding something to do where there seemed to be a challenge and a future.

At what point did you realize the Marriott Corp. was going to become tremendous?

I don't know that there was any one point. I could see that there were great possibilities in our business because we were catering to the automobile trade.

We put in drive-in service. Up until the late 1920s, about the only drive-in food business was in the South and Far West, where people drove up to corner drugstores in small towns to get sodas or sandwiches.

Then, a man named McGinley down in Texas invented the curb service tray to hang on the side of the car. He got patents and he's still making that tray.

A fellow named Allen, in Sacramento, Calif., and another man named Wright worked out a formula for five-cent root beer which they called A&W.

In Salt Lake City, during my last year in college at the University of Utah, a couple of root beer places opened. They were so successful that drivers lined up all the way around the block trying to buy a five-cent glass of ice cold root beer.

I decided to buy the franchise for Washington, Baltimore, Philadelphia and Richmond, and go east. I knew that Washington got awfully hot in the summertime, and I thought it would be a great climate for ice cold root beer.

Before I started east, I spent a year teaching at Weber State College in Ogden, Utah. I did a lot of things in that little college—I was treasurer, and I ran a theater—until about March of 1927. Then I came to Washington and opened my root beer stand. In June, I flew back home and got married.

Not many people were flying in those days.

No. But I flew out to Salt Lake City to marry my little girl who had just graduated from my same college.

At 6 a.m. on my wedding day I went to a woolen mill in northern Utah, which I had sold for, and tried to collect $3,000 owed me. During the previous summer 45 salesmen, under my supervision, sold woolen goods in California logging camps. I got a commission on their sales.

The company said, "Well, you have been away quite a while; we are not going to pay you." So instead of getting my $3,000, I got nothing. I was out of money.

I rushed back to the Mormon Temple in Salt Lake City—two hours late for my wedding. A very worried bride and her mother were there waiting.

Instead of having a reception, my wonderful widowed mother-in-law gave us $200 to get back to Washington. So we got in my Model T Ford—I had left it in Utah—and headed for the East.

It took us 11 days. It rained almost constantly, so most of the roads were mud. We got stuck several times. Every time we'd go 35 miles an hour, the engine would boil over. Every time we'd go over a hill, it would boil again. What a trip!

Did the mill ever pay you the $3,000?

Yes, the next year. After a lot of threatening to sue, they finally paid me. That was a lot of money, then, and it came in very handy to help open another root beer stand.

My father couldn't help because he had just suffered tremendous financial difficulties. At the end of World War I he owned about 14,000 head of sheep with a bank mortgage. The price on sheep dropped from $14 down to $4 a head.

Like practically every sheepman in Utah, he went broke.

But I had saved and borrowed $3,000. A friend of mine, Hugh Colton, who was attending law school in Washington, D.C., provided another $3,000. This supplied the capital to operate two A&W stores.

Then came the terrible 1929 crash. Shortly before the crash a friend at the bank across the street from our first place asked me not to withdraw our deposits. So, being loyal to him, I didn't. After closing, the bank finally paid off about 20 cents on the dollar.

By then my partner had become a lawyer and wanted no more part of a tough root beer business.

When our first winter came we couldn't sell root beer, so we added some hot items—chili con carne, tamales and barbecue. The Mexican Embassy was close by and its chef gave us recipes.

Our first little unit was a root beer stand one night, and the next morning it was a "Hot Shoppe." We stayed up all night, put some stools in, took the big orange barrel out of the window, and put a little barbecue machine in its place. We left the sawdust on the floor.

Soon we opened a drive-in, the first in Washington.

We passed out free root beer tickets at street intersections. This brought us more people than we could take care of.

We just kept enlarging—getting more locations, adding to our menu—until today we have almost every type of restaurant in America. We have over 350 company-owned units and over 700 franchised units.

Before telling us more about today's Marriott Corp., are there other incidents from your early business experience that stand out in your mind?

If you want me to reminisce, I'll go back to 1915.

This was my first business deal: to sell a trainload of my father's sheep in San Francisco. I was 14 and my father put me on a sheep train at Ogden, Utah, going to San Francisco.

We had been running sheep in the desert in the wintertime and in the mountains in the summer.

My father wanted to get early lambs to the world's fair. He put the sheep aboard and me in the caboose.

Every time the train would jolt to a sudden stop, my job was to jump off, take a long pole and run alongside the cars and jab lambs that had been knocked off their feet and were all piled up, suffocating.

After I got them up I would get on top of the train and run back to the caboose while the train was in motion. This was scary business.

The next year, my father sent me to Omaha with more sheep. When we got to Cheyenne the train inspector said, "We don't allow anybody on this train under 18. Get off." So I had to take a passenger train to Omaha.

When I got there, I waited two days but my sheep didn't arrive. After three days, we finally found them back in Wyoming in a feed lot. Somebody had neglected to send them on. There were about 3,000 head and when we finally got them to Omaha some greenhorn in the stockyard turned my sheep right in with somebody else's, mixed them all up with a whole band of sheep from Texas. Those Texas sheep weren't nearly as large as our Utah sheep.

My father had bought these sheep at the stockyard in Ogden. They had various brands on them, so I couldn't tell which were ours. It came out all right, though. We ran them through the chute and I cut out the biggest ones.

I kept going on sheep trips. My father used to tell me, "Never send a boy to mill." But he always sent me to mill when I was a boy.

Mr. Marriott, your company feeds millions nowadays. Just who are they?

We feed everybody who eats out—the family, the teen-agers, executives, tourists. . . .

Airline passenger feeding has become a large part of our business. I don't think I mentioned cafeterias in industrial plants and office buildings. We also cater to hospitals and colleges, and airline terminal and toll road restaurants.

Would you say that preparing over 350 meals for one jumbo jet is the biggest carry-out operation in the world?

I don't know any other single one that's bigger. But we planned special equipment to do this and we can completely serve one of these giants in 30 minutes.

What general rules do you observe in deciding whether to build a large new facility?

We don't take anything that isn't first a prime location. We believe a top location is absolutely vital. We study the environment of the area, the competition, the potential, the need for a restaurant or hotel, whatever it may be.

We won't take a location because the rent is low. Most of our locations are in expensive rent areas. We want to be where the people are—where we can do a volume business. An extensive questionnaire is filled out by our real estate department and studied thoroughly before we decide on a location.

Does it take much nerve to order the building of a huge hotel at times like these, when wages and other costs are skyrocketing?

It has to be an awfully good location with real potential and a reasonable rental base. We do have some extensive expansion plans which we are watching very closely. But we can't stop without serious results to our profits and personnel.

As an example, we have a 1,000-room hotel next to the Los Angeles International Airport we have been planning for three years. We have a big one under way in New Orleans. And we are going to go ahead with others in Denver, St. Louis and Miami. Building costs are increasing at the rate of 10 to 12 per cent a year, so if we wait, our costs may be more—even if money is cheaper.

Would you describe some particularly nerve-racking periods for the Marriott Corp.?

I suppose the most critical period was during World War II when gasoline was rationed and cars couldn't be operated except for business purposes. It was touch and go because we were depending almost entirely on automobile traffic to get our customers.

But we were far better off than some of our competitors who were out on the highways. All our locations were in cities close to business and residential areas.

What about your decision to go into the hotel business back in the Fifties?

We had a very unusual location on the Potomac, next to the Pentagon. It was on U.S. Route 1, which was carrying 110,000 cars a day, and Washington National Airport was close by. We had obtained this property for our future office headquarters. But we felt it was a natural for a good hotel, so we changed our plans.

We hadn't been in the hotel business, but it was related to the food and service business. I was skeptical of the downtown type hotel, having lived through a period when most of them failed. So we built for the automobile traveler—the motel concept—as well as for the businessman.

Your fixed-price, do-it-yourself ice cream bar is one of your latest innovations. Don't customers eat you out of house and home on a hot day?

I was watching some of them recently. I noticed the kids and older folks were having a great time fixing their own ice cream sundaes, piling up the nuts.

Don't you go broke passing out all those nuts?

Well, a lot of people don't like nuts. There is also a practical limit, since they can only get so much in a cup. But this is an added attraction we charge to advertising.

You've done quite a lot of innovating, haven't you?

Well, I guess the urge to earn a living made it necessary to be innovative. When you work for yourself you become an innovator or you don't eat.

I have traveled a lot to see what competitors are doing. I've never been satisfied with anything we've ever built. I've felt that dissatisfaction is the basis of progress. When we become satisfied in business we become obsolete.

So we have tried to keep current, and a little in front of our competition.

We make five- and 10-year plans and keep changing them as we look at future market prospects.

Mr. Marriott, as a Mormon, how do you feel about serving whiskey and beer, and selling cigarets, in your restaurants?

Well, I don't have to drink the stuff or smoke the cigarets. Our business demands that sort of service, and if we are going to be in this kind of business, we must sell the things our customers require.

I feel that if we operate in a first-class manner and maintain a reputable business we are rendering a good service to the public.

Is your family in the business?

Yes, but we're pretty large now—we're not really a family business. My oldest son, 38, is president of the company and my other son, 32, heads our architecture and construction division. But we're decentralized into some 16 divisions—and none of their vice presidents is a member of the family.

Do you feel the urge now and again to look over your son's shoulder as he runs the company?

I get involved in policy making, and in our expansion program. This means checking locations for a large hotel, or getting into major financing problems. I also check our operations for service and food quality. Fortunately, my son has a mind of his own and is not afraid to make decisions. He has freedom to operate the business.

You and President Nixon are old friends. How did this friendship begin?

I became acquainted with him when he came to Washington as a Congressman in the late 1940s. I suppose my friendship with Republicans began in 1929 when my wife's mother came to visit us. She had been a widow 10 years. We introduced her to Sen. Reed Smoot of Utah, chairman of the Finance Committee. It was almost love at first sight. She was a beautiful woman. His wife had died a couple of years before.

They got married and spent their honeymoon at the White House as the guests of Herbert Hoover.

So, through the Senator, I became well acquainted with Republicans and when Mr. Nixon came I became acquainted with him.

I had never been engaged in politics in any way until President Nixon named me chairman of his Inaugural Committee, I have always supported the Republican Party, but I also have a lot of wonderful friends who are Democrats.

How do you spend most of your time these days?

Visiting our hotels and other operations and doing civic and church work. Last year I was chairman of the Executive Committee of Honor America Day, on July 4. It took almost my full time for six weeks.

I like people and I get a great thrill out of going to our shops and hotels. I don't like the office. I like to work with people.

You're a happy man, then?

Well, I'd say so; as happy as one can be facing the problems of a hotel-restaurant business.

Which lines of your business do you feel closest to?

I don't know that I have any favorities. They all use a lot of people, so I am happy helping to keep our morale at a high pitch in any kind of operation.

We try hard to maintain a friendly and customer-oriented employee. We have a lot of employee parties at our company farm in Virginia. We've built a large pavillion there, and they have outings, barbecues, horseback riding and dancing.

There are trains and ponies for the kiddies as well as hay rides in the mountains.

I spend my time at these outings renewing old acquaintances and making new ones. It's really quite touching to see employees who have been with our company through the years—some as many as 40 years—all the time serving with great loyalty. They are as interested in the business as if they owned it. Of course, most of them do own part of it. They have stock in the company.

What is it like being rich?

If you're rich, you still get arthritis, headaches and stomache-aches—possibly more so than the poor guy. A Chinese philosopher once said a rich man can only eat so much, and that's about the way it is.

I believe money should only be a means to an end. If we do good with it, help those in need, provide an opportunity for others to have some of the good things in life, contribute to worthy causes, do things that make others happy, then money is a great blessing.

Otherwise, if we are selfish, it becomes a curse and provides no happiness for anyone.

I suppose we all fall short of our objectives, but I've tried to be constructive—to do some things that involve accomplishment.

We treat our people right, just like they're members of our family. There's nothing within our power we won't do for the people who work for us.

If someone gets sick, we look after them. We have a profit-sharing plan where we give a good percentage of our profits to employees and they also contribute some of their earnings. Most of our employees who have been in this plan for 20 years or more will retire with as great an income as they had while working.

And all our executives own a considerable amount of our stock. I've always believed that those responsible for management should have an ownership interest. A lot of our executives have retired as multimillionaires.

In an attempt to upgrade workers, we have adopted an incentive plan for all employees. We tell them, "O.K. You do a good job for three months and you'll have a chance to be promoted." We call this our career progression program.

This has a particularly good effect among minorities. No tests, no formalities—just give them a chance to jump up a couple of grades. For maybe two hours a day, we let them see if they can do the higher-paid job. They then feel the way is open.

We want our people to realize they have a future to work for.

## FOSTER GRANDPARENTS

Mr. McINTYRE. Mr. President, I wish to express my personal disappointment over the President's recommended cut in funds for the Administration on Aging.

At a time when we are beginning to confront the variety of problems facing senior citizens, I think it would be unfortunate if we were to cut back, rather than expand, financial support for those programs which have already proved their usefulness.

The President's budget calls for an expenditure of $25,850,000 for the Administration on Aging. This is $79,000,000 under what Congress had authorized and $7,800 less than what was appropriated for this fiscal year.

One of the programs affected is Foster Grandparents. The President has called for funding of this program at a level of $7.5 million, less than a third the amount authorized by Congress and a full $3 million under what the program operated on last year.

I have a good deal of personal confidence in the Foster Grandparents program and I have been extremely impressed with the results achieved so far. Initiated under OEO in 1965, Foster Grandparents rests on two basic facts: America has hundreds of children in in-

stitutions without the opportunity of experiencing a close personal relationship; America also has thousands of persons 60 years or older whose lives have become essentially meaningless because they no longer have a close personal relationship. Foster Grandparents operates on the belief that the needs of both groups can be satisfied by close and sustained mutual encounters.

For the most part, the children involved in the program are under 15 years of age. They are assigned to a foster grandparent in settings such as pediatric wards of general hospitals, homes for dependent and deprived children, correctional institutions, and institutions for mentally retarded and emotionally disturbed children.

The foster grandparent is generally a person of 60 or older who is living on an income below that established by OEO as the poverty level. In essence, a foster grandparent acts as a parent substitute for a child deprived of the benefits of a normal relationship with parents or older persons. Foster grandparents talk, listen, read, and play with their children and offer them support and assistance in learning the therapy situations. They are paid on an average of $1.50 an hour for a period of 2 hours a day of individual contact with a child.

I am extremely proud of the foster grandparents program in New Hampshire. Operating from Larconia State School, the program has approximately 100 young children and 52 foster grandparents. Since the program's inception in 1965, foster grandparents have invested almost 165,000 man-hours of employment caring for young retarded children.

I think this represents a tremendous outpouring of energy and faith on the part of all involved. From all reports I have received, the results have proved to be well worth the effort. Both grandparents and children have testified to the benefits they are deriving. Almost all grandparents have expressed satisfaction over seeing their children progress; most grandparents have expressed pleasure at being involved in something meaningful. As one older citizen wrote:

> The foster grandparents project gives me the ability to earn my living rather than receive aid to the disabled; it gives me a feeling of usefulness; since I think I can do the children some good; it has opened up a whole new life for me and my grandchildren; and, I feel needed again.

Even more heartening to me have been reports from the staff at Laconia State School detailing the progress of children involved. Most of the children have become more aware of themselves as distinct individuals and have evidenced an ability to interact socially with one another. They have developed essential self-help skills and have increased their capacity for learning. And above all, the children, secure in the affection and understanding of a foster grandparent, have begun to respond more fully to life around them.

If Congress does not act to raise appropriations for the Administration on Aging, then the foster grandparents program at Laconia State School and hundreds of similar programs across the country will be severely impaired. Furthermore, those children and senior citizens who might have availed themselves of the benefits of foster grandparents will now be deprived of that opportunity. I urge Congress to take appropriate action to prevent this eventuality.

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## DECLINE IN U.S. MACHINE TOOL INDUSTRY

Mr. TAFT. Mr. President, these are difficult times for our economy. The policies of the Nixon administration have helped greatly to lessen the problems of inflation, stagnation, and tight money, but many challenges remain.

One area of continuing concern is our deteriorating international trade balance in manufactured goods. At the present time American producers are struggling desperately to retain their position in export and domestic markets in the face of growing foreign competition.

In this struggle to hold American jobs one of the most important weapons at our disposal is an adequate supply of efficient productive equipment. Yet today American builders of machine tools are being forced to cut back their operations, with a resulting loss of trained employees and curtailment of valuable research and development programs.

Orders in the machine tool industry have recently fallen to depression levels. For the first time in recent history, the United States has lost its world lead in shipments of machine tools. And the future holds little prospect of improvement. Loss of delivery capabilities due to curtailment of operations may well thwart the attempts to maintain even our share of the U.S. market when an upturn does come.

This critical situation in the American machine tool industry demands that we take appropriate action before it is too late. The establishment of the 20-percent shorter guidelines and the elimination of the reserve ratio test was a hopeful step in the right direction, but this is as much as can be done through administrative action. Several other possible courses of action merit our serious consideration.

A 7-percent investment credit to cover new orders for capital equipment placed this year would provide a short-term incentive to inspire investment decisions, aid the machine tool industry and generally promote economic recovery. It is important that such an incentive be made retroactive to a past date to prevent suspension of present ordering.

Legislation implementing the changes proposed by the President's Task Force on Business Taxation would also help greatly to restore the vitality of the Nation's capital goods industry.

In the event that these approaches prove inadequate, we must not hesitate to explore others. The seriousness of the problem demands our immediate and continuing attention.

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## U.S. RELATIONSHIPS WITH LATIN AMERICAN COUNTRIES

Mr. HUMPHREY. Mr. President, in these days when much of our attention is focused upon the critical situation in the Middle East and the war in Indochina, we are prone to forget the importance of our relationships with our neighbors to the south in Latin America. Nevertheless, those relationships are critical and basic to our national security and to the development of the Western Hemisphere.

Recently, Mr. William D. Rogers, former deputy U.S. coordinator for the Alliance for Progress and president of the Center for Inter-American Relations, delivered a very thoughtful, perceptive, and candid address entitled "Latin America and the United States: Change and Perplexity."

Mr. William Rogers has analyzed what is happening to U.S. policy in Latin America. He has reminded us of the dangers which are inherent in the so-called Nixon low-profile posture as it relates to our relationships with our South American neighbors. Mr. Rogers correctly notes that much of the Alliance for Progress has been jettisoned or forgotten by the Nixon administration, and he properly calls to our attention the dangers inherent in the current situation.

We are indebted to Mr. Rogers for his frank and revealing commentary. I would suggest that it deserves the careful attention and thoughtful consideration of every Member of Congress, particularly of those who are responsible for the formulation and execution of American freign policy.

I ask unanimous consent that the text of Mr. William D. Rogers' remarks be printed in the RECORD.

There being no objection, the address was ordered to be printed in the RECORD, as follows:

### LATIN AMERICA AND THE U.S. CHANGE AND PERPLEXITY

(By William D. Rogers)

It was on March 13, 1961, in the East Room of the White House, that President John F. Kennedy met with the diplomatic representatives of the free nations of the Americas to announce his proposal for an Alliance for Progress:—a "vast cooperative effort unparalleled in magnitude and nobility of purpose, to satisfy the basic needs of the American people for homes, work and land, health and schools, *techo, trabajo y tierra, salud y escuela.*"

Now, almost ten years to the day, the Alliance for Progress is dead.

It was, while it lasted, a generous and compassionate partnership effort to meet the storm of change—social, economic and political—sweeping across Latin America. The rate of change has quickened in these last ten years in Latin America. Yet the Alliance is now dead.

First, a word about the ways in which Latin America is changing. And then to the Nixon Administration's perplexed response.

Extraordinary rises in population, rapid growth of cities, unemployment, grievous gaps in housing, schools and medical services—all lines on the social fever chart of a Hemisphere; each one more disturbing than in 1961. No nation in the Hemisphere can claim it is on the way to a social solution. In the first seven years of the Alliance, the number of school children increased fifty percent—but there are more adults who cannot read in Latin America today than ever in its history.

On the economic side of the ledger, matters are a bit brighter. Due in no small way

to Alliance aid, industrial output is up. Though agriculture is a disappointment and the free trade movement is stalled, the Hemisphere's economies—led, of course, by Mexico and Brazil—are stronger than a decade ago.

In matters political, though, the Alliance aspiration for fundamental reform through democratic processes seems almost as far from our grasp as in 1961. Tax and land tenure systems have been modernized in some countries. But the majority of the people of South America live under military governments.

It is, of course, the dramatic which catches the eye and, in the case of Latin America, the dramatic is the guerrilla, the kidnapper and the terrorist. I believe, however, that these are transitory phenomena. Uruguay is more embarrassed than staggered by the Tupamaros. There are, of course, some trouble spots of local insurgency—Guatemala and Argentina, for example. But for the moment I have little doubt that the incumbent Latin American governments can handle these insurgencies. In ten years there has never been a successful revolution against the structure of authority, and I do not expect any now.

It is also clear to me that the sense of unity within Latin America—never very strong in any event—is wearing thin. The nations of Latin America are moving off in a variety of different ideological directions. Argentina's army government, Chile's newly-elected Marxist administration and Peru's military populist generals eye each other nervously—though not with quite the bitter hatred of Salvador and Honduras, which erupted last year into the first international war in Latin America in modern times.

New types of nationalism, some military, some radical revolutionary, some reformist, some deriving from older conventional demagogic political styles, are springing up. The differences within Latin America are becoming even more marked.

Cuba is no longer an example to which the rest of the Hemisphere may be tempted to repair. Its economy is in chaos. The Soviets in alliance with technocrats in Castro's regime are evidently intervening rather directly. Fidel's adventurism is now pretty well limited to speeches.

But elaborate generalizations about politics, economics and sociology are all very well. Remember, though, one thing before all else about Latin America: the great bulk of its 270 million people are still poor—poor in ways almost incomprehensible to this nation.

Yet they are a step or two ahead of Asia and Africa. If we, the rich, are ever to succeed in a cooperative effort for economic, political and social development in the LDC's we will succeed first in Latin America.

Yet the Nixon Administration has killed the Alliance for Progress.

This year, for the first time in ten years, there is no separate line item for the Alliance in the Administration's aid authorization request. Congress will have no opportunity to vote Alliance aid, up or down.

In his massive State of the World message to Congress last week, the President ignored the Alliance for Progress entirely.

The USIA, the State Department and AID never mention it, either here or in Latin America.

The Administration decided to do this, not because that program no longer represented the highest and best aspirations of the American Republics for economic, social and political development, but for plain domestic politics. It was an awkward reminder of John F. Kennedy.

What has the Administration invented to take its place? For the Alliance blueprint of cooperative development, it has substituted instead the Low Profile. Low Profile—this means the avoidance of commitment . . . cool it . . . duck. Low Profile may be fine for Martha Mitchell, but it hardly strikes one as a serious and inspiring policy for a great nation in its home hemisphere. Neglect, for once, is raised to a principle of diplomacy.

The point, of course, is not that the Administration should not change anything. Each new President may be expected to put his stamp on foreign policy. But look what was lost in the process. The Alliance—building, I would emphasize, on foundations laid down during the Eisenhower Administration such as the Inter-American Development Bank and the Social Progress Trust Fund—brought it all together in a comprehensive program in the 1961 Charter of Punta del Este, of reform and self-help within each Latin American country, free trade throughout Latin America and aid, private investment and trade assistance on the part of the United States and other rich nations, all directed to the development goals which the Latins had set for themselves. It was, in short, a real alliance.

In killing off this policy, it has done away with something more substantial than a Democratic Party slogan. It has snuffed out something which was the community's.

Latin America had begun to call the Alliance, "Our Alliance." The program did not belong to the United States. It belonged to all the nations which had signed the 1961 charter.

Moreover, the Administration turned its back on our part of the Alliance bargain:—the *commitment* to vigorous, long-term partnership to spur reform and development throughout Latin America. It has muted our support for political forms of democracy, our special relationship with democratic elements and with the struggle for elementary civil liberties. And it has lost an unprecedented opportunity for continuity in the development effort in the Hemisphere.

The best that can be said in justification for the Low Profile is that the Administration is genuinely perplexed and baffled by the winds of change sweeping across Latin America, and that it had hoped to buy time in order to concentrate on other questions and figure out what it could do in Latin America. In the meanwhile, though, there has been no innvovation, nothing new, no building on the efforts of the 60's.

I do not mean to discredit the participation of the US in the Inter-American Development Bank, some projects of our bilateral program and the continued support for the Peace Corps. But beyond these older programs, nothing has happened.

This, in spite of the fact that the Administration began with an almost frantic search for a coherent overall Latin American policy. Governor Rockefeller, you will recall, made a series of lightning visits as the President's personal representative in 1969. The venture went rather badly. The Governor was unable to visit some of the more important countries. And at the time, it seemed more show biz than substance, at least to many Latin Americans. But he did finally hand in to the President a full-scale serious report, proposing a real policy alternative to the Alliance. With a minor exception or two, the Rockefeller Report has been ignored by the Nixon Administration.

The Low Profile, which the Administration prefers, is a non-policy. Without a general program, we respond to each problem when it comes along. And the responses have varied across a fairly narrow spectrum, from the merely indifferent to the downright mean and tactless. Some of the more recent examples:—Dr. Kissinger's briefing newspaper editors that President Allende's victory in Chile would actually pose a security threat to Argentina; the impolite rebuff last week of Allende's invitation for a courtesy visit by our nuclear carrier, the Enterprise, to Chile; and so forth.

Latin America, I regret to say, is replying in kind. It is becoming increasingly disillusioned and cynical with Washington. Hemisphere relations are never easy. But now, persuaded that we are treating them like a lost continent, and that our interest in internal reform and democratic development has dropped to zero, Latin America is organizing itself to deal as a single bloc with the United States. We are excluded from important Hemisphere questions in the Special Committee for Latin American Coordination—the CECLA. The United States is increasingly isolated in its home Hemisphere. Our influence, our leadership has never been at lower ebb—and, might I add, the same is true of morale in State and AID.

When I first suggested that the Alliance was dead in my review in the Washington Post of the excellent Levinson/de Onis book on the Alliance, UPI reported (and I quote):

"Nixon administration officials immediately took issue with this statement. They said that while Rogers was coordinator of the Alliance, 'there was lots of rhetoric and little action while now there is less rhetoric and more action.'

"The officials said the U.S. State Department did not wish to get involved 'in an argument over whether the Alliance is dead, dying, stagnated or whatever.'

" 'But it seems to us that those people who are now saying the Alliance is dead have suddenly become myopic to what is happening in Latin America,' they added."

Whether the Administration spokesman was Dr. Kissinger or not, I do not know. I doubt if it was my namesake. But no matter.

In one sense, I have to agree. There is plenty of action on the Inter-American scene these days—a 22–0-vote against the United States last month in the OAS on an unprecedented charge that we had committed economic coercion; the expulsion of our DCM from Costa Rica on grounds that we had plotted the overthrow of newly-elected President Figueras; Ecuador's seizure last week of the twenty-fifth American tuna boat this year; the six-nation walkout from the OAS in protest against our hijacking treaty; complaints of trade discrimination; expropriations; kidnappings. Action indeed there is.

In a Hemisphere changing as rapidly as ours, no relationship can remain static. I would be the last to suggest that what was laid down ten years ago this month is the ultimate wisdom for all time. But I do say that some policy and a sense of purpose are essential.

It is Dr. Kissinger's grand overview that the superpower contest is the only thing that really matters in today's world. A nation that believes that can afford the luxury of a perplexed non-policy for Latin America. For it is true that no area is less important to our security.

But if Latin America is not significant to our security, it is vital to our hopes—our hopes, if you will, for a different world. And this in the long run may be more important.

Latin America is the most developed of the underdeveloped. In the 70's, the nations of this Hemisphere will move pellmell to more industrialization, greater population pressures, expanded communications and travel. They will chew up more of their natural endowment, generate greater demands on the world's non-renewable resources and contribute more and more poison to the air and water.

In the process, Latin America will demonstrate—to us and to Asia and Africa as well—whether in this century growth and change are possible, whether the world will tolerate a wide variety of political communities; whether we can solve the problems of human fecundity and environmental destruction, whether cooperation between the rich and the poor can yet open the way for a decent life for all peoples.

We have a vital stake in this, though it change the Cold War not a whit.

Low Profile will not do. It is impossible for the United States—with 13 billion dollars of investment and a music, literature and film which spread to every corner of Latin America—to pretend it can keep its head down. But more important, keeping our head down will not contribute much to development.

We are in the Hemisphere. For better or for worse.

Latin America is transforming itself, with agony, from traditional to modern societies. The Alliance was a design to participate in, to influence, to help shape the forces of change for the common betterment of our Hemisphere. I mourn its death.

## PRIORITIES AND THE SST

Mr. PACKWOOD. Mr. President, the Senate is scheduled to vote tomorrow on additional money for the SST program.

I begin my comments by acknowledging that we have invested a substantial amount of money, some $864 million, in two prototypes. Only time will tell whether we have made a good investment. But the fact that we have spent nearly $1 billion in public funds does not, in my estimation, justify the spending of additional money at this time.

If the SST is all that it is cracked up to be, and that is possible, then our free enterprise system will see to it that it is built. As I see it, Uncle Sam has done his job. He has started the ball rolling, and now it is time for the Nation's financial community to evaluate what has been done and the road that lies ahead.

I realize that thousands of jobs may be hanging in the balance. Some of these are in my home State of Oregon. But there is a greater issue than two prototypes of a huge plane and the jobs that come with their construction. At issue is a matter of priorities.

When I look at the accomplishments of this country and when I look at its failures, I cannot help singling out our transportation system as one of the most dismal failures. In my home State of Oregon, I can leave Portland by air and be halfway across the country before I can be to many communities in my State only a couple of hundred miles away. The Bends and Medfords of Oregon are everywhere in the Nation. Yet we ignore these and instead choose to focus on being able to fly to a foreign land at faster than the speed of sound. Thus, we have a case of misplaced priorities where we concentrate on making a good service great so that less than 1 percent of the population can use it while ignoring another service which is crying for help.

How many State capitals do we have in this country that are away from the large areas of population? In the West there are numerous examples: Olympia, in the State of Washington; Carson City, in the State of Nevada; and Salem, in my home State of Oregon. Now, would it not be an excellent investment to have high-speed trains running at frequent intervals from, say, Seattle and Tacoma to Olympia in the State of Washington, from Reno to Carson City in Nevada, and from Portland to Salem in Oregon? In this way government could be brought closer to the people because it would be more accessible. Just as important, pollution would be reduced, the tension on frayed nerves would be lessened, and highways might be unclogged to some degree. I cite this as only one example of how we could better order our priorities.

Mr. President, the time has come for projects such as the SST to stand on their merit and for them to be built with private money if they are to be built. The investment of the taxpayer's dollar in such projects cannot be justified.

## NEED FOR IMPROVEMENT IN ELECTION PROCESS

Mr. GRAVEL. Mr. President, I think it is fair to say that most Members of Congress believe some improvement should be made in the election process. Last year the Congress enacted legislation that would have reformed certain aspects of the way media is used in election campaigns. Regretfully the President vetoed that legislation. But in so doing he suggested that reform should be more comprehensive.

This year I have attempted to follow that advice. Together with many other Senators, I have introduced S. 1, which would represent a broad-based reform in the election process. I have also introduced S. 9, which would shift the burden of financing campaigns where it belongs, to the people who must live with the results—the general public.

When we talk about campaign reform, we are talking about a very fundamental change in the democratic process, a change not to be taken lightly. But I am pleased to see that many of the organizations which have a legitimate interest and deep concern in the manner in which we elect public officials, have welcomed this change.

Recently, the Committee on Political Education of the AFL–CIO devoted an entire page of its national newsletter to the question of campaign reform. COPE was positive in its position that reforms are needed and they must be wide-ranging.

I congratulate COPE for taking this position and for attempting to develop support for the cause of campaign reform. It is a move that reflects a positive and realistic approach, and I hope that all organizations that contribute funds to candidates and actively care about the kind of representation that people have in government take note of this approach.

Mr. President, I ask unanimous consent that the statement by COPE on campaign reform be printed in the RECORD.

There being no objection, the statement was ordered to be printed in the RECORD, as follows:

MAKE VOTING EASIER, CURB CAMPAIGN COSTS—COUNCIL

Two "basic deficiencies" in the political process must be corrected "if democratic ideals are to be brought to full fruition," the AFL–CIO Executive Council has stated.

1. "Artificial barriers to voting must be eliminated to permit the greatest possible participation in all elections."

2. "Provisions must be made for meeting election costs in ways that will give major party candidates equitable opportunities to reach the voters while at the same time minimizing dependence on wealthy individual contributors."

The basic democratic precepts which should underlie election reform, the Council said, are:

"First, the purpose of elections is to ascertain the will of the majority. The basis of the authority exercised by the Executive and Legislative Branches is that the President and the Members of Congress are the choice of the people, as expressed in free and open democratic contests. Obviously, then, all feasible steps should be taken to facilitate the right of every eligible voter to cast his ballot. The smaller the percentage of voters, the less responsive the government is to the wishes of the country.

"Second, an election campaign is a debate as to who can best serve the voters. The accepted norm in debates is that each side is accorded an equal opportunity to present its arguments to those who will decide the issue. This standard should likewise be the objective in election campaigns. Election regulation should insure that major party candidates have at least a roughly equal opportunity to present their message to the public. This condition must be fulfilled to assure that elections are being decided on the merits, and not simply on the basis of which candidate has the money to monopolize the media."

The costs of reaching the voters are high, and getting higher, the Council pointed out. A major factor is the increasing use and the increasing cost of television.

"It is ironic that the air waves, which are the property of all the people, should have been made the most costly media for reaching the people. . . . It is clearly in the public interest that the voters hear both sides of the campaign—not just the side of the party that can afford exorbitant TV costs," the Council said.

It said the essential goals of regulation of election campaigns must be (1) to maximize the number of eligible voters who go to the polls, (2) to insure that major party candidates have a fair opportunity to reach those voters with their message, and (3) finally, to prevent any group from utilizing its economic resources to secure political dominance.

"There are two things Congress could and we think should do to expand the franchise. Congress has already enacted certain voting standards, applicable to both federal and state elections, such as outlawing literacy tests and fixing length of residence as a prerequisite for voting. Congress should in addition require employers to provide time off with pay to vote, and should establish a uniform and simple system for absentee voting. Next, Congress should establish a federal agency to work with the states to stimulate and facilitate registration and voting. For the present, however, the primary responsibility for expanded exercise of the franchise will continue to rest with the states, and we urge our affiliates in each state and locality to pursue vigorously the goals of simplified and permanent voter registration and expanded exercise of the franchise."

Beyond that, the Council said, federal legislation on campaign financing is "urgently needed." The abuses of financing by wealthy individuals—who are often candidates themselves—must be curbed. Ceilings should be placed on expenditures by candidates from their own resources and those of their families; and ceilings should be placed on the

total, aggregate contributions individuals and their families may make to candidates or political committees.

The Council declared, "A substitute must be found for the present dependence on contributions by wealthy individuals. The AFL-CIO has long favored some from of federal subsidy for elections. This subsidy should take a variety of forms. There should be direct treasury grants to political parties, with a formula allocating specific sums to Presidential, Senatorial and House nominees. Free TV and radio time should be provided for Presidential and Senatorial nominees. A special election frank permitting free mailing by nominees for the Senate and House should be established.

"Finally, there are some very evident gaps in the present reporting requirements which should be closed. State as well as interstate political committees should be required to report on spending in federal elections, if they exceed some fixed minimum. Wealthy individuals who, together with their families, contribute more than a fixed minimum should likewise be required to report."

## WITHDRAWAL OF TROOPS FROM VIETNAM

Mr. HATFIELD. Mr. President, I ask unanimous consent to have printed in the RECORD an editorial by Mr. Gwen T. Coffin, editor of the Wallowa County Chieftan, Enterprise, Oreg., which is one of the best commonsense approaches I have seen on the need to completely withdraw our troops from Vietnam.

There being no objection, the editorial was ordered to be printed in the RECORD, as follows:

THE WAY TO WITHDRAW IS TO WITHDRAW

Seven years after becoming heavily involved in the Vietnam war we are told by President Nixon, Defense Secretary Laird and the generals at the Pentagon that we have, in effect, achieved our objectives of checking communist aggression and threats to American security in southeast Asia and we are withdrawing. But we are withdrawing slowly, we are informed, because a little more time is needed for a million South Vietnamese soldiers to develop the skill to cope with half a million North Vietnamese and Viet Cong troops. After seven years of assistance and instruction from U.S. army two South Vietnamese soldiers don't quite equal one North Vietnamese.

This reminds us of the old arithmetic books used for years after the Civil War which often used problems like this: "If one Union soldier can lick three Confederate soldiers, how many Confederate soldiers can 15 Union soldiers lick?"

But while the American people are trying to digest the assertion that twice as many South Vietnamese soldiers as North Vietnamese cannot turn back the enemy without massive assistance from the U.S., we are reassured that the South Vietnamese army is now a crack outfit and is ready to defend democracy at home and elsewhere in southeast Asia once we have pulled back to our own frontiers. They are brave and determined soldiers, patriotic and loyal to the Thieu-Ky popular and democratic regime. But a lot of people are not buying it.

The real test of credibility and gullibility, however, comes in the explanation that we are withdrawing American troops as fast as we can get them out of Vietnam without exposing our departing troops, and those waiting to leave, to danger of annihilation. This explanation supposes that we are in a sort of Battle of Britain Dunkirk situation in which the enemy is hovering around the perimeter of our troop concentrations with vast destructive power ready to rain death and destruction on our men once they have turned their backs on the jungle and headed toward the sea.

It is more realistic to suppose that the North Vietnamese and the Viet Cong would gladly sit on their hands and watch us go, glad to see the whole American army depart intact. It is not improbable that they would agree to do nothing if we gave them a timetable for total withdrawal. In fact, this is what they have repeatedly said they would do.

So the idea that we are fighting a sort of delaying and rear guard action to give our main forces time to get out seems to be sheer nonsense too. We could probably arrange terms to move them all out in a month without incurring a single casualty if this was what we chose to do.

Actually an extension of the war into Cambodia and deep into Laos, while we are allegedly winding down the war, makes sense only on the premise that we are not going to give the world, and particularly the American people, a picture of American military frustation or defeat by a precipitous withdrawal. An announced withdrawal on a gradual basis enables us to maintain that we have defeated the enemy, won the war, achieved our objectives, and are leaving the battlefield with "honor". It is costing a lot of lives, and money to promote this concept, but it is deemed to be worth it politically. To admit an error or a lost cause is too much for most people and particularly for the president, the generals and Congress.

Back in the post-Civil War era when Congress was debating how and when the country should return to the exchanging of gold for paper currency, or as they referred to it in those reconstruction days, "the resumption of specie payments", the debates waxed long and violent in Congress over the issue. Finally one brilliant senator rose on the floor and said: "The way to resume is to resume!" and then he sat down. This overwhelming simple logic carried the day.

Applied to the present it might be changed to state, "The way to withdraw is to withdraw."

If we need to feel better about the whole thing, we can announce that we have won the war, defeated communism, made the world safe again for democracy, and the war is over. Even if we are not entirely convinced, it is an "honorable" way out.

## COURTS AND THE PROBLEM OF CRIME

Mr. RIBICOFF. Mr. President, there is little doubt that the Nation is facing a serious crisis in criminal activity. Every morning we open the paper to find more evidence that personal and property crimes are on the increase across the Nation. Unfortunately, many Americans, politicians and private citizens alike, have taken the easy way out and have attacked the Nation's judicial systems, especially the Supreme Court and the U.S. courts of appeals, as the cause of this increase.

The U.S. Court of Appeals for the District of Columbia has in recent years borne the brunt of much of this criticism. It is constantly under attack for being too liberal and for being overly conscious of the constitutional rights of the accused thereby allowing criminals to walk the streets.

Anyone who has taken the time to investigate the record of the local court of appeals knows, however, that in recent years it has reversed a smaller percentage of criminal convictions than the average for the Nation's other 11 appeals courts. In fact, there are many courts, such as the third circuit, which have consistently reversed a higher percentage of cases.

Barry Kalb, of the Washington Evening Star, has studied the records for the last few years and has come up with some surprising statistics.

In fiscal year 1965 the District of Columbia court's reversal rate in criminal cases was above the national average—20.1 percent to 16.9 percent to the average of 14.4 percent. This trend continued as, in the next 3 years, the rate of the local court was below the national average. By 1969 the national average was 13.7 percent, while in the District it was a low 8.8 percent. Last year only 11.1 percent of the cases in the District were reversed.

These figures are all meaningless, however, for it is not a crime for a court to reverse a lower court's decision. The men and women who make these decisions have taken an oath to uphold and honor the Constitution and are simply insuring that other authorities do the same.

We are never going to stop criminals by attacking our own judicial institutions, for such attacks only serve to lessen the respect our law enforcement and judicial authorities have in the community. It would be far more productive to attack the roots of the problem—the poverty, the poor schools, the racism, the governmental indifference which allow and encourage criminal activity to flourish.

I ask unanimous consent that a table detailing the reversal rates in criminal cases of the U.S. courts of appeals be printed in the RECORD.

There being no objection, the table was ordered to be printed in the RECORD, as follows:

PERCENTAGE OF CRIMINAL CASES REVERSED OR DENIED IN THE UNITED STATES COURTS OF APPEALS, FISCAL YEARS 1965 TO 1970—Continued

| | 1965 | 1966 | 1967 | 1968 | 1969 | 1970 |
|---|---|---|---|---|---|---|
| All circuits | 16.9 | 14.4 | 13.5 | 16.0 | 13.7 | 16.6 |
| District of Columbia | 20.1 | 14.9 | 11.0 | 14.9 | 8.8 | 11.2 |
| 1st circuit | | 31.0 | | 14.7 | 16.0 | 11.1 |
| 2d circuit | 13.6 | 8.2 | 8.7 | 6.6 | 9.2 | 5.7 |
| 3d circuit | 8.0 | 20.0 | 19.1 | 23.8 | 26.2 | 28.3 |
| 4th circuit | 20.4 | 11.8 | 8.6 | 8.9 | 8.2 | 17.2 |
| 5th circuit | 18.9 | 19.5 | 14.9 | 23.9 | 16.6 | 21.9 |
| 6th circuit | 8.7 | 10.1 | 16.3 | 16.8 | 16.3 | 11.4 |
| 7th circuit | 13.2 | 12.7 | 12.1 | 25.0 | 26.4 | 26.4 |
| 8th circuit | 6.1 | 6.8 | 10.8 | 16.7 | 9.9 | 22.1 |
| 9th circuit | 16.7 | 9.8 | 19.5 | 13.0 | 14.3 | 17.3 |
| 10th circuit | 19.1 | 25.0 | 14.3 | 14.5 | 10.0 | 25.9 |

## INTERVIEW OF SENATOR SCOTT BY MILES BENSON

Mr. HATFIELD. Mr. President, the distinguished Senator from Pennsylvania (Mr. SCOTT) was interviewed recently by Miles Benson, reporter for the Newhouse News Service. He spoke candidly and seriously about matters of national concern. So that others may know the recent thinking of our Republican minority leader, I ask unanimous consent to place this article in the RECORD.

There being no objection, the interview was ordered to be printed in the RECORD, as follows:

SENATOR FAILS TO ENDORSE—OR OPPOSE—AGNEW FOR RENOMINATION: NIXON MUST RUN A DIFFERENT RACE FOR SECOND TERM, SCOTT SAYS

(By Miles Benson)

WASHINGTON.—Senate Republican Leader Hugh Scott believes President Nixon must run a far different campaign for a second term in the White House than his party did in last year's Congressional election.

In an exclusive interview, Scott failed to endorse Vice President Spiro T. Agnew for renomination—nor did he oppose him—but made it clear he considers the heated rhetoric of the 1970 campaign a thing of the past.

A leading GOP moderate, Scott placed on the record his own views on subjects which many Republicans discuss candidly only privately—concerns about the war in Indochina, Agnew, the economy, the Democratic opposition, the President's civil rights policies and the 1972 election outlook.

The Pennsylvania senator said:

"It will not be enough for President Nixon to stop the war. He also must rescue the economy or risk the fate of Great Britain's Sir Winston Churchill, who was turned out of office after World War II because of pocketbook concerns.

Agnew will have to change his "belligerent" personal style of campaigning if he remains on the GOP ticket, which Scott considers likely.

The President has done more for black Americans than he receives credit for—but has not done enough.

The "Southern strategy" is as dead as the "brawling" tactics of the last campaign.

The Nixon administration has been a pleasant surprise to many liberals and moderates, whether they admit it or not.

In an unusually rough attack, Scott discussed the war policy candor of former Presidents John F. Kennedy and Lyndon B. Johnson, and declared:

"We have had a decade of deceit. We have had elegant deceit and we have had awkward deceit—two varieties of deceit—and I will not elaborate further."

In contrast, Scott said, President Nixon "has kept every promise he made. The people are not quite used to this. It comes as a surprise."

Scott also claimed a superior record for the Nixon administration in "the betterment of black people" than any previous administration.

Here is an edited transcript of the Newhouse News Service interview with Sen. Scott:

(Q) What do you think of the administration's policy on the war in Southeast Asia and, in particular, on withdrawal of U.S. forces?

SCOTT. The commitment is, of course irreversible. I think the de-escalation is proceeding rather well. I would favor every means by which we could accelerate that de-escalation, consistent with safety.

"I could not support a U.S. ground operation—with U.S. infantry—in either Laos or Cambodia. I couldn't support it because I don't think it would be wise to do it, and beyond that, politically, the country would not support it.

"I think it is a miserable war, of course. . . ."

(Q) Do you believe the Nixon administration is taking a more successful approach in Vietnam than Johnson did?

SCOTT. I do. I do indeed. I think Nixon reversed the entire war-making process from a trend of escalation to disengagement.

"I get letters from people who want to see us out right away. Well, when you are down to the last 100,000 men and the enemy sends down a force to destroy them, we will want to do all we can to save the 100,000. Certainly that demand was present in England at the time of Dunkirk. There wasn't a living Englishman who wouldn't have wanted those troops out of there.

"I would hate to see us in that situation—where you think you are just about out, and then you're back in horse, foot and dragoon. It is better to disengage with the finality that has been used."

(Q) Do you think such acts as the bombing of the Capitol represent a renewed opposition to Nixon and to the war?

SCOTT. The bombing of the Capitol is supposed to be the action of terrorists and is probably bad news for the peaceful protesters. It may well shoot down the April 24 Peace Mobilization, the Peace Move.

As far as criticism of the President goes, I think the President has proven two things:

First, he proved that he kept every promise he made. The people are not quite used to this. It comes as a surprise. We have had a decade of deceit. We have had elegant deceit and we have had awkward deceit—two varieties of deceit, and I will not further elaborate.

After the people have been lied to in the two previous administrations, the truth is rather ungraciously accepted by the public. The attitude is, "Whoever would think Nixon would tell the truth while those other guys lied to us?"

The second reason is even simpler—the draft. He (Nixon) has reduced the liability in the draft from seven years to one, so aside from the 19-year-olds, the rest of the young people now know that the fear of being killed has been largely removed.

Much of the protest—every pious and articulate argument to the contrary notwithstanding—is based on the fear of being killed, which is a well-known human emotion. The fear of being killed is what brought these guys here, it is what makes parents write violent letters to me . . . it is what organized Harvard professors, it is what organized the demonstrations.

At the same time, the American people are sitting in judgment, and they are reserving judgment. If the Laos thing fails, then certainly we would all be in the bucket as far as any attempt to justify further involvement in Indochina is concerned.

(Q) Will the war be a positive or a negative issue for Nixon in 1972?

SCOTT. I think with regard to the benefits, the innate fairness of the American people will be brought into play, and they'll have to balance the books. They'll have to balance the books on a four-year basis.

(Q) What are his chances of solving the economic problems?

SCOTT. They're better than good. He's taking the hard knocks early. Some of his economists have been wrong several times. They have not allowed for the time lag, the economic time lag. They have proved to be the same kind of optimists that politicians are.

We think of economic crises as having a six-month lag. This turned out to have a nine-to-18-month lag.

Now there's a sense of haste about it, a feeling that whatever it is they are going to be doing, they'd better be doing it. That was not present a year ago. Before they had the attitude that "we know what we're doing and in six months the economy will turn around". Now it's "we hope to God we know what we're doing but it will take 12 to 18 months to turn it around."

Probably it will turn around visibly and appreciably and viably in the summer of '72 . . .

He (Nixon) has shown a willingness to make some hard decisions—the fact that he took on the construction industry. His willingness to take on what he has constantly referred to as our friends, I think, shows courage, because he feels the construction industry has been more amiably disposed towards Republicans than any other broad union group.

(Q) Are you satisfied with what the administration is doing in the area of civil rights problems? The broad aspect of social problems?

SCOTT. Well, I think every administration can do better. The Kennedy administration did nothing except to provide a great deal of style, and everybody liked this stylish negativism. Oh, it had all the advantages of a bra-less flat-chested woman. You thought you saw something and enjoyed what you thought you saw, but you really weren't looking at anything. That was the net result of the Kennedy Administration.

Well, the Johnson Administration on the other hand was a good deal like walking through a series of bordellos. You may not have been sure it was good for you, but you sure were enjoying it.

And so now we've hit maybe some backwaters, some pleasures and some disappointments. I was not satisfied with the administration's original approach to civil rights, the voting rights bill.

I am pleased as a moderate, and I'm pleased as the leader, that the President has dared to propose such bold and new things as welfare reform and draft reform, and the reorganization of Congress, reform of criminal law, manpower utilization, and Social Security cost-of-living provisions.

I think the Nixon proposals for the 92nd Congress are so thoroughly justified and so desirable that they have left the Democratic Party gasping for alternatives. I think it is significant that the Democratic Party has no alternative to the President's health proposal except to abolish the present system and start over again at twice the cost. This is fundamentally the Kennedy proposal.

They have no alternatives to revenue sharing but to take all the money in the President's proposal and continue the present programs, too, and thereby continue all the present evils and add to them the cost of the new program. They have no alternatives to family assistance other than to turn the whole cost over to the federal government which thereby gives outrageous benefits to three states at the expense of others. New York, California and Massachusetts—they'd get 51 per cent.

(Q) You mentioned the tactics of the last campaign. One of the central issues of that campaign was Vice President Agnew. What is your view of him?

SCOTT. I think the Vice President is confining himself largely to such things as revenue sharing dealing mainly with the governors and the mayors. This is an area where he possesses considerable background and expertise.

I wouldn't want to comment on that beyond, other than to say that his method of doing it may be different from mine. His kind of rhetorical approach differs. He has certainly proven to be a catalyst. He has stirred reactions, and rather useful talk, pro and con, I think.

He certainly revealed that the reportage of the war on television networks was grossly one-sided, and has brought about a better reportage, a better coverage of the war.

(Q) Do you think, in net balance in 1972,

that Agnew will be a positive political advantage to the ticket?

SCOTT. I don't know. Time will tell that. The President will make that decision.

(Q) Have you made up your mind whether you want him to remain on the ticket or not?

SCOTT. No, but I consider it likely that I'll be chairman of the third largest delegation at the convention and I would expect to caucus with the other delegates and see what they thought. I think the administration is well aware that I will probably be chairman of the third biggest delegation, and therefore I would expect to be consulted in advance on the personnel who are chosen to run the convention, the permanent chairman, the platform committee.

(Q) Do you detect any high degree of opposition to Agnew's renomination within the party, and are you satisfied with his performance to date?

SCOTT. I don't think there is a very high degree of opposition to the vice president. There surely is some. There were some candidates who campaigned away from the veep last time.

There's nothing very hopeful, nothing very serious being sounded at this time that I am aware of. I myself have said I'm going to reserve what I am going to do, dependent on what the President wants done and what the Pennsylvania delegation wants.

(Q) It's been suggested that the Vice President's work in revenue sharing and health is intended to rehabilitate his image. Do you share this view and if he fails to rehabilitate his image, what implications do you see?

SCOTT. Only time will tell. The President will give the vice president a lot of assignments and if he does them well, it may strengthen him as a candidate.

(Q) Then you mean if we don't see a new candidate for Vice President in 1972, we will see a new Agnew?

SCOTT. Well, everybody could use a face lift every two years, when political tactics change. I don't think anybody's going to ask the vice president to undergo a metamorphosis, but if he stuck to the achievements of the administration and his part in it, that would be constructive campaigning and I would encourage him to do it.

(Q) If he exhibited signs before the convention of returning to the 1970 style, would you feel compelled to oppose his renomination?

SCOTT. That's what Mr. Roosevelt called an iffy question. I'm speaking very candidly without in any sense giving offense. I just think that we all learn from mistakes, as I do, and there are certain things in a campaign that are not productive. I think I could have predicted that if I'd been asked. I wasn't. Now that they have demonstrably been proven unproductive, I doubt that they'll be repeated.

(Q) Who do you think would be the strongest potential Democratic candidate to run against the President in 1972?

SCOTT. Well, in a four-mile race the runners are apt to change places. I don't know who's coming down the stretch. But certainly on the back part of the track, Muskie seems to be ahead and he seems to be the favorite. Someone else may come to the public eye or the public ear.

I think Hubert Humphrey's the most popular candidate among the professionals. I feel he's still the most admired. But he is not equipped with the same organization that's begun to form up around the others.

I think McGovern is a sure loser because he is tailoring his appeal to the far, far left and there's just not enough people over there on the gooney bird section of the bleachers.

## EXTENSION OF THE ECONOMIC OPPORTUNITY ACT

Mr. CRANSTON. Mr. President, I am delighted to have joined in cosponsorship of S. 1290, introduced by the Senator from New York (Mr. JAVITS), on March 19 on behalf of the administration to extend the Economic Opportunity Act of 1964, as amended, for an additional 2 years after its expiration this June 30. In view of the contradictory rumors which have found their way out of the executive branch over the past months, this proposal on the part of the administration is a welcome step in the right direction.

I believe it is vital to preserve a separate poverty agency within the Federal Government to fight for the rights of the poor and the downtrodden and to serve as a focal point for representation of the interests of those without political or economic power within our system.

However, although I strongly favor extension of the Economic Opportunity Act for another 2 years, I want to make perfectly clear that my cosponsorship of this bill does not in any way imply my acceptance of the statement of the Director of the Office of Economic Opportunity in presenting it that that act should be extended without amendment. Indeed, on the same day S. 1290 was introduced I joined with Senator MONDALE and other Senators in sponsoring S. 1305 the National Legal Services Corporation Act which would add a title IX to the Economic Opportunity Act. And I expect to be supporting extensive amendments to that act with respect to Headstart and child development, as well as economic development.

With that caveat, I join with the administration in support of a 2-year extension of OEO and the poverty program and look forward to working with the administration, Chairman NELSON of the Employment Manpower and Poverty Subcommittee and Senator JAVITS to develop the most effective legislative framework for continuation and expansion of the urgent fight to eliminate poverty from our land.

## RATE DISCRIMINATION IN RAIL TRANSPORTATION

Mr. TAFT. Mr. President, on February 17, I introduced S. 1092, the Modern Railway Transportation Act. One of the key provisions of the bill outlaws any rate discrimination in rail transportation.

A blatant example of rate discrimination recently brought to my attention by the Great Lakes Task Force demonstrates the need for this legislation.

The shipment of synthetic rubber by rail from Louisville, Ky., to New York, Chicago, and Toledo for export exemplifies the absurdity of the present rate structure. The rate from Louisville to New York, 834 miles, in 1970 was 95 cents per hundred pounds. The rate from Louisville to Chicago, 291 miles, was 98 cents per hundred pounds. But, the freight rate from Louisville to Toledo, 298 miles, was set at $1.18 per hundred pounds.

Why it should cost more to ship rubber 298 miles than 834 miles is a secret locked within the bureaucratic tangles of the ICC.

As this example graphically illustrates, the ICC has succeeded in turning out the lights of reason. The time for reform is at hand.

## ADMINISTRATION MUZZLES UNEMPLOYMENT EXPERTS

Mr. PROXMIRE. Mr. President, the administration ". . . is about to muzzle the nonpolitical technicians at the Bureau of Labor Statistics in their attempt to help the public understand what is happening to unemployment."

Last evening I released a letter to Secretary of Labor James Hodgson asking him to explain the basis for the elimination of the regularly scheduled news conference on unemployment and consumer price developments. In the letter I question whether the Department of Labor "may now be in the process of spoon feeding the American people" and say that a "reversal" of the policy "would be the only convincing answer you could give to this question."

In addition, I believe that instead of acting vigorously to reduce unemployment, the administration has figuratively decided to shoot the messenger who brought the bad news.

Now we shall find administration politicians describing economic trends in whatever way they find most convenient to the Executive. They will shout from the housetop when they get favorable information and they will retreat to the cellar when trends are not going their way.

What is happening to employment, unemployment, and prices represents the most timely information provided by the Government on the state of the economy. For almost 20 years the Labor Department has held regularly monthly public news briefings on these most important subjects.

In all of this time, the BLS has built and retained its reputation for absolute impartiality, highly professional competence, and a completely nonpartisan approach. The BLS has epitomized the rule that to make useful judgments we must have absolutely honest statistics.

For these many years the news conference approach, which involved the explanation by technical experts of price and employment development, has been recognized as a most effective way of communicating to the news media and hence to the general public what was the current state of the economy, free from the political slant which could easily be applied to such facts.

The Joint Economic Committee is responsible to the Congress to see that economic facts are not treated as pawns for partisan political manipulation of the public. Just because some political appointee's hair is ruffled is no reason to depart from a sensible approach to in-

forming the public about what is happening on the economic front. I am convinced this is exactly what has happened in this case. It should not be allowed to prevail.

I ask unanimous consent that the text of the letter to the Secretary of Labor, and an editorial on this subject, entitled "The BLS—Another Outpost Overrun," published in the Washington Post for Monday, March 22, 1971, be printed in the RECORD.

There being no objection, the items were ordered to be printed in the RECORD, as follows:

Hon. JAMES D. HODGSON,
*Secretary of Labor,*
*Washington, D.C.*

DEAR MR. SECRETARY: As Chairman of the Joint Economic Committee, responsible to Congress to keep it informed on a timely and impartial interpretation of economic developments, I am disturbed by reports that you have abolished the news conference procedure of having technically knowledgeable economists explain to the news media and the public what is happening on the employment and inflation fronts.

Would you supply answers to our Committee with respect to the following questions?

1. When was the news conference approach initiated by the Labor Department as a method of informing the public about consumer price and unemployment developments?

2. What were the antecedent factors leading up to this decision?

3. Why have you now decided to discontinue existing procedures?

I am most concerned that your Department may now be in the process of spoon-feeding the American people. Will you make it clear to the Congress, this Committee and the American people that news on such important developments as inflation and unemployment will be forthrightly and objectively placed in the public record? It is my firm conviction that a reversal of your apparently recent decision to ban technically-led news conferences on consumer price and employment developments would be the only convincing answer you could give to this question.

Sincerely yours,
(S) Bill Proxmire,
WILLIAM PROXMIRE,
*Chairman.*

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[From the Washington Post, Mar. 22, 1971]

THE BLS—ANOTHER OUTPOST OVERRUN

For more years than we care to remember, the Bureau of Labor Statistics has been one of those government agencies you could count on for straight talk—a little on the dry side, perhaps, but straight. It could operate no other way, given the political and psychological dynamite in its economic indices on prices and wages and jobs. Elsewhere in the government—at the White House, for instance—you expected to get no end of self-serving interpretations of the economic trends, garishly rose-tinted for their political impact. At BLS, you got unvarnished facts with only the most cautious, balanced elaboration by trained technicians.

The Bureau could not perform its job in any other way; enormously important decisions, both public and private, by businesses and labor unions as well as the government, depend on the integrity of the monthly BLS measurements of economic trends; under escalator clauses, the wages of hundreds of thousands of workers are pegged automatically to movements in the BLS price index. Not that there haven't been efforts in the past to exploit this information for political effect; there is always heavy pressure from the politicians in power, for example, to speed up the release of a favorable BLS finding on prices or employment so as to make it public just before election day. But resistance to this sort of political hanky-panky has also always been strong; Arthur Goldberg, when he was Secretary of Labor, felt so keenly the need to resist such temptations that he fixed, and announced a full year in advance, the schedule of release dates for BLS reports in order to foreclose their premature publication for political purposes.

Just because of its integrity, over the years serious students of the subject have come to set a high store on the public press briefings at which the bureau's statistcs and indices have been released. Although it was pretty desiccated stuff, you had the feeling that you could count on the BLS commissioners and their expert assistants to give you a sort of bench-mark against which all the other appraisals could be measured.

So it is disappointing, not to say disquieting, to hear that the Nixon administration has decided to muzzle the BLS. The bureau will still grind out the raw data every month, but without the public briefings by the men who actually compile the figures and are accordingly in the best position to explain to a confused and anxious public what may or may not have accounted for this or that movement in prices or wages or employment levels and what it all portends. BLS experts, we understand, will still be available to reporters for questioning—but under wraps, presumably as anonymous "informed sources" whose unattributable opinions will lose a lot of their authority. The loudest voice, putting the most favorable spin on things, will be that of Mr. Ronald Ziegler at the White House.

It is being said in some quarters that this change was made because the BLS in its starchy addiction to the facts, has occasionally undercut some of the Nixon administration's best efforts to tell us what it thinks we would most like to hear about the state of the economy. This figures—from an administration that has established its own communications czar, in Mr. Herbert Klein, and demonstrated so marked a tendency to embargo the bad news and mechandize the good. But motives are always hard to establish in these matters and what is important, in any case, is the effect. The effect in this instance is to muffle a potential source of dissent—not on policy, which is sometimes understandable, but on the meaning of events which matter enormously to the public. In the continuing—some would say losing—struggle for the greatest possible freedom of information from the government, another outpost has been overrun.

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## STEWART MOTT REPLIES TO JOSEPH CALIFANO STATEMENT TO COMMERCE COMMITTEE

Mr. HATFIELD. Mr. President, in testimony before the Committee on Commerce Joseph A. Califano, general counsel to the Democratic National Committee, addressed the general subject of campaign reform.

A portion of his testimony dwelled on allegations concerning Stewart Mott and Senator HUMPHREY during the 1968 presidential campaign.

Mr. Mott has responded to Mr. Califano's statements and their subsequent interpretation in a letter to Senator JOHN PASTORE, the subcommittee chairman.

I ask unanimous consent that the text of Mr. Mott's letter be printed in the RECORD.

There being no objection, the letter was ordered to be printed in the RECORD, as follows:

Senator JOHN PASTORE,
*Chairman, Subcommittee on Communications of the Senate Commerce Committee, Washington, D.C.*

DEAR SENATOR PASTORE: Exactly two weeks ago, your subcommittee received a statement—in which my name was cited—from Joseph A. Califano, Jr., General Counsel to the Democratic National Committee, in which he said he was speaking as attorney for the DNC and indicated that his views reflected those of Chairman Lawrence O'Brien and Treasurer Robert Strauss.

In his statement, he referred to the "danger of abuse," the "potential for corruption of official integrity," and went on to say that "substantially more insidious is the danger that large contributors, by reason of their enormous wealth alone, can influence foreign or domestic policy to suit their personal prejudices." Citing me, and me alone, he claimed that I "attempted to purchase (my) own foreign policy for 200 million Americans."

As a consequence of Mr. Califano's statement, various headlines appeared in the press such as "Effort To Bribe Humphrey Alleged" (Philadelphia Evening Bulletin, 3/3/71) and "HHH Was Offered $5 Million to be A Dove" (Detroit Free Press, front page, 3/5/71). Of course neither you nor Mr. Califano could control what the press would say in reporting Mr. Califano's statement, but when I read the text of what Mr. Califano actually said—"corruption . . . danger of abuse . . . insidious . . . personal prejudices . . . purchase his own foreign policy"—it is quite clear that Mr. Califano's inference was that indeed I did attempt to *bribe* Mr. Humphrey.

In view of such outright calumny, I am herewith requesting, as a point of personal privilege, your permission to offer my reply to Mr. Califano and have it printed and incorporated into the official record of your hearings. If it is too late and you are unable to do so, then at the very least I am requesting that you have it entered into the Congressional Record.

I would like to point out that Mr. Califano cited only four examples of individuals who allegedly sought improper benefits from campaign contributions. Three of them were Republicans, William J. Casey, Fred J. Russell, and Mrs. John D. Rockefeller, Jr. In each of those three cases, I concur with Mr. Califano that the alleged benefits sought were indeed of a personal character and could be construed to be highly improper. To give balance to his presentation, I assume, he decided to cite an example of an improper Democratic donation. The fact that he chose me both puzzles and amuses me—for the following reasons:

A) I am a registered Republican.

B) the meeting with Humphrey never took place

C) no money was ever donated by me or my associates

D) the candidate was never elected

E) no foreign or domestic policy was ever influenced.

No doubt Mr. Califano and his associates O'Brien and Strauss are all clever men. If indeed they had wanted to cite an example of an improper Democratic donation, I am sure that in their quite recent memory they could find literally hundreds of good examples which illustrate the point quite vividly. Examples of large donations from wealthy individuals or labor unions, donations which were actually given, to candidates who were actually elected, where an influence on foreign or domestic policy was clearly evident, and most especially, where substantial personal gain was involved.

It's very curious, isn't it, that Messers. Califano, O'Brien, and Strauss chose *not* to cite any such concrete examples. Examples such as defense contractors who benefit from supersonic transports, ABM systems, and Vietnam munitions supply. Examples such as oil executives who benefit from protective oil

legislation. Examples such as major farmers who benefit from agricultural subsidies.

No, Mr. Califano chose not to cite any such Democratic contributor by name. No doubt he and his associates O'Brien and Strauss continue to rely upon them for funds to finance the debts of the bankrupt DNC. I'm not surprised. I'm sure the list of political bribes and pay-offs for personal economic gain would be longer than the entire transcript of your subcommittee's hearings. And I have a hunch that a good many criminal prosecutions might result if Mr. Califano chose to speak forthrightly about improper Democratic Party donations.

I'm not at all sure why the DNC chose to cite me, Stewart Mott, as their prime case of an improper Democratic Party donation—Even if the Alleged Facts Were True!

Let's review the facts. Yes, I did write a letter to Hubert Humphrey proposing a meeting. But it's quite clear that Mr. Califano never bothered to read that letter. Instead, he quoted from Fortune magazine which incorrectly reported the story. No doubt Mr. Califano could have checked his facts if he had wanted to; he could have obtained a copy of the original letter either from me or from Mr. Humphrey. But no, the Fortune article more aptly suited his purposes because it *incorrectly* stated that I "made it clear that the presidential candidate would have to modify his views on Vietnam before he could expect any financial support from this group."

"Modify" is the key word here. In my letter to Humphrey, dated 10/13/68, which I have just re-read, there is not the slightest implication or intimation that Mr. Humphrey would be expected to *modify* his Vietnam views in order to please my fancy and earn my campaign donation. The tone of my letter suggested no "buy-a-dove attitude." There are no grounds whatsoever for alleging that I attempted to purchase my own foreign policy for 200 million Americans.

As I am sure Mr. Califano can recall, there was considerable speculation in mid-October 1968 as to the exact nature of Mr. Humphrey's views on Vietnam. Some people were referring to his Salt Lake City speech as a major shift in his position. Others denied it. In retrospect, looking back over the past three years, I think it's fair to say that Mr. Humphrey's Vietnam views have been variable, shifting and speculative continuously—depending usually upon the degree of influence which the DNC and Mr. Lyndon Johnson brought to bear upon him.

In short, on 10/13/68, no one seemed to be sure just where Humphrey stood on Vietnam, not even the candidate himself. The proposed meeting had asked for an explanation—clarification—of his views on Vietnam (and other issues of national importance), *not* a modification of his views. There was no presumption whatsoever that Mr. Humphrey would suddenly and dramatically change his views as a result of that proposed meeting. To call it a "purchase of foreign policy" is ridiculous.

It may very well be, however, that both Mr. Califano and Mr. Humphrey perceived the proposed meeting as an attempted bribe. Certainly they must have become accustomed to thinking in such terms. In fact, during that campaign both candidates had fundraisers working for them who were quick to suggest the possibility of government service for those who made substantial contributions. In June of 1968 I had a conversation with Maurice Stans, financier for the Nixon campaign; and in October I had a conversation with Robert Short, financier for Humphrey. Both conversations had one striking similarity. In both instances the fund-raiser was looking for a donation from me, and both men asked me whether I had ever given some thought to government service, working in Washington, or words to that effect. In both instances my response was negative and I was thoroughly disgusted by their oblique suggestions of a political appointment in thanks for a campaign donation.

So perhaps I shouldn't be surprised that Mr. Califano would perceive that proposed meeting in his own terms. But he is patently wrong both as to the facts *and* the intent of that never-consummated meeting and donation.

It is a sad day for American politics when an individual citizen such as myself, seeking no personal economic benefit or aggrandizement whatsoever, cannot speak out on major issues *and* give campaign money to the candidates of his choice *and* carry on a rational dialogue with a presidential aspirant—without risking the calumny which Joseph Califano (and the press) heaped upon me March 3rd at your subcommittee.

It is even more sad when the slander originates from the Democratic National Committee, a party which has brought forth some excellent candidates whom I have been greatly pleased to support. You and your subcommittee may ask *any* of the candidates whom I have supported during the past decade whether my donations have represented an "insidious danger" to the welfare of our nation. And you may ask whether I have ever once sought to influence foreign or domestic policy in favor of personal financial gain.

The DNC really ought to be encouraging an open debate, a free discussion of the issues, not only among candidates but also among contributors, and particularly between candidates and supporters. But if the DNC thinks it can muzzle into silence either candidates or contributors, it will continue to lose elections and it will never receive a dime from me.

Senator Pastore, I'm sorry for the delay in writing this letter. Actually, I didn't want to attempt to reply to Califano's remarks solely on the basis of the press reports about what he said. He himself made that mistake by quoting an erroneous Fortune article. I waited until I received a transcript of his remarks.

The sweet irony in this episode is that during this past week I've received two different invitations to attend a fund-raising event here in NYC; Messrs. O'Brien, Strauss, and Humphrey are inviting me to Arthur Kim's home to shell out a cool $5000 per table to help the DNC pay off Humphrey's colossal campaign debt of 1968. I think I'll pass up their kind invitation.

Sincerely yours,

STEWART R. MOTT.

## FEDERAL BUILDINGS URGED FOR BLIGHTED URBAN AREAS

Mr. HARTKE. Mr. President, in a speech in the Chamber on March 9, I urged that historic buildings in the Nation's Capital be saved from the wrecker's ball.

The interest which that statement aroused indicates that there are many who are concerned that our haste to modernize has made as heedless of a great heritage. There is much of our past which has significance for the present and the future. It should be preserved and promoted, rather than destroyed.

For more than 2 years, one of the most famous of Washington's landmarks has stood vacant. The Willard Hotel, where the great and near-great have stayed, has played a prominent role in the political and social past of the Nation's Capital. Following one of his visits, Carl Sandburg said that—

The Willard Hotel more justly could be called the center of Washington than either the Capitol or the White House or the State Department.

Not only does the Willard have sentimental significance; it also represents an excellent sample of architecture and is in perfect harmony with its surroundings. Neither claim can be made for most buildings constructed in recent years.

I have been among those who have suggested that the Willard could be retained as a museum. So much of our history has occurred within its walls that it would be ideal for such a purpose.

There is, however, another valuable use to which the building could be put—one which would do even more honor to its past glory.

On February 27, 1970, President Nixon issued an Executive order directing the General Services Administration to develop plans for the acquisition and leasing of space for Federal offices in areas where such offices would have a significant impact on improving social and economic conditions.

In a press conference which was held on the same day, Dr. Daniel P. Moynihan said:

The present Executive order takes the concept beyond the imposition of some order within the priorities of different Departments in the Government and acknowledges what has been the fact—whether you wish to acknowledge it or not—namely, that where the Federal Government locates its offices, its plants, its factories, has very great consequences for people, not just for the Government; that this has extraordinary impact on the development of cities, different parts of cities, different regions of the country, different parts of those regions.

This is one of the most important real options the Federal Government has in seeking to bring about a kind of purposeful, rational growth policy.

At the same press conference, Administrator Robert L. Kunzig of the General Services Administration stated:

In other words, what we are talking about is double duty for Federal dollars. Not only will the dollars be used to build the building, but they will also be used to assist and aid in the economic development, or urban redevelopment.

The past few years, however, have seen an increasing decentralization of Federal office buildings to the suburbs. We pay a high price for this trend, not only because of the exorbitant rents which are charged, but also because there is an enormous need within the District for jobs.

No Federal City Bicentennial Corporation, such as the one which has been proposed to restore the Pennsylvania Avenue area between the Capitol and the White House, will have any significant impact on the revitalization of Washington unless we act to make this a good place in which to work and to live. The Federal Government has the power to spur employment and economic vitality by constructing office buildings in depressed areas of the District. Unfortunately, the President's Executive order of 1 year ago has not been implemented in Washington.

I would urge that the GSA undertake a survey of the Willard Hotel, not for the purpose of determining the easiest way to tear it down, but rather for the

purpose of determining the suitability of the Willard as a Federal office building.

Whatever the outcome of the study, I believe that there is a place for the Willard in a revitalized Washington. I also believe that it is time that action was taken to restore burned out and blighted areas of the Capital, not by displacing small businessmen and not by a wholesale destruction of historic buildings, but by moving resolutely to implement the President's Executive order of February 27, 1970.

The Washington Post put its editorial finger on the real issue when it said on January 11, 1971:

When, back in the 1950's, federal government offices began to move out into the suburbs, it was a matter of national policy. The government was to be dispersed to minimize disruption in the event of an atomic attack. No one gave much thought to the fact that low income and minority employees were left behind in the city because there was no housing for them out there. But the policy became obsolete, or at least implausible, with the advent of the hydrogen bomb.

Now, for a variety of new reasons, government dispersal has become something else; it has become a way of evading national policy.

Mr. President, I ask unanimous consent that the text of President Nixon's Executive order of February 27, 1970; the transcript of the White House news conference of the same date; the Washington Post editorial of January 11, 1971, entitled "Jobs That Move Away"; and an article entitled "Federal Office Leasing Policies Questioned" published in the Evening Star of December 4, 1970 be printed in the RECORD.

There being no objection, the items were ordered to be printed in the RECORD, as follows:

PLANNING, ACQUISITION, AND MANAGEMENT OF FEDERAL SPACE

(White House Executive Order)

By virtue of the authority vested in me by the Federal Property and Administrative Services Act of 1949, as amended, and as President of the United States, it is hereby ordered as follows:

Section 1. The Administrator of General Services (hereinafter termed "the Administrator") shall initiate and maintain plans and programs for the effective and efficient acquisition and utilization of federally owned and leased space located in the States of the United States or in the District of Columbia or in Puerto Rico (hereinafter termed "in the United States"), and for which the Administrator is responsible. The Administrator shall prepare and issue standards and criteria for the use of such space and shall periodically undertake surveys of space requirements and space utilization in the executive agencies and initiate actions and formulate programs to meet the essential space requirements of executive agencies. In carrying out these functions, the Administrator shall (a) coordinate proposed programs and plans for buildings and space with the Bureau of the Budget, (b) obtain from the Civil Service Commission, the Office of Emergency Preparedness, and the Department of Defense any information in the possession of those agencies which may bear upon such programs and plans, (c) coordinate proposed programs and plans for buildings and space in a manner designed to exert a positive economic and social influence on the development or redevelopment of the areas in which such facilities will be located, (d) seek the cooperation of the heads of the executive agencies concerned with any of the foregoing, and (e) annually submit long-range plans and programs for the acquisition, modernization, and use of space for approval by the President.

SEC. 2. (a) The Administrator, and the heads of executive agencies, shall be guided by the following policies for the acquisition, assignment, reassignment, and utilization of office buildings and space in the United States:

(1) Material consideration shall be given to the efficient performance of the missions and programs of the executive agencies and the nature of function of the facilities involved, with due regard for the convenience of the public served and the maintenance and improvement of safe and healthful working conditions for employees;

(2) Consideration shall be given in the selection of sites for Federal facilities to the need for development and redevelopment of areas and the development of new communities, and the impact a selection will have on improving social and economic conditions in the area. In determining these conditions the Administrator shall consult with and receive advice from the Secretary of Housing and Urban Development, the Secretary of Health, Education, and Welfare, the Secretary of Commerce, and others, as appropriate;

(3) Maximum use shall be made of existing Government-owned permanent buildings which are adequate or economically adaptable to the space needs of executive agencies;

(4) Suitable privately owned space shall be acquired only when satisfactory Government-owned space is not available, and only at rental charges which are consistent with prevailing rates in the community for comparable facilities;

(5) Space planning and assignments shall take into account the objective of consolidating agencies and constituent parts thereof in common or adjacent space for the purpose of improving management and administration;

(6) The availability of adequate low and moderate income housing, adequate access from other areas of the urban center, and adequacy of parking will be considered; and

(7) Proposed developments shall be to the greatest extent practicably consistent with State, regional, and local plans and programs; and Governors, local elected officials, and regional comprehensive planning agencies shall be consulted in the planning of such developments.

(b) The Administrator shall plan, acquire, and manage space in the United States upon his determination that such actions will serve to improve the management and administration of governmental activities and services, and will foster the programs and policies of the Federal Government. Prior to making such determinations the Administrator shall consult with the heads of the executive agencies concerned and take into account their requirements, consistent with the criteria stated here and his other responsibilities. The Administrator shall advise the agency head in writing of his intended course of action and notify him that in the event of disagreement the affected agency head may within thirty days make a written request for review of the matter, through the Director of the Bureau of the Budget, to the President.

SEC. 3. The heads of executive agencies shall (a) cooperate with and assist the Administrator in carrying out his responsibilities respecting buildings and space, (b) take measures to give the Administrator early notice of new or changing space requirements, (c) seek to economize in their requirements for space, and (d) review continuously their needs for space in and near the District of Columbia, taking into account the feasibility of decentralizing services or activities which can be carried on elsewhere without excessive costs or significant loss of efficiency.

SEC. 4. The provisions of this order shall be subject to applicable provisions of law (including applicable provisions of any reorganization plan).

SEC. 5. Executive Order No. 11035 of July 9, 1962, is hereby superseded.

RICHARD NIXON.

THE WHITE HOUSE, *February 27, 1970.*

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THE WHITE HOUSE PRESS CONFERENCE, FEBRUARY 27, 1970

(Robert L. Kunzig, Administrator, General Services Administration; Dr. Daniel Patrick Moynihan, Counsellor to the President; John R. Price, Executive Secretary to the Urban Affairs Council; and Jerry Warren, Deputy Press Secretary to the President)

Mr. WARREN. First, I would like to draw your attention to the Executive Order on Planning, Acquisition, and Management of Federal Space. I know you haven't had too much time to read it, but we have some gentlemen here who will be able to go through it with you: Robert Kunzig, Administrator of the General Services Administration; John R. Price, who is, as you know, Executive Secretary to the Urban Affairs Council, and the Rural Affairs Council, and a Special Assistant to the President; and our good Counsellor, Dr. Moynihan.

So I will turn it over to John Price.

Mr. PRICE. Thank you very much, Jerry.

The Executive Order supersedes one that was signed in 1962, 11035. And the reason for your having this one here today is that in early December, December 5, there was a meeting of the Urban Affairs Council at which the whole question was raised of how better use could be made of some of the resources of the Federal Government in the field of social and economic development and re-development.

It was pretty obvious that one of the things which loomed large in the Federal budget and in terms of employment and so forth was the construction and the location and leasing of Federal facilities. And at that time, the Administrator described a little bit to us about the kind of resources that would be available over the next five years. We find that something in excess of 100 projects, which have already been authorized in one way or another, will have potential for developing or re-developing urban areas. These projects will employ as many as 140,000 employees between now and 1975.

So it is fairly clear that we had substantial dollar impact and employment impact here. And the question was whether or not the existing authority under which the Administrator made his decisions was adequate to do the job. The decision was that it was not.

I call your attention, as he will in more detail, to Section 2(a)(2) on the bottom of page 1 of the Executive Order. This is really the key paragraph for you to pay attention to. Here we say that consideration is going to be given to the impact the selection of the site is going to have on improving social and economic conditions in the area and providing a potential use for the stimulation of new community development as well.

I would like to turn the meeting over, first to Dr. Moynihan, who might explain to some extent how this would fit into a national growth policy, and then to the Administrator, who could describe in more detail how the operation will take place.

Dr. MOYNIHAN. I have very little to say.

The order, as is rarely the occasion, speaks for itself. 11035 came at a period when, after a prolonged hiatus in Federal building projects in the depression, the War, rearmament, Cold War, and a buildup of a tremendous backlog of Federal activities, a fairly chaotic, almost political situation in which Cabinet Officers just sort of negotiated themselves with the President. This was an effort to give to the Administrator of GSA the basic re-

sponsibility for assigning priorities within the Government to which buildings would be built and for whom and, to some extent, where.

The present Executive Order takes that concept beyond the imposition of some order within the priorities of different Departments in the Government and acknowledges what has been the fact—whether you wish to acknowledge it or not—namely, that where the Federal Government locates its offices, its plants, its factories, has very great consequences for people, not just for the Government; that this has extraordinary impact on the development of cities, different parts of cities, different regions of the country, different parts of those regions.

This is one of the most important real options the Federal Government has in seeking to bring about a kind of purposeful, rational growth policy.

In the National Urban Policy, which we began to evolve last year, one of the first principles, not one of the ten main points, but one of the first principles we talked about was the need for the Federal Government to pay attention to its hidden policies, its hidden urban policies.

It says, "There is hardly a Department or agency of the National Government whose programs do not in some way have important consequences for the life of cities and those who live in them." Frequently one is tempted to say normally the political appointees and career executives concerned do not see themselves involved with, much less responsible for, the urban consequences of their programs and policies. They are to their minds simply building highways, guaranteeing mortgages, advancing agriculture or whatever.

No one has made clear to them that they are simultaneously redistributing employment opportunities, segregating neighborhoods, or desegregating them, et cetera.

All of these things are the second and third order consequences of normally unrelated programs.

Of all of these activities, the one that directly would seem to have this effect is the location of Federal facilities. The President accepted this idea right away as part of his general position. Mr. Kunzig has been energetic beyond the demand of any Federal Presidential appointee in acknowledging the fact in sorting out the details and has come forward with an Executive Order which requires of him in the future to take into consideration not just the immediate benefits to the Government, but the long-run and general consequences to the communities, to the regions involved in his choice of sites for the very great range of activities which he is responsible for.

We have been much impressed with his efforts. The President is very happy to sign this. He regards this as a concrete, specific and general undertaking which is to make the Federal Government realize what it is doing and do what it intends to do. Because whether you have a policy or not, the activities, the normal activities of the Government, have the consequence of policy.

Here is a very prime example, and we feel this important event is likely to have considerable consequences in, of course, the decade to come.

Mr. Kunzig.

Mr. KUNZIG. Gentlemen, and ladies:

Two major points here specifically have been touched upon.

To clarify this, perhaps, the item here down under Section 2(a)(1), you see the words, "Material consideration shall be given to the efficient performance of the missions and programs of the executive agencies," and so forth. It used to read "primary consideration." The result of that was that primary consideration meant that if an agency wanted a building here at the corner of Second and Market, whatever it was, that is where the building went. Primary means they made the decision where it would go.

This has changed now to material consideration. It means we are still giving great consideration, of course, to the efficiency of the Government operation. Nobody is trying to make a Government operation inefficient or not able to work. But it is no longer the primary consideration. It is the material consideration. That is a definite coming down from the word "primary."

Then the new portion is the Section 2(a)(2), where it says, "Consideration shall be given in the selection of sites for Federal facilities"—and this is new—"to the need for development and redevelopment of areas and the development of new communities, and the impact a selection will have on improving social and economic conditions in the area. In determining these conditions the Administrator will consult with and receive advice from the Secretary of Housing and Urban Development, the Secretary of Health, Education, and Welfare, the Secretary of Commerce, and others, as appropriate."

Most of the rest of this is the same, but number 6, which is about a page further down, says another item which will be considered when you are deciding where to put buildings is "The availability of adequate low and moderate income housing, adequate access from other areas of the urban center, and adequacy of parking will be considered," and so forth.

They are the new elements. In other words, what we are talking about is double duty for Federal dollars. Not only will the dollars be used to build the building, but they will also be used to assist and aid in the economic development, or urban redevelopment, whatever it may be, new towns. All of these things will now be considered. That is really the basis of the whole thing.

You might be interested in what types of things are included here. These are buildings that come under GSA, such as general purpose office buildings. When you see a big Federal office building, storage buildings, United States Courts, Federal buildings with postal facilities, when they are together, customs houses and so forth, Federal buildings that the GSA builds, also special purpose buildings where we build for others, Food and Drug laboratories or Public Health hospitals where they ask us to build them, which they usually do, and we build the buildings, they are included also.

Excluded would be military facilities, which we have nothing to do with, and special buildings such as NASA and things of that nature.

That is the general picture.

Q. Mr. Kunzig, in Section 3, that last part of that sentence (d) about the District of Columbia, would that indicate one, no more, if possible, new Federal buildings in the District—I am speaking of the feasibility of decentralizing—or does it mean that therein lies the possibility that there will be further decentralization of Government that is now in Washington?

Mr. KUNZIG. I think what we are talking about here is that these various items will be given consideration. Some of them, as you can see, are different items. Sometimes one will receive more. The vote will go more over here and more there depending upon the situation. I wouldn't say it means there would be no decentralization ever again, but it also doesn't mean that everything is going to be decentralized.

The best example I can give you: We put out this new rule many months back that buildings should be close to the homes of the workers of low-income groups when they are principally the people working in the buildings, unless there is adequate transportation. The best example of that, where the change was made, was you read a lot about the Government Printing Office. They were going to move way out. Now, they are reconsidering. The Government Printing Office is not moving way out. I am sure we are going to find a place in town near the homes of the workers who work in that type of work.

Q. Also, that Section 6 you referred to is a new element. Does adequate access include transportation? You don't make any mention of transportation. You speak of giving him parking space.

Mr. KUNZIG. Yes, that would be transportation. Again, all of it considered the best way possible. There can never be perfection in everything.

Q. Mr. Kunzig, do I understand that Executive Order pretty must is like the earlier one, except for Section 2(a)(1) and (2) and Section 6?

Mr. KUNZIG. Yes, the parts I read; most of it is the same as before, which was put out in 1962. This now supersedes the order of '62, and gives us for the first time the right not to have to give absolute primary consideration to the wishes of the agency and the right to consider for the first time social and economic things and items in the decision of where a building goes.

Q. Would it be fair to conclude that because of this Executive Order more Federal facilities now would be built, say, in center-city areas and low-income areas than has been the custom in the past?

Mr. KUNZIG. I would say some might, but I don't think you could say that all the way, because, for example, new cities, new towns—suppose, for example, proposals came up that a Government agency might well go to, let's take one purely hypothetically, Columbia, Maryland. Suppose a new Federal building were to go into Columbia, Maryland, to add further to a new town with adequate transportation to come in, homes there for the workers. That would not be in the heart of a big city. It would be in a new town. I think it is all of these things. It is urban redevelopment, and new towns.

Q. Wouldn't this new program give the politicians a little more leeway to work on you, because, after all, you had only that one criterion to start with, and you could say to them, "We are sorry, but this has to be the primary rule." Now they can say, "Look at all of these other things," and give you a harder time in trying to get the thing in their district.

Mr. KUNZIG. The politicians have never worked on me. It is all new to me. (Laughter.)

Dr. MOYNIHAN. This Executive Order is not going to make the life of the Administrator of the General Services Administration happier or probably even longer, but it will make the job more important.

Q. What consideration have you given to the Civil Rights Commission's recommendation of a few days ago that you locate new facilities in such a way that the——

Mr. KUNZIG. I know what you mean.

Q. Low and middle income employees can live there?

Mr. KUNZIG. I am afraid, without any disrespect for the distinguished Civil Rights Commission, that they totally ignored the fact that the Nixon Administration, and the General Services Administration on behalf of Mr. Nixon, had put the order into effect many months ago. They actually made reference to it, although we had to point it out to them, in their report, but didn't in their press briefing which they had. They were saying "Why doesn't the GSA do what the GSA has been doing for many months since the Administration came into power?"

I can't speak for them, but I gather they wanted to go further, which is something, I guess, that should be considered. They are talking about over all the whole Government, you see. We are talking about the buildings I listed to you that we GSA people have some control over.

Dr. MOYNIHAN. Could I just speak on behalf, as it were, of the Administrator here.

It is a matter of very explicit record that the GSA presented to the Urban Affairs Council on December 5—we spent almost an entire meeting of the Urban Affairs Council on this subject, outlining the issues that ought to be raised in locating facilities. There is one particular city in a State that I won't name, which has a very specific issue of this kind involved.

The Administrator laid out the pressures on him, the gains and losses of any of the about three or four possible decisions, proposed the criteria that are in this Executive Order, and subsequently, as is the practice, the President made his decision to go this way.

Here we have the Executive Order, and meaning no disrespect whatsoever to the Civil Rights Commission, we were not aware that they were working on this issue at all at the time. The GSA has been in this; it was in this matter first. It has been explicit.

Mr. KUNZIG. It was May, '69, last May was when our order went out for all Government buildings that we control in the United States of America, not just Washington, but the entire country. Again, the Printing Office is the best example at the moment of that.

The PRESS. Thank you.

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[From the Washington Post, Jan. 11, 1971]

JOBS THAT MOVE AWAY

When, back in the 1965's, federal government offices began to move out into the suburbs, it was a matter of national policy. The government was to be dispersed to minimize disruption in the event of an atomic attack. No one gave much thought to the fact that low income and minority employees were left behind in the city because there was no housing for them out there. But the policy became obsolete, or at least implausible, with the advent of the hydrogen bomb.

Now, for a variety of new reasons, government dispersal has become something else: it has become a way of evading national policy. One begins with the Nixon administration's announced policy of drastically curbing the construction of federal office buildings. Since this policy does not curb the need for more office space, the General Services Administration leases space from private builders. And since private builders prefer to build where the land is cheaper and the land is cheaper out in the suburbs, the government is still dispersing into such human filing cabinets as Parklawn, near Rockville, or Crystal City in Arlington. And since there is still not much low cost housing there, the low income and minority employees are still left behind in the city.

Now, President Nixon, more than ten months ago, you may remember, directed otherwise. And the Department of Housing and Urban Development, so directed, promised "affirmative action." And the General Services Administration said that "adequate" housing for workers at the GS7 level or lower and their families would "be considered." But fair housing groups think that these pronouncements are much too vague. They insist that suburban homes for all employees who want them must be assured before their jobs move away from them. The Washington Planning and Housing Association favors creation of a National Capital Affairs Office in the White House which would base federal relocation decisions not on the whims of speculative builders but on the needs of the capital region. We think this suggestion merits careful consideration.

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[From the Washington (D.C.) Evening Star, Dec. 4, 1970]

VIRGINIA NOW LEADS DISTRICT: FEDERAL OFFICE LEASING POLICIES QUESTIONED

(By Christopher Wright)

The federal government should increase the price it is willing to pay for rented office space and become "more competitive for central city rents" in Washington, the executive director of the National Capital Planning Commission has told the federal planning agency.

Pointing out that the General Services Administration, property manager for the government, has insisted on a $5-a-square-foot ceiling on general office rents here, executive director Charles Conrad told the commission yesterday the government has priced itself out of the rental market in the city.

The result, Conrad implied, has been a bonanza for surburban builders and a further blow for Washington's faltering downtown economy.

Conrad's comments came as the panel of planners questioned the commission staff on a report on government leasing which outlined a marked increase in suburban government complexes within the last two years.

A GSA representative and ex-officio member of the commission, John C. Dye, had just told the body that the spread of government offices to the suburbs had been "more or less the result of trying to solve a problem" rather than a district policy decision. The government's latest big move, when more than 9,000 Navy Department employes were shifted to Arlington's Crystal City after temporary buildings on the Mall were destroyed, was an accident of economics, said Dye.

"Had there been economical space to rent within the city it would have been rented," Dye told fellow commission members. "It was not our intention to move outside the city necessarily."

But city rents, said Dye, are "probably more than we can pay" in most cases because of inner ctiy construction costs. He also said the $5 rent ceiling, though not an absolute maximum, requires special GSA action before it can be waived.

GSA is currently in court with the Washington Planning and Housing Association over the removal of the Navy complex to Crystal City. WPHA contends the action was discriminatory and illegal. GSA says, however, that large blocks of rental property are nearly impossible to obtain inside the District.

The government has consumed roughly a million square feet of office space annually in recent years—the equivalent of one major building a year. In May, as evidence of this requirement, GSA called through newspaper advertisements for listings from developers for 500,000-square-foot office buildings which might be available for occupancy next September within the District.

The million-foot a-year requirement has given added impetus to rebuilding plans for Pennsylvania Avenue and downtown, both of which anticipate a large amount of federal employment through leased office space.

However, much of the needed space is being found in the suburbs because GSA has balked at paying the going rate inside the city—which may be as much as $7.50-a-foot on Pennsylvania Avenue and $10-a-foot in L'Enfant Center.

The staff report to the planning commission, which chairman G. Franklin Edwards said "raises very fundamental questions as to our system as a whole and as to the use of land and private property," detailed the federal spread to the suburbs since 1952.

Pointing out that government leasing only began in quantity after Congress balked at federal construction budgets in the early 1960s, the report shows the bulk of rented space is now in Virginia.

Until March of this year, the District led all jurisdictions with 6.6 million square feet of leased space. However, with the move of the Navy employes this summer, Virginia jumped to the top with 7.86 million. Most of the Virginia concentration is in Arlington County, where some 27,000 employes work principally in the Rosslyn area and the Jefferson Davis (Route 1) corridor.

Maryland trails the three jurisdictions with a mere 3.7 million square feet of office space, almost all of which is in Montgomery County.

The government now rents almost half as much space as it owns outright, the report added.

The Thursday staff presentation is the latest item in a series of studies the planning commission is doing on the impact of federal employment on the Washington area.

An earlier study, made in June by the local consulting firm of George Schermer Associates, called for direct control of federal office leasing by NCPC in addition to the agency's existing jurisdiction over federal construction in the area.

Sharply criticizing the government for scattering its rented office facilities throughout the area, the Schermer report urged the government and the NCPC to tie office complexes to housing and transportation facilities.

The government has been steadily dispersing its agency operations since 1950, when planners, under the shadow of the Korean War and the McCarthy investigations, began decentralizing the government in the interest of national security, the report says. In spite of definite decisions during the Kennedy years to reverse this trend, the cost of land and the destruction of the "tempos" like the old Navy building have forced the agencies into the suburbs.

Contemplating these facts, architect Paul Thiry, a commission member, commented that federal leasing policies seemed like "the dog is following the tail." Why, he asked, should the government run to suburban developers when it found it could not get space inside the city.

In an exchange with Dye and Edward Hromanik of the commission staff, the commission suggested that the government might consider taking long-term leases on buildings to obtain office space where it wanted, rather than where the developers wanted.

Pointing to New York's Rockefeller Center as a prime example of a major office development constructed on leased land (Columbia University owns the real estate), Conrad L. Wirth suggested this might be one way to "get the building you want, where you want it."

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## BARRON'S ON AN ALL-VOLUNTEER ARMED FORCE

Mr. HATFIELD. Mr. President, the stage is being set for debate within both Houses of Congress on whether the draft should be extended or whether we should return to voluntarism to fill the ranks of our Armed Forces. I think it significant that virtually every sector of our society has indicated an interest in this issue. I commend to the Senate an editorial published in the March 8 edition of Barron's National Business and Financial Weekly and ask unanimous consent that it be printed in the RECORD.

There being no objection, the editorial was ordered to be printed in the RECORD, as follows:

TAPS FOR THE DRAFT?: A FREE SOCIETY SHOULD OPT FOR A VOLUNTEER ARMY

"They have set up separate companies for men who have refused to go out into the field. It is no big thing here any more to refuse to go. If a man is ordered to go such and such place he no longer goes through the hassle of refusing; he just packs his shirt and goes visit some buddies at another base camp. Operations have become incredibly ragtag . . . Many guys don't even put on their uniforms any more. . . . The American garrisons on the larger bases are virtually unarmed. The lifers have taken our weapons from us and put them under lock and key.

. . . One black locked and loaded on the battalion CO recently because they were trying to send him into the field. About 10 others backed him up. . . . There have also been quite a few frag incidents in the battalion."

The foregoing is part of a letter from an American soldier stationed in Cu Chi, as quoted recently in The New York Times; more powerfully than the front-line dispatches, it underscores the breakdown of discipline in Vietnam. It also suggests that something must be done, and quickly, if the U.S. Armed Forces are to retain the capability of defending the nation. There is no dearth of proposals. When the Senate Armed Services Committee resumes debate this week on extending the draft, it will have before it several alternatives. One, introduced by Senator Edward Kennedy, would give the draft a new lease on life but limit inductions to 150,000 men per year. It stands virtually no chance of adoption. Neither does a proposal to repeal the Selective Service Act outright. Rated as having an outside chance, however, is the Hatfield-Goldwater Bill; it follows the recommendations of the Gates Commission, set up in 1969 to study the matter, which came out four-square for an all-volunteer armed service. Essentially, the bill calls for expenditure of about $3 billion to boost soldiers' pay to a level thought likely to attract the necessary volunteers. That would mean $300 a month for raw recruits, compared to the $134 offered now. It would keep the structure of Selective Service intact. Men still would register, and draft boards would stay on the job; if enough volunteers failed to respond, conscription could quickly fill the gap.

Until the war in Vietnam finally ends, some such standby authority is doubtless needed. Nevertheless, the Hatfield-Goldwater bill would be a long step in the right direction—toward an all-volunteer military establishment. Contrary to the objections voiced by Senator Kennedy and other critics, it would not place the burden of fighting U.S. wars on "the poor and the black," surely no more than is now the case, nor would it create a new military elite. It would be a great reaffirmation of individual rights. That argument was set forth in these columns in 1965, when Barron's first advocated an all-volunteer army. "The strongest objection to the draft," he said then, "is philosophic: for the sake of the majority, it imposes a heavy sacrifice upon what might almost be called an oppressed minority. In the process, it cannot fail to stamp on the minds of young adults a vivid impression of the power of the state, a totalitarian image which those who argue for a free society may spend a lifetime trying to erase."

Prior to November 1968, Richard Nixon took a similar stand: "Today, all across our country, we face a crisis of confidence," he declared. "Nowhere is it more acute than among our young people. They recognize the draft as an infringement on their liberty, which it is. To them, it represents a government insensitive to their rights, a government callous to their status as free men." Now, however, the President insists the time is not yet ripe. He has asked Congress to extend the draft another two years beyond June 30, when it is due to expire. During that time, the Pentagon will try to make military service more palatable to the nation's youth—eliminating useless work details, putting up curtains in the barracks—and soldiers' pay is to be raised again. A saturation campaign of TV commercials, costing $30 million, will sell young men on the idea that army life is fun. By such means, plus the constant threat that if they don't join up they will be drafted anyway, the President hopes to get enough volunteers to make zero draft calls feasible, at least by next election time.

Clearly, that's not good enough. A zero draft call is not the same thing as no draft. The element of compulsion remains; it's like the sergeant barking, "I want three volunteers—you, you and you." For evidence that an all-volunteer army can meet the requirements of national defense, the U.S. need look no farther than across its northern border. True, Canada's armed forces number a scant 90,000 men, but they are under no compulsion; volunteers from the start, they can quit the service at will. A recent television documentary by ABC found that the Canadian Army turns away three would-be soldiers for every one it accepts. The strategic ingredient, of course, is money: raw recruits earn $250 a month, and a corporal starting his second five-year hitch can make up to $698 a month. Similarly, the British army has been a volunteer force since 1957, with 400,000 men under arms. Whitehall says the system is working well.

Opponents of an all-volunteer military service in Congress make some specious claims. Senator Kennedy, as noted, objects that under such a system the defense burden would fall disproportionately upon the poor and the black, who would constitute the bulk of the recruits. Since most well-to-do youths now avoid the draft by staying in college, that wouldn't change anything. Under the pay scales contemplated for the volunteer army, the poor who enlisted at least would be on the road to affluence. Another argument is that a volunteer force would be made up of "mercenaries" ready to follow any would-be dictator on the General Staff. Yet, fully half the men in the armed forces now are "true" volunteers, including all the officers. So far, the "lifers" have resisted any temptation to overthrow the government.

Currently, all the services are on a volunteer basis except the army, which also has a high proportion of enlistees. Only 4% of army volunteers, however, sign up for infantry, artillery or tanker outfits; hence, the Pentagon says it still needs the draft to fill their ranks, even though bonuses of up to $3,000 will be paid for such service. Conceivably, what is needed is a change in tactics, particularly to eliminate what GIs call "chicken"—the whole fabric of regulations that demean the common soldier. Military service also could be made infinitely more attractive if educational opportunities were broadened. There is no dearth of applicants for the service academies, even though cadets are well aware that, on graduation, they will quickly be shipped off to front-line duty in Vietnam. Last year, for example, over 6,000 young men took the exams at West Point—to fill 1,375 openings. For less than the government has budgeted for aid to higher education and vocational training next year, it could give every GI the equivalent of a college education or teach him a trade.

Whatever the inducements offered enlistees, there should be no delay in tooling up for volunteers. The annual cost, says the Gates Commission, would run to less than $3 billion; for halfway measures which, critics claim, are really designed to perpetuate our freedoms, remove an inequity now im- $1.5 billion. Wouldn't it be better to go all out? As the commission report says, "A return to an all-vounteer force will strengthen our freedoms, remove an inequity now imposed on the expression of the patriotism that has never been lacking among our youth, promote the efficiency of the armed forces, and enhance their dignity."

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## AETNA LIFE AND CASUALTY SUPPORTS NO-FAULT AUTO INSURANCE

Mr. RIBICOFF. Mr. President, the cost and availability of automobile insurance is one of the most serious and aggravating problems facing our citizens today.

One of the most widely discussed, and controversial, proposals to meet this problem is to replace the present court-oriented reparations system with a system of "no-fault" automobile insurance.

In January of this year, Aetna Life and Casualty, the world's largest multiple line insurance company, with many years of experience in automobile insurance under the present system, issued a report on this matter. The report explains in simple language the outline of the problem and the proposed solution.

The report also expresses Aetna's unequivocal support for this innovative plan—whether embodied, as it is, in proposed Federal legislation by Senator HART, or in State legislation, such as that recently enacted by Massachusetts.

I ask unanimous consent that the report be printed in the RECORD.

There being no objection, the report was ordered to be printed in the RECORD, as follows:

[Public Affairs Bulletin]

A REPORT ON NO-FAULT AUTOMOBILE INSURANCE

AETNA LIFE & CASUALTY,
*January, 1971.*

The pace of events leading toward a decision on "no-fault" automobile insurance has quickened in recent months. "No-fault" plans may be proposed to legislatures in several states in the near future. A partial "no-fault" plan went into effect in Massachusetts on January 1, 1971.

This report will furnish you with background information on "no-fault" coverage—why it is needed and how it works. It assumes a wide variance in familiarity with the problem among readers and will try, therefore, to supply some background, touch upon the more significant current developments, describe progress made to date in gaining public acceptance for the concept and voice Aetna's stance on various proposals which have come forward.

BACKGROUND

When auto insurance was introduced around the turn of the century, its purpose was to protect a few thousand drivers from financial liability arising from their own negligence. Fault had to be proved before the benefits could be paid. For many years the system worked well, but no longer.

Today, more than 5 million Americans are killed or injured each year in automobile accidents. In 1969 economic loss from traffic accidents exceeded $16.5 billion, a sum equivalent to an assessment of $80 for every man, woman and child in the country. Courts in many jurisdictions cannot hear auto damage cases for months or even years and the system no longer serves the needs of a mobile society or satisfies apparent public demand for a responsive accident reparations system. In large metropolitan areas where traffic congestion produces high accident frequencies, necessary auto liability insurance protection often costs more than the motorist can afford.

THE PRESENT SYSTEM

Under the existing system, benefits are paid to accident victims by the insurer or the driver determined to have been negligent. If negligence cannot be established, the victim goes uncompensated. Further, the cost of investigation, legal fees and other expenses eats into the premium dollar so that less than 30 cents of that dollar is available to cover the economic loss of the accident victim. Moreover, studies have shown that the present system generally produces overpayments to people with minor losses, while those with larger losses are undercompensated.

COMMENTS BY W. O. BAILEY, SENIOR VICE PRESIDENT

Pertinent to this discussion are the following excerpts from a recent address by Senior Vice President, William O. Bailey, before the Central Carolinas Chapter, C.P.C.U.:

"The single greatest problem of automobile insurance today is that it is required to operate under a legal system of reparations which is no longer desired by the public."

"Increasingly, we are coming to realize that our insurance system cannot do the job of establishing responsibility and penalties for negligent conduct in the use of automobiles in a highly mobile society."

"The serious injury study released last spring by the Department of Transportation has again exposed the harsh truth that persons who sustain the *most* serious injuries in automobile accidents recover much less than half of their total economic loss from all sources, including automobile insurance."

"Automobile insurance will last as long as the automobile does. The threat of the 70's is only that automobile *insurers* may vanish unless meaningful reform can be achieved before others assume responsibility for us."

PUBLIC OPINION SURVEY RESULTS

A number of public opinion surveys on the "no-fault" question have been undertaken in recent months by government researchers or by those opposing or favoring the concept.

The surveys, with one exception, indicated a definite preference for "no-fault" type coverage among respondents when it was adequately described to them. Also, this view was strengthened as they become more fully informed.

A study by the American Insurance Association determined that 72% of those queried favored the "no-fault" proposal.

Two newspaper surveys, in Minnesota and Connecticut, found that the majority of those polled approved of the new concept.

University of Illinois researchers found a 71% preference as did University of Michigan pollsters commissioned by the Department of Transportation.

Contrary results were reported by the State Farm Insurance Company, an opponent of the "no-fault" plans, following a survey among its policyholders. That study, which has been criticized by professional researchers for the way in which the subject was presented and the manner in which questions were phrased, reported that 94% of the respondents favored retention of the fault system.

THE AIA "NO-FAULT" PLAN

Aetna has endorsed the AIA "no-fault" plan in which:

1. All drivers would be required to buy "no-fault" insurance. Since this plan requires that all motorists in the state relinquish the right to sue for damages, as under the fault system, special legislation is required for adoption of the "no-fault" system.

2. Benefits would be paid immediately and directly to all auto accident victims regardless of who was to blame.

3. Medical and hospital expenses, rehabilitation costs, lost income and property losses would be reimbursed by the victim's own insurance company.

4. The plan does not compensate victims for so-called pain and suffering.

5. Savings up to 30% are considered possible.

TESTIMONY BY SECRETARY JOHN A. VOLPE—U.S. DEPARTMENT OF TRANSPORTATION

Secretary of Transportation, John A. Volpe, whose staff has been studying automobile insurance for two years, in a statement before the Senate Commerce Committee stated that the facts demonstrate that changes in the present system are needed. "The existing system," he said, "is not serving the accident victim, the insuring public and society as well as it should."

*Main points*

1. The accident victim with large economic losses and large intangible losses has a far poorer chance of receiving full compensation for economic loss, let alone intangible losses, than the less seriously injured victim.

2. "The tort liability insurance system . . . has a very high cost/benefit ratio compared to any other major reparations system."

3. The tort liability system apportions benefits unevenly, in some cases paying too late and in others too soon; it is still often quite slow and can operate to discourage early rehabilitative efforts. "The system pays most slowly in cases where the need for timely payment is greatest, i.e., cases of permanent impairment and disfigurement."

4. Auto accident disputes are placing severe strain on the nation's judiciary and the tort liability system has exerted great strains on the system of state regulation of insurance.

5. "The extensive study we have conducted dramatically demonstrates that the scale of the auto accident problem has simply become so immense that the techniques which may at one time have been adequate may be no longer sufficient, in every respect, to present-day realities."

6. Basic principles by which change in the system should be guided are:

a. "Overriding goal should be a compensation system that is efficient, offers greater flexibility and choice, is fair, gives maximum incentives to loss reduction, and . . . does a better job of reparating victims' losses than the one we have today."

b. The system should cover the bulk of economic losses at levels designed to prevent serious economic dislocation for the victim.

c. Much greater emphasis must be placed on rehabilitation.

d. We should continue to rely upon private enterprise to operate the auto accident compensation system.

e. Reform should be accomplished at the state level, perhaps with Federal guidelines.

Although the Secretary made no specific recommendations for changes in the automobile reparations system, it is anticipated that the Department's proposals will be advanced in early 1971 and that they will include:

a. Adoption of the "no-fault" concept.

b. Increasing emphasis on accident reduction and loss reduction efforts.

c. Reliance on the private sector to administer the new system under state controls made more uniform by means of Federal guidelines and incentives.

LEGISLATIVE PROPOSALS OF SENATOR PHILIP A. HART (D.-MICH.)

The Senate Antitrust and Monopoly Subcommittee chaired by Senator Hart recently concluded an extensive study into the problems of automobile insurance marketing, capacity and costs. The study has prompted Senator Hart to introduce several bills on these matters, one of which proposes a no-fault type reparations system as outlined below.

*Uniform Automobile Insurance Act (S. 4339)*

Highlights of the Senator's proposal:

a. Does away with the "fault" system for all but the permanently disabled or disfigured or those who suffer excessive financial loss.

b. Guarantees non-cancellable policies to all licensed drivers.

c. Reimburses totally for medical rehabilitation and incidental expenses as incurred. Replaces lost income up to $1,000 a month for 30 months. Has a death limit of $30,000.

d. Authorizes the sale of group auto insurance in the 36 states which now prohibit such sales.

The Hart bill is in accord with the American Insurance Association proposal which Aetna supports except where it retains the fault recovery concept in cases of catastrophic loss. Our long experience in handling liability claims suggests that claimwise litigants suffering minor injuries will be able to demonstrate subjective symptoms which would earn them undeserved benefits. Also, there is no known standard against which to evaluate the worth of such subjective damages. Therefore, we do not believe that such a system could be administered effectively, and it might cost the motorist substantially more.

Aetna's position is that the system should go as far as it can to compensate auto accident victims for both present and future economic loss without regard to fault. We support the thrust of Senator Hall's bill, therefore, but feel that it stops short of the ideal "no-fault" system.

MASSACHUSETTS "PERSONAL INJURY PROTECTION" (PIP) PLAN

In Massachusetts, a limited "no-fault" plan went into effect on January 1, 1971. Called "Personal Injury Protection" (PIP) this plan differs somewhat from the AIA-endorsed system:

1. The plan covers bodily injury claims only up to a $2,000 maximum in medical, hospital and actual wage-loss benefits.

2. The plan does not cover property damage liability.

3. The driver retains the right to claim against the other party for any loss exceeding $2,000. This means, of course, establishing that the other party was at fault. The party would still collect losses up to the $2,000 maximum. As a result, Massachusetts drivers are still required to carry bodily injury protection of at least $5,000–$10,000.

4. The rates for compulsory *bodily injury* liability coverage have been reduced by 15%. Under the old plan, rates would have been *increased* by at least 22% in 1971.

5. The PIP protects Massachusetts residents outside as well as inside the state.

Aetna supports this innovative plan. While the PIP doesn't include all of the features of the AIA's no-fault plan, it is an important step forward in correcting the inequities of the present fault system of accident reparations. Aetna will strive to help make Personal Injury Protection a meaningful and successful start in automobile insurance reform.

CONCLUSION

Through the efforts of AIA and other proponents of the "no-fault" reparations system, such plans will be proposed this year in a number of other states where receptivity is judged to be favorable. Aetna will support such efforts diligently in the belief that no-fault type automobile insurance will best serve all concerned: companies, producers and the insuring public.

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## NEED FOR FAIR FORMULA FOR REVENUE SHARING

Mr. TAFT. Mr. President, I believe that it is incumbent upon Senators who are cosponsors of the general revenue sharing bill, S. 680, to point out some of the serious defects in its formula for the intrastate distribution of funds.

The present formula is premised upon the concept of local tax effort. Within the context of the bill, tax effort is basically equated with tax productivity. As a consequence, the existing formula gives a preference to those communities which have a large tax base, in contrast to those poorer communities which do not.

This problem can be illustrated within my home county in Ohio. The city of St. Bernard, which is the site of the large

Procter & Gamble plant, will receive $25.41 per capita under general revenue sharing. By contrast, Mount Healthy, which does not have a large tax base, will receive $1.99 per capita.

Under the existing formula, Beverly Hills, Calif., will receive $24.40 per capita, and Lincoln Heights, Ohio, a community which is largely black and relatively poor, will receive only $2.38 per capita.

In contrast to the $2.38 per capita for Lincoln Heights, the nearby village of Evendale, which is the site of the General Electric plant, will receive $79.74 per capita.

I am sure that these problems did not occur to the administration and those of us who have cosponsored this legislation. Unquestionably, the proposed formula is not workable and will have to be substantially revised to afford a fair division of these dollars among our local communities.

The importance of having a fair distribution formula under general revenue sharing is highlighted by the fact that over 80 percent of the new money under the revenue sharing proposals is in general revenue sharing as opposed to the special revenue sharing measures.

Before we are all hung in our own noose, I suggest that we analyze alternate formulas which may better reflect the intent of those of us who are firmly committed to the principle of revenue sharing.

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## CUSTOM, LAW, AND HUMAN RIGHTS

Mr. PROXMIRE. Mr. President, recently I spoke of the growing international concern that basic and fundamental human rights should be guaranteed by law. So powerful are these sentiments that one could say that there has evolved a customary law of international human rights.

Nations should recognize, I submit, a moral responsibility for their actions to the world community, to the United Nations. In the past decade, there has developed a general recognition that international peace requires an international commitment. This commitment, if it is to affect the actions of men and their governments, must be firmly rooted in the traditions and the morals of nations. Yet this commitment, if it is to be effectively implemented, must depend upon signed treaties and not alone on custom or intention.

The United States has a long history of preserving the fundamental human rights of its citizens, and in fact has often lent a hand overseas for the betterment of fellow nations. It is this proud tradition that we must sustain. By failing to ratify the Genocide Convention, and for that matter, almost all the other human rights conventions of the United Nations, we have failed to sustain our traditions of respect for international human rights.

The United States must lead the fight for the recognition of human rights everywhere. We have promoted human rights in our domestic and foreign affairs. I urge the Senate to protect human rights further by ratifying the Genocide Convention.

## SUNRIVER: AN ECOLOGICALLY BASED COMMUNITY

Mr. HATFIELD. Mr. President, in order to solve our environmental problems on a long-range basis, we must begin to rethink our concepts of development. The time has passed in America when the recognition of the use of ecology in planning was considered a luxury. We must start with the realization that fostering our environment is a prime consideration when developing our resources and planning for the future.

In the mountains of central Oregon, a planned community has based its development on just this premise: that a desirable, and even profitable, new community starts with a base of firm environmental protection. Sunriver, Oreg., represents the forefront of the ecologically based community of the future and an example for us to learn by. In the January issue of American Home, Sunriver was featured as "The Healthiest New Town in America." In order that we may all profit from these thoughts on development and planning, I ask unanimous consent that the article be printed in the RECORD.

There being no objection, the article was ordered to be printed in the RECORD, as follows:

THE HEALTHIEST NEW TOWN IN AMERICA

(By Dolly Connelly)

Do you suppose it can happen? That a sophisticated Oregon real-estate development can survive on the premise that what's good for the red-shafted flickers and the Deschutes River otters is also good for Sunriver residents? And, more crassly, for business? It sounds like a utopian dream—that is, until you talk with Sunriver's ecologist-in-residence, Jim Anderson or sit in on a Sunriver discussion ranging from the reproductive rate of the Gambusia guppy (used for mosquito control) to the healthy incidence of twin fawns among the mule deer of surrounding Deschutes National Forest.

Guiding spirits of Sunriver, a community development of private homes and condominiums keyed to environmental living, are two Oregonians who have maintained an abiding determination that their state continue to dwell in beauty. Donald V. McCallum, former head of the Portland Title and Trust Co., is president of Sunriver Properties, Inc. Chairman of the Board is John Gray, president of a saw-chain manufacturing company with plants worldwide. Constantly on the go internationally, Gray still knows his home state with a backpacker's familiarity. He is known best to Oregonians as the creator of their gem resort on the coast, Salishan, a vibrant example of Gray's resolve "to use this land better, to set an example."

The two visionaries came together over McCallum's search for a secluded location for a fishing cabin. He turned up the 5-by-2½-mile Sunriver site, used during World War II as a training base for the Army Corp of Engineers. McCallum knew that he'd found a good deal more than a fishing hole. He took color slides and maps to Gray, who saw the lyrically lovely land as a new challenge, as a fresh possibility for "an exciting mode of life."

Sunriver—5,500 acres of sun-washed subalpine meadow necklaced with 8½ miles of the meandering Deschutes River—is a geologic accident, a lake basin formed some 2,000 years ago in the wake of an immense lava flow that spilled from Lava Butte, a 5,016-foot cinder cone a few miles south of Bend in central Oregon. Indians camped in the ancient lake basin, and eventually trappers, explorers, hunters and stockmen came to this high plateau-transition region (4,200 feet) with its ponderosa-pine forests and open meadows within full view of the snowy Cascade Range.

The Sunriver development, which now includes weekenders, vacationers and year-round residents, was opened on June 28, 1968, with a 20-year prognosis for completion. That the completion span now appears to have shortened to 12–15 years indicates no lessening of ecological vigilance, but rather an astonishing response from people who want to breathe clean, crisp air, walk gently in the woods and live in an environment controlled for the benefit of man, pine tree and red-tailed hawk.

Ecologist Jim Anderson, employed full time as Sunriver's naturalist, consultant in planning for protection of the environment and overseer of the community's wildlife sanctuary, explains it another way. Says Anderson, "We don't have to manage wildlife. We manage the people. We protect the habitat, and from there on nature does the rest."

A young man of tremendous zeal, Jim lopes happily from marshland to rimrock in work boots and dusty pants, forever enlarging the definition of his extraordinary job. Often he is accompanied by a friend known simpy as "Owl"—because that is what he is, a splendid specimen of the great-horned variety. Jim's Nature Study Center, a fascinating hodgepodge of outdoor photographs, field-trip paraphernalia, a tarantula, snakes, mice and Owl, soon will be moved to an "ecologium," an ambitious nature-interpretation center. Of it he says, "The ecologium will function for people and for the very nature we're here to enjoy. To my knowledge, this is the first time that a community development has ever taken this step.

"I'm employed to function in the planning of the area and to interpret its nature to the inhabitants. This is done through regular evening programs, saddle trips, canoe drifts, rock hounding, fossil hunting, nature walks, bird counts—the whole bit. The more nature and wildlife activity people see, the more aware they will become of this tremendous asset and the more they will respect it.

"As for industry in Sunriver, we'll be encouraging the so-called 'clean' industries to come here—'brain' industries, research companies, not the smoke belchers. When that happens we'll have a greater economic cross-section. Weekenders, summer people, retireds, skiers will be balanced by working people."

Anderson's twice-weekly evening nature lectures originally were scheduled in the Nature Study Center conference room in the hope that his bird-banding youngsters and college ecology majors might turn up two dozen strong. Programs have now been shifted to the Great Hall, the immense log-beamed, onetime Army officers' club where an overflow of mesmerized children sprawl on the floor and adults fill every chair.

The end result of all this passionate concern is a perfect environment for families, best expressed by Robert and Mary Glass, who, with their three young boys, spend their weekends and summers in Sunriver. Robert is a dentist in Eugene and a skier who knows the value of nearby 9,600-foot Mount Bachelor.

"Sunriver is going to give us five more years with our boys than is the norm today. Mary and I have seen too many of our friends' children start to go their own way as soon as they hit the teens, bored with the family beach or mountain cabin, cutting off their parents. At Sunriver there's a youthful freedom and so much to do that every age has its companions and activities.

"There's a good deal of luxury here, but life has some aspects of comfortable camping. We walk and jog and bicycle. Many

families lock up their cars on arrival and take to foot on the 25 miles of cart paths. Most of the property here is being purchased by Oregonians. And that's the way we want it to remain—Oregonian."

(The rash of sun-seeking developments in the area has shaken up many an oldtimer. But residents of Bend, 15 miles to the north, admit, "If Sunriver *had* to happen, thank God it's Oregonian, and double thanks that it's the work of John Gray and Don McCallum.")

McCallum has discovered that Sunriver's spell has also taken hold of families with sons and daughters in their 20's, like his.

"Our family will remain a good deal closer for the rest of our lives because we live here. There's too much to do ever to grow bored. We listed the sports activities alone and came up with golf, tennis, boating, skiing, fishing, ice skating, swimming, hunting, exploring, horseback riding, hiking, mountain climbing, sky diving, flying, saddle trips—and I've probably left something out."

John Gray sounds a cautious note. "Sunriver is a composite of the thinking of many people. It's an experiment—there's no question about this. No one can predict the future with certainty."

The basic plan of Sunriver is flexible. It can be adapted without destruction of the environment. Sunriver Properties turns the clustered communities over to their residents when 90 percent of the land is developed or when the developer declares that it is virtually complete or, at the latest, by the year 1999. I believe Sunriver's eventual 5,000 families will want to retain a quality project utilizing the best of the environment."

Peter Walsh, who works in Portland, charter flies to the Sunriver Airport to join his wife, Lindy, and two daughters at their condominium. Peter, who admits that the handyman act is "not my bag," wants relief from all the worries of absentee homeownership.

"The condominium concept appeals to me—no headaches. It's amazing how easy it is to live here. We're at Sunriver primarily for the recreation. I've been a golfer all my life and like tennis before breakfast. I also like to fish and hunt and some of us ski and ride and explore. The only thing missing is the ocean, but we've got great sailing lakes. We take our boat up on the high lakes on Century Drive. Then there's the airport—only a 50-minute flight from Portland."

Lindy Walsh was hostessing a half-dozen of her older daughter's college friends when we visited her. She said, "It's simple to entertain here because there's so much for people to do. You don't really 'entertain' them—you just give them opportunity to do exactly as they please."

Peter, whose front-porch view of the distant mountains is endlessly spectacular, sums it up: "I can't think of anything they've left out at this stage of the game. They've made a tremendous investment here, some $13,000,000 plus land and operating costs, and yet the main interest doesn't appear to be making money, but in creating a way of life."

Private homes already completed range in value from $15,000 to $100,000. The lots vary from about ⅛ to ½ acre with a value spread from $5,700 to $22,000. Residential condominiums range from $29,950 to $43,000, land included. The Design Committee must approve house plans, which are required to blend naturally into the environment with no clash of exterior material. Natural landscaping is the rule, and special permission must be obtained for removal of any tree larger than three inches in diameter. Fences at property lines, urban lawns, paving, planting of any growth not indigenous to the area are restricted.

The monthly maintenance charge, levied on all residents, is $10 and includes fire and police protection. The fee entitles homeowners to unlimited use of the swimming pool, tennis courts, children's playground and pays for the upkeep. It also gives them a price break on family use of the 18-hole golf course, soon to be augmented by another.

Nonresidents can also join the Sunriver experience. Scattered throughout the development are 23 guest lodges, open year-round, where vacationers can bed down between trips to the wilds or the ski slopes. In the main Sunriver Lodge, teen-agers have their own place, The Establishment, a noon-to-midnight jukebox, soda-fountain and psychedelic-postered recreation center into which adults cannot step after 7 p.m. unless accompanied by their young.

Ask residents what they like about Sunriver and the answers are sure to vary. Canoeists reply, "It's the 8½ miles of the Deschutes winding through Sunriver, the trout—the big Germans browns, the rainbows and the brookies."

Judy King, a member of Sunriver's bird-watching clan, found it easy to answer "We've lived in cities. We've lived in California. But here I can see hundreds of wild birds—look at them bathing in my pool."

Judy and husband Kenneth King, a retired Denver businessman, worry over "the thin line seperating practical considerations and idealism." Says Judy, "Whether Sunriver can remain under control with today's pressures of population and technology is unknown. It's still a real-estate sales program. The company cannot develop the project solely to keep deer healthy and attract wild birds. Can it be environmentally attractive and yet make of money?

"Jim Anderson is opening the eyes of the young people to the beauty of the land. They'll be willing to protect it. But can Sunriver remain a sanctuary until these young people serve on the boards that assist in the planning?"

This unique development has been put in capable hands. Sunriver may serve as an inspiration to other community planners to go forth and do likewise. It isn't unrealistic to hope that the day may come when real-estate development begins not with the snarl of bulldozers, but with the laugh of a child, the song of a bird, the splash of a silvery trout in clean water—in short, with ecological research into the living relationship between man and other endangered species.

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## BUDGET REQUESTS FOR HIRSHHORN MUSEUM AND SCULPTURE GARDEN

**Mr. ALLEN. Mr. President, yesterday it was my pleasure to present a statement to the Senate Appropriations Subcommittee conducting hearings on budget estimates for fiscal year 1972 for the Department of the Interior and related agencies. My specific concern related to budget requests for the Hirshhorn Museum and Sculpture Garden. I believe the subject matter is of interest to all Senators. For this reason, I ask unanimous consent that the statement and an appendix in the form of an article dated March 17, 1971, prepared by the distinguished national columnist Clark Mollenhoff be printed in the RECORD.**

**There being no objection, the statement and article were ordered to be printed in the RECORD, as follows:**

STATEMENT OF SENATOR JAMES B. ALLEN

Mr. Chairman, excavations for the substructure of the Joseph H. Hirshhorn Museum and Sculpture Garden are under way. Only minor work has been done thus far on the sculpture garden but it has been reported that "major digging is slated to start late this Spring." Mr. Chairman, I am strongly of the opinion that additional work on this project should be temporarily terminated. It is my intention to introduce in the near future a Senate Joint Resolution to effect that end. Let me briefly explain some of the reasons underlying my opinion and judgment in this matter.

Last Friday, March 19, 1971, the *Washington Post* printed an article appropriately entitled, "The Hirshhorn Hassle." The article deals generally with the subject of an alternate location for the construction of the sculpture garden feature of the Hirshhorn Museum. The article quotes Mr. S. Dillon Ripley, Secretary of the Smithsonian, in part as follows: "The (new) design is a slight change in our contract authority and does not affect our permission from Congress . . ." In another place Mr. Ripley concedes that the design, ". . . was a part of the contract with Hirshhorn . . ." and that "Any redesign is contingent on the ability of the Smithsonian to meet the cost." We learn further that, "A sketch of the new design had not been submitted to Hirshhorn but it had been discussed."

Mr. Chairman, let us examine a few of the implications derived from these remarks. The implications point to the very heart of a very important problem.

If Mr. Ripley is correct in his conclusions, then this Congress is confronted with a situation where a private citizen who is also a prospective donor of works of art to the Smithsonian Institution must be consulted for approval of any changes in the design of the building and grounds, located on and adjacent to the Washington Mall, but Congress need not be consulted. Congress, it is contended, can only accept such changes in design as might be agreed to by the prospective donor. Yet, according to Mr. Ripley, whether or not the alterations in design are actually effected depends on additional funding, presumably by Congress.

Mr. President, if we assume that Mr. Ripley is right in all of his conclusions, is it not natural that citiezns should inquire as to how Congress got itself into such a mess?

Let me briefly list some of the facets of this mess, but first let's put the problem in perspective. We are considering a disposition by Congress of part of the real property located on and adjacent to the Washington Mall, the preservation of which is surely an important public trust affecting posterity. It seems to me that we cannot but consider the propriety and legality of appropriating these lands in perpetuity for a single use and to honor in perpetuity the memory of a single donor of a collection of works of arts.

Then, too, problems are presented which invoke questions concerning the integrity of the legislative process. For example, Congress is concerned with what I consider a unique situation best described as legislation enacted pursuant to contract. In this case the contract is between the Smithsonian Institution and a private citizen and his private foundation. I dare say that few will champion the idea of "legislation pursuant to contract" and particularly contracts with private citizens involving the appropriation of public lands in perpetuity.

Then, too, we are confronted with serious allegations of undue pressures and irregularities in the enactment of the legislation which is the basis of the request for further funding by the Smithsonian Institution.

Before leaving the subject of integrity of the legislative process it may be relevant to consider questions raised concerning Congressional authority and responsibility for legislative oversight. For example, have inherent powers of oversight in Congress been circumscribed by the terms of the Hirshhorn contract? Can this Congress accept as a

precedent legislation enacted pursuant to contract when the terms of the contract require that one Congress bind another in perpetuity including an obligation to make open-ended appropriations to honor the memory of an individual in perpetuity?

But more than questions of legislative integrity are involved, legal and ethical questions are also involved. Congress is presented with questions concerning the sale, exchange, and gift of works of art by a private citizen dealing with his own private tax exempt foundation and questions concerning the ultimate cost to the public in the form of income tax deductions which may result from such transactions.

Then there have been charges of possible conflict of interest involving an architect who designed the project.

And questions have been raised concerning the eligibility of the contractor to bid on the Hirshhorn Museum and Sculpture Garden.

And questions have been raised concerning the legality of actions of the Smithsonian Institution to obligate funds in excess of Congressional authorizations.

We are confronted with demands by some that this Congress reject the terms and conditions of the contract under which the Smithsonian Institution accepted gifts conditioned on specific performance by Congress, and some demand that Congress repudiate such terms and conditions to the extent that they are incorporated in the statute of implementation (P.L. 89–788).

Mr. Chairman, I do not prejudge the charges nor express an opinion or judgment on the validity of the questions which have been raised.

In fairness to all concerned, I believe that each individual who has been in any way involved in the establishment of the Joseph H. Hirshhorn Museum and Sculpture Garden, from its inception until today, should be afforded an opportunity to answer to Congress and to the public all valid questions which have been and which might be presented concerning the origin, development and implementation of plans for establishing the Joseph H. Hirshhorn Museum and Sculpture Garden. Such individuals are entitled to be heard and to an opportunity to justify any actions which might have given rise to some of the questions to which I have referred. Until such time, I am of the opinion that further construction on the project should be suspended.

Mr. Chairman, in these remarks I have only attempted to illustrate some of the legal, moral, and ethical questions which should be explored. In this connection, the highly respected national columnist, Clark Mollenhoff, elaborated on some of these questions in an article published on March 7, 1971. Mr. Chairman, I request that the Mollenhoff article be printed as an appendix to these remarks.

In conclusion, let me say that the distinguished Chairman of the Senate Committee on Government Operations (Mr. McClellan) has designated me Acting Chairman to hold hearings on S.J. Res. 45 which seeks to amend P.L. 89–788. As you know, P.L. 89–788 is the statute which establishes the Joseph H. Hirshhorn Museum and Sculpture Garden. Under the circumstances, I thought it proper to call to the attention of the Senate Committee on Appropriations our plan to conduct hearings on S.J. Res. 45 and to the possibility of developing evidence which may be relevant to the question of current budgetary requests by the Smithsonian Institution for additional funds to be expended for continuing construction of the Joseph H. Hirshhorn Museum and Sculpture Garden.

RUSH MUSEUM DESPITE FUROR

(By Clark Mollenhoff)

WASHINGTON, D.C.—The Piracci Construction Co. is pushing work on the $15 million Joseph H. Hirshhorn Memorial Garden and Museum at a fever pitch.

At the same time, the Smithsonian Institution has engaged in delaying tactics to keep Congress from acting to amend the law under which it is erecting the museum.

Smithsonian officials and the construction company have the same goal: To complete as much work as possible before Congress can halt or modify the project.

Bulldozers and excavation equipment currently are at work digging and laying foundations for the museum.

LBJ PUSHED PROJECT

Former President Lyndon Johnson pushed the project to demonstrate that a Texan could be as interested in art and culture as the Kennedy family. President Nixon fears that any move to reject the Hirshhorn collection would be used to picture him as anti-culture.

Two House committees and a Senate committee have been asked to examine the approval of the museum, the background of Joseph H. Hirshhorn, and the legislation that passed in 1966 to permit Hirshhorn's name to appear on the museum.

Last week, Senator George Aiken (Rep., Vt.) declared, "I do not believe that any man should be permitted to buy a place of honor on the Mall."

Senator Aiken said he favors a move by Senator James Allen (Dem., Ala.) to halt work on the project pending an investigation by the Senate permanent investigating subcommittee headed by Chairman John McClellan (Dem., Ark.).

"I am sure this project could never pass through the Congress today," Allen said.

There are no vocal defenders of the Hirshhorn project in the Nixon administration, except for the officials who took part in the Johnson administration's decision that was approved by Congress in 1966.

SMITHSONIAN ROLE

S. Dillon Ripley, secretary of the Smithsonian, was an active participant in the project at that time, and is now involved in what some consider delaying tactics to keep Congress from acting to halt construction.

Hirshhorn was twice convicted on foreign exchange violations in Canada.

Ripley has confirmed that the art collection cost Hirshhorn between $4 million and $5 million, and estimated that Hirshhorn will probably get a tax write-off of between $40 million and $50 million for the collection.

This is the first time the federal government has financed the housing for an art collection. Past donors have paid for the buildings.

A report by the House administration subcommittee on libraries and memorials is critical of the manner in which President Johnson and Ripley moved the project through a public works subcommittee headed by Representative Ken Gray (Dem., Ill.).

Gray said his committee "was used" by the White House, and that he was negligent in not sending the project to the House Administration Committee for discussion of whether Hirshhorn was a proper person to be memorialized.

Gray said that Ripley had told him Hirshhorn's law violations were petty and should not interfere with acceptance of the Hirshhorn collection.

"I do not agree with him on that, and I think that the donor has to measure up to a pretty high standard if we are going to memorialize him with Washington and Lincoln." Gray said.

Gray said he believes Ripley has been moved too much by the possibility of obtaining the Hirshhorn collection, and that he is "too much afraid that this thing is going to get away."

Gray said he believes it would be better if the House Administration Committee called Hirshhorn.

Representative Fred Schwengel (Rep., La.) helped manage the investigation that resulted in the derogatory report.

In recent weeks, Hirshhorn and Ripley have cited articles by art critics that emphasize these points:

1. The museum does not honor Hirshhorn so much as it is a convenient way of obtaining a fine art collection for all the people.

2. If the United States government does not go ahead with its agreement it will be "welshing on a deal" and Hirshhorn just might pick up his art collection and go home.

3. Hirshhorn's collection should not be rejected simply because he has a questionable background, for many of the great art collections have come from men with seamier pasts.

Schwengel said, "No one quarrels with the value of the art, and we would all like to have it if the price was right."

Here are some other factors that are involved in the Hirshhorn project:

1. The architect on the project is Gordon Bunshaft, a member of the Fine Arts Commission that approved the design submitted by Bunshaft's architectural firm of Skidmore, Owings, and Merrill. That firm will receive an initial commission of more than $650,000 on a project base of about $12 million, but will also receive fees that will bring the total to about $900,000.

Bunshaft contends he avoided any "conflict of interest" by stepping out of the room when the project was discussed, and he noted he receives no money for his work as a member of the commission.

2. The Piracci Construction Co. of Baltimore, Md., is owned by Dominic A. Piracci, a twice convicted felon. He was convicted on a fraud count in Baltimore in 1954 in connection with a parking garage scandal, and in the last two years he has been convicted under a federal bribery statute.

The General Services Administration (GSA) permitted Piracci to resign control of the company so the firm would be "a responsible bidder" for the Hirshhorn contract.

"Piracci irrevocably removed himself from any control of the operations of that corporation for a period of time which will extend six months beyond the completion of the Hirshhorn Museum and Sculpture Garden," the GSA explained in 1969.

COMPLAIN BID ALTERED

Congress and competitors have complained that Piracci was permitted to correct its low bid of $11,874,000 on the contention that a "clerical error" had resulted in omitting $754,000 from a base figure. The addition of the $754,000 still kept Piracci just lower than the next high bidder on the project.

Gilmore D. Clarke of New York, a member of the Fine Arts Commission from 1932 to 1950, called the Hirshhorn Museum a "thoroughly disgraceful intrusion on Washington's distinguished central composition—the Mall."

"I firmly believe, an opinion that is widely supported, that no collection of works of art—no matter how important it may appear to be—justifies the permanent impairment of a much more important and generally acknowledged work of civic art, the greatest single element of monumental civic design in the United States of America, the Mall," Clarke said.

Bunshaft brushed off the criticism by stating, "I'm told that Clarke made his

comments on the basis of aerial photographs and drawings. He's a man of eighty.

"I didn't get where I am by wrecking the environment."

## THE BLOOD DONOR RECORD OF THE PORTSMOUTH, N.H., NAVAL SHIPYARD

Mr. COTTON. Mr. President, the fate of the Portsmouth Naval Shipyard has been hanging fire for much too long, and occasionally I have received reports that the lack of definite information about the future of the yard has had an adverse effect on the morale of the personnel there.

If so, it would be understandable.

I should like to point out, though, that the Portsmouth Naval Shipyard is a fighter, and even while it has been taking its knocks, it has been steadfastly refusing to do less than its absolute best in any endeavor, whether it be production or some community project.

Recently my attention was called to a matter which illustrates my point.

In the last calendar year, the blood donations of the employees and military personnel at the yard to the visiting Red Cross bloodmobiles surpassed those of any other industrial facility in New Hampshire and Vermont.

The yard's newspaper, the Portsmouth Periscope, published an article on this subject, and I ask that it be printed in the RECORD at the conclusion of my remarks.

Accompanying the article was a picture showing Charles T. Mazza, assistant administrator of the Vermont-New Hampshire Red Cross Regional Blood Center, presenting a letter of commendation to Capt. Donald H. Kern, who accepted the letter for all of the blood donors.

In the group, too, representing the Portsmouth blood donors, were Earl F. Frost and Robert P. Hopley, members of the 10-Gallon Blood Donor Club.

Also pictured was Maurice Bedard, the shipyard's leading donor with 86 pints credited to his blood donor record card.

I commend all of the shipyard personnel who helped contribute to the outstanding blood donor record and I submit that their accomplishment is another demonstration of their ability, determination, and spirit.

There being no objection, the article was ordered to be printed in the RECORD, as follows:

PORTSMOUTH'S BLOOD DONATIONS IN 1970 AT ALL TIME HIGH; SHIPYARD LEADS ALL INDUSTRIES IN VERMONT-NEW HAMPSHIRE

Blood donations by employees and military personnel on the monthly visits of the Red Cross Bloodmobile during the calender year 1970 surpassed donations in all industrial facilities in New Hampshire and Vermont. A total of 2,115 pints of blood were donated at PNS during 1970, an average of 176 pints of blood each month. This is an all time high for blood donors at Portsmouth. Previous record high was in 1966, with 2,072 pints of blood donated.

Shipyarders consistent support of the Blood Program was recognized Tuesday morning, December 15, at a ceremony held in the Administration Bldg., when Charles T. Mazza, Assistant Administrator, Vermont-New Hampshire Red Cross Regional Blood Center, presented a letter of commendation to Captain Donald H. Kern, Shipyard Commander, who accepted the citation for all PNS blood donors. Mazza added his personal commendation, pointing out that accolades were also in order to volunteers who turn out to donate and are unable to do so because they cannot meet medical standards for giving blood.

Representing all blood donors at the ceremony were Earl F. Frost, Shop 72 and Robert P. Hopley, Planning. They are among the leading donors, each employee having donated 10 gallons of blood. Maurice Bedard, also a 10 gallon donor, was unable to attend. He is the Shipyard's top donor, with 86 pints of blood credited to his official Blood Donor Record card.

Among Shipyard officials in attendance were Donald K. Holster, Director of Industrial Relations and Administrator of the Shipyard's Blood Program; and Kenneth C. Clement, Employee Services, who is Coordinator.

The letter of commendation, signed by Edward R. Stearn, Administrator, Vt.-N.H. Red Cross Blood Program, with headquarters in Burlington, Vt., is quoted:

"Officials of the Vermont-New Hampshire Red Cross Blood Program throughout the region join me in extending heartiest congratulations on the outstanding blood drawing held at the Portsmouth Naval Shipyard December 2. As you may know, the 206 pints donated that day brought the total for the calendar year 1970 to 2,115 pints, an all time high for this installation. As a matter of fact, this is also a new 12-month record for any group, plant or other facility in our entire region.

"The total donated on December 2 could not have arrived at a better time, since our blood drawing for the preceding week had been curtailed by the Thanksgiving holiday and with no drawing being held on the day following. Thanks to the response of Shipyard employees, however, we were able to meet all demands, including exactly 100 pints sent to just one of our hospitals over a three day period from Saturday through Monday.

"A quick check of our records indicates that in the 208 blood drawings held at the Portsmouth Naval Shipyard from September 1953 through December 1970, there have been 27,774 pints of blood donated. In itself this total is outstanding, but we believe there are two factors that make this figure even more significant. The first is that donations are on the rise rather than declining. The second is that every request we have made for rare types of blood to meet special situations such as open heart surgery, aneurysms, etc., have, without exception, been exceeded by a substantial margin.

"All of us involved in the day to day operation of this program are aware of the time and effort required to achieve the results enumerated above. Please convey our sincere thanks to Donald K. Holster, Director, Industrial Relations Office and Kenneth C. Clement, Blood Program Coordinator, for the planning and direction they have given this program over the years.

"We trust that all others who have helped in any way in achieving this outstanding record of accomplishment are aware of how much their support is appreciated by our hospital patients and their families. Needless to say, we are aware that this increase in donations in recent years could not have been achieved without your personal interest and support."

## S. 1305—NATIONAL LEGAL SERVICES CORPORATION

Mr. CRANSTON. Mr. President, it is a great honor to have joined with the Senator from Minnesota (Mr. MONDALE), and so distinguished and bipartisan a group of cosponsors, in introducing S. 1305 on March 19. This bill amends the Economic Opportunity Act of 1964 by adding a title IX to create a National Legal Services Corp.—a private, nonprofit program independent of any agency or establishment of the U.S. Government.

It is my firm belief that the legal services program, by providing the poor with some of the vital tools they need to help themselves, has been one of the most productive of all war on poverty programs. In my own State of California I have witnessed the tremendous impact of the legal services program. Successful attacks upon the established order have resulted in making food available to hungry people in every county in the State; senior citizens have been afforded essential health care to which they are entitled; various consumer fraud schemes have been successfully halted; discrimination in employment is being countered; and in one outstanding case before the California Supreme Court, 80,000 Spanish-speaking citizens were enfranchised by the elimination of an English literacy requirement for voting. I have joined in introducing this bill because I believe its adoption is necessary to preserve the independence, integrity, and initiative of this outstanding program for providing equal justice under law for the poor.

Although there have been many successes under the present legal services program, recent events have convinced me that the integrity and effectiveness of the program can no longer be maintained in the face of growing political pressures from all sides.

The OEO legal services program has survived three major blows during the past year and a half—but it is staggering under their cumulative effect. The first was the unsuccessful effort to give Governors absolute veto power over programs in their States. Such a move would have permitted the very governmental "establishment," which often has been responsible for the grievances of the poor, to determine the type of legal assistance to which the poor would be entitled.

The second blow was the attempt to undercut the program through regionalization, a move which would have taken legal services from the able leadership of its Washington-based attorneys and dispersed it under the jurisdiction of 10 regional administrators, the majority of whom were not even lawyers. The third blow was the ousting of the program's director and deputy director, Terry Lenzner and Frank Jones. These men, it is widely held, were most responsible for the recent growth and success of the program.

And most recently, we have witnessed an attempt to destroy what has been rated the most effective legal services operation in the Nation, the California rural legal assistance program. Knowledgeable observers fear that the compromise to refund the program for only 6 months while an "independent study" is made, is an attempt to kill the program slowly rather than all at once.

Because I believe that these and future pressures to blunt the effectiveness of the OEO legal services program must be resisted, I have worked closely with Senator MONDALE in developing the National

Legal Services Corporation Act of 1971. This act would authorize the creation of a private, nonprofit corporation, free from political interference, to increase the availability and quality of legal services to all citizens of the United States, especially low-income persons.

The very integrity of the adversary system of justice in the United States, and indeed, of the attorney-client relationship, requires that the performance and provision of legal services be free from these interferences. These recent blows to the legal services program indicate that such freedom cannot be guaranteed while the legal services program remains within the Office of Economic Opportunity, subject to the heavy hand of politics and political gamesmanship.

Therefore, I propose this alternative, modeled on the Public Broadcasting Corporation Act. The bill provides for the incorporation of the National Legal Services Corporation under the trusteeship of the president and president-elect of the American Bar Association, and the presidents of the National Legal Aid and Defender Association, the American Association of Law Schools, the American Trial Lawyers Association, and the National Bar Association. After incorporation the program would be carried out under a Board of Directors comprised of an Executive Director appointed by the Board, six public members—five appointed by the President with Senate confirmation and one by the Chief Justice—six representatives of clients and project attorneys, and the six initial incorporators and their successors as organization leaders. They would generally serve up to 3-year terms.

This bill would authorize the corporation to make grants and contracts to provide financial assistance to programs furnishing legal services to the poor and others who cannot afford counsel.

Although the bill stresses continuation of existing legal services programs which have provided economical, effective and comprehensive legal services to the client community, it does not specify the types of programs which would be funded. Thus, the National Legal Services Corporation could, if it chose, fund various types of programs to provide legal services to low-income persons including judicare.

Nor does the bill establish any restrictions on the types of cases which legal services attorneys could bring. Rather, the bill specifically requires that the corporation must insure that legal services attorneys carry out the same duties to their clients and enjoy the same protections from interference as privately paid attorneys.

At the same time, in order to insure accountability for the expenditure of public funds, the records of the corporation would be subject to disclosure under the Freedom of Information Act, as long as consistent with the canons of ethics and the ABA Code of Professional Responsibility, and annual independent audit of the corporation's financial records would be required. In addition, the General Accounting Office would be authorized to make annual audits of the corporation, copies of which would be required to be submitted to the Congress.

The corporation would be funded through appropriations made through the Office of Economic Opportunity, as authorized in the Economic Opportunity Act of 1964, as amended. A reservation of funds—$140 million in fiscal 1972 and $170 million in fiscal 1973—would be added to the Economic Opportunity Act to be available only for the purposes of transfer to the corporation. This level of funding should permit a program of about twice the size of the present legal services program, taking into account inflation and administrative costs of the corporation and of the legal services programs themselves that previously were borne by the Office of Economic Opportunity and its grantees.

Generally, the corporation could carry out the same activities and programs as are presently carried out under the Office of Economic Opportunity by the Legal Services Office; certain restrictions with respect to the types of services provided would be eliminated. More specifically, the corporation would be empowered to carry out research, training, technical assistance, and law school clinical assistance, to improve the provision of services to low-income clients. It would also attempt to increase opportunity for legal education for individuals who are economically disadvantaged or who are members of minority groups. And it would prohibit Federal control over the corporation or its employees.

In summary, the keystone of the Legal Services Corporation bill is succinctly set forth in the purpose section: insuring the integrity of the attorney-client relationship and keeping the provision of legal services free from political interference.

The worst example of political interference with legal services was the recent CRLA veto by the Governor of California, the sustaining of that veto by the Director of OEO, and the process by which that totally unjustified decision was reached.

This tragic case has made manifestly clear to all supporters of legal services for the poor that the legal services program, as presently constituted, cannot survive within the governmental/political process. The legal services program, as epitomized by CRLA, has grown too effective to suit the tastes of those with the political power of life and death over it. It has won too many important cases against the establishment. In short, it now threatens the power structure, which is inevitable when the rights of the poor are being denied.

Those being brought before the bar of justice and found in violation of the Constitution and laws of this land can no longer be permitted to sit in judgment on this program and impose the death sentence on it.

Thus, we join in proposing a nonprofit corporation to operate outside Government control in providing legal services. The bipartisan nature of the sponsorship of this bill and the varying philosophies of its sponsors from both parties dramatize the nonpolitical approach we are proposing to this problem.

There is, thus, very broad consensus that vindicating the rights of the poor under the Constitution and laws of the land must not be subjected to varying partisan pressures and interests. It must be left to the operation of the attorney-client relationship under the legal profession's canons of ethics.

This basic consensus has formed behind the most fundamental of concepts in our democratic system—that the test of the system is its capacity to remedy inequity and injustice within its legal and judicial processes.

We must remove the politics and political gamesmanship from legal services. Otherwise, we run a serious risk of permitting this last access to orderly change to be closed off.

Mr. President, I urge my colleagues to give this bill their careful consideration and strong support. The continued effectiveness of the legal services program rests with our prompt passage of this vital legislation. I pledge myself to do all I can to work with Senator MONDALE and the other sponsors of this legislation to move it through the Labor and Public Welfare Committee and to the Senate floor as quickly as possible as part of the bill to extend the Economic Opportunity Act of 1964, as amended, which expires this June 30.

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## FEDERAL BOAT SAFETY ACT OF 1971

Mr. HATFIELD. Mr. President, on Monday, March 22, the Merchant Marine Subcommittee of the Commerce Committee held a hearing on S. 696, a bill to provide for a coordinated national boating safety program.

There is a need for such legislation and the current bill is a revised form of earlier versions.

I ask unanimous consent to have printed in the RECORD a section-by-section analysis of the bill and a letter from Mr. Robert Rittenhouse. Mr. Rittenhouse is director of the Oregon Marine Board and is a recognized leader in State groups across the country. Last year, Mr. Rittenhouse served as president of the National Association of State Boating Law Administrators.

There being no objection, the items were ordered to be printed in the RECORD, as follows:

SECTION-BY-SECTION ANALYSIS OF S. 696, TO PROVIDE FOR A COORDINATED NATIONAL BOATING SAFETY PROGRAM

FEDERAL BOAT SAFETY ACT OF 1971

Sec. 2: Policy and Purpose

Sec. 3: Definitions for the following terms: "boat", "vessel", "undocumented vessel", "use", "passenger", "owner", "manufacturer", "associated equipment", "Secretary" (Department in which Coast Guard is operating), "State" (includes Puerto Rico, Virgin Islands, Guam and D.C.), and "eligible State" (defined as "one that has an accepted State boating safety program". This definition affects the allocation of Federal funds under sections 25 and 27.)

Sec. 4: Act applies to vessels in the United States and owned in the United States, except foreign vessels, nonrecreational public or military vessels, nonrecreational vessels owned by a State or subdivision thereof, and ship's lifeboats.

Sec. 5: Secretary shall issue performance standards for boats and associated equip-

ment, prohibiting the use of equipment which does not meet safety standards. Regulation issued shall become effective between 180 days and 18 months from the date of issuance, depending upon necessary changes in the manufacturing process. Compliance with the date or regulation shall be determined by the Secretary. Regulations must be consistent with the sanitation equipment requirements of the Water Quality Improvement Act of 1970.

Sec. 6: In prescribing standards, the Secretary shall consider their need, their reasonableness, all available data, and shall consult the Boating Safety Advisory Council.

Sec. 7: Secretary may require or permit the display of insignias indicating compliance with the Act.

Sec. 8: Secretary may delegate responsibilities for inspection and testing under sections 5 and 6.

Sec. 9: Secretary may issue exemptions to the Act, conditional or otherwise.

Sec. 10: Provide uniformity in law by Federal preemption of State law, except when a State standard is accepted by the Secretary for uniquely hazardous conditions.

Sec. 11: Secretary and the Secretary of the Treasury may authorize imports conditioned by assurances of eventual compliance with safety standards.

Sec. 12: Boats and equipment cannot be manufactured or sold unless they meet safety standards, or are intended solely for export. No liability will be imposed for good faith reliance on certificates of compliance, or for defects beyond an individual's control. Prohibits the use of a false insignia of compliance, the use of a vessel in violation of the Act, the use of a vessel in a negligent manner and the use of certain vessels for carrying passengers for hire under the charge of an unlicensed person (unless the vessel is used for bona fide dealer demonstrations furnished without fee).

Sec. 13: Coast Guard may order vessels operating hazardously to take corrective action, including an order to return to their mooring. Present Coast Guard authority in such cases is limited to arrest.

Sec. 14: Provides record keeping requirements for an inspection of manufacturers subject to the Act.

Sec. 15: Requires manufacturers to furnish notification of boat defects.

Sec. 16: "Good Samaritan" provision removing liability for civil damages when rendering assistance.

Sec. 17: Requires the numbering of undocumented vessels with propulsion machinery.

Sec. 18: Secretary shall establish a standard numbering system. A state with an approved system shall be the issuing authority. States under the 1958 Act may continue under that Act for up to three years. Provides for reciprocity among the States and Federal government.

Sec. 19: Issuing authority (Secretary or the approved State) may exempt vessels or classes of vessels from the numbering provisions of the Act.

Sec. 20: Description and requirements for use of certificates of number.

Sec. 21: Requires number to be displayed on forward half of vessel.

Sec. 22: State may require vessel operator to hold a license.

Sec. 23: Issuing authority may prescribe regulations and fees to carry out sections 17–24 and section 37.

Sec. 24: Issuing authority may supply, for a fee, information on numbering systems for safety purposes to a manufacturer.

Sec. 25: Establishment and acceptance of State boating safety programs. Acceptance is necessary for a State to receive full rather than partial Federal financial assistance. Also provides for availability of funds to national nonprofit public service organizations.

Sec. 26: Requires Secretary to accept State programs which: have a numbering system, include the substance of the NASBLA Model State Boat Act, provide for adequate enforcement and boating safety education programs, and designate a State administering authority.

Sec. 27: Allocation of Federal funds.

The new formula for the allocation of Federal funds is set out below:

FISCAL YEARS, 1, 2, 3

1. During first three fiscal years funds are available—the funds shall be allocated among applying States which have a boating safety program, or which indicate their intention to establish boating safety programs in accordance with Sec. 25.

2. ½ the funds to be allocated equally among the applying States, and the other ½ to each applying State in the same ratio as the number of vessels propelled by machinery numbered in that State bears to the number of such vessels numbered in all applying eligible States.

FISCAL YEARS, 4, 5

The monies shall be allocated among applying States.

1. ⅓ allocated each year equally among applying States.

2. ⅓ allocated so that the amount each year to each applying eligible State will be in the same ratio as the number of vessels numbered in that State, under a numbering system approved under this Act, bears to the number of such vessels numbered in all applying eligible States.

3. The remaining ⅓ shall be allocated so that the amount each year to each applying eligible State shall be in the same ratio as the State funds expended or obligated for the State boating safety program during the previous FY by a State bears to the total State fund.

Sec. 28: Provides a descending scale of limitations on the Federal share of the total cost for each of the years in which funds are made available. Also provides for the use of unobligated or unallocated funds.

Sec. 29: Secretary shall establish a basis for determining the expenditures of State funds obligated pursuant to the Act.

Sec. 30: Authorizes 7.5 million per year for five years.

Sec. 31: Provides for the computation and payment of funds allocated under Sec. 27.

Sec. 32: Provides for consultation and cooperation between the Secretary and State and local governments and public and private organizations.

Sec. 33: Establishes a National Boating Safety Advisory Council of twenty-one members.

Sec. 34: Criminal penalties.

Sec. 35: Civil penalties.

Sec. 36: Injunctive proceedings.

Sec. 37: Secretary shall prescribe a uniform casualty reporting system for vessels subject to the Act.

Sec. 38: Authorizes such amounts as may be necessary to administer the Act.

Sec. 39: Repeal and amendment of certain provisions of the Motorboat Act of 1940, the Federal Boating Act of 1958, P.L. 86–396, and P.L. 87–171.

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STATE MARINE BOARD,
OFFICER OF THE DIRECTOR,
*Salem, Oreg., March 16, 1971.*

Hon. Mark O. HATFIELD,
*U.S. Senator,*
*Senate Office Building,*
*Washington, D.C.*

DEAR SENATOR HATFIELD: First, let me say that when I read in the local papers that you are now a member of the Senate Committee on Commerce I was quite pleased, as this committee will soon be considering legislation in which we are interested and support.

It is my understanding that the Subcommittee on Merchant Marine will be holding a hearing on S. 696 on March 22. As you know, S. 696 is identical to H.R. 15041, which passed the House of Representatives shortly before last year's adjournment. Considerable work went into the preparation of H.R. 15041 by representatives of the various states through the National Association of State Boating Law Administrators, representatives of industry and the Coast Guard. I know of no serious opposition to this legislation in its present form, and we believe it is a very definite improvement over the Federal Boating Act of 1958 by which we are now guided.

There are several specific features of this bill which we feel are important and would benefit the Oregon boaters as well as those throughout the country. For example, Sections 5 and 6 would provide for passenger and maximum weight load capacity plates; require improved stability in design and construction as well as installation of floatage materials in such manner as to keep boats upright when filled with water.

Last year 27 fatalities occurred in Oregon, caused by capsizing of small, open boats. The 1970 national statistics are not yet available; however, during 1969 there were 587 fatalities throughout the country that were caused by capsizing, out of a total of 1,350 fatalities. This indicates that on a nationwide basis, capsizing contributes to nearly 50 percent of the total boating fatalities. I personally believe that this is one of the most important parts of the bill.

Another desirable feature of the bill is Section 27 which covers the allocation of Federal funds to encourage and assist the states in the development of boating safety programs. This financial assistance will very definitely stimulate and improve boating safety in Oregon and throughout the country.

We also strongly endorse Section 33 which provides for a Boating Safety Advisory Council, of which one-third of the members will be state officials responsible for boating safety programs. It is altogether proper that the states have a strong voice in a national boating safety program for the states will have a lion's share of the responsibility in administering the new law and programs at the state level.

We do hope that the Senate Committee on Commerce will act on this bill as speedily as possible. Oregon and many of the other states will have to enact some legislation at state level to be compatible with this new Federal Act. As you well know, many of the state legislatures are now in session. Hopefully, we will be able to act at the state level prior to adjournment.

Very truly yours,
ROBERT F. RITTENHOUSE,
*Director.*

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## THE SMITHSONIAN AND AMERICA'S FUTURE IN FLIGHT AND THE ENVIRONMENT

Mr. GOLDWATER. Mr. President, yesterday I had the privilege to appear before the Senate Appropriations Subcommittee of which the distinguished senior Senator from Nevada (Mr. BIBLE) is the Chairman. It was my purpose to point out the very special role which two of the Smithsonian Institution's leading museums will have in America's future in flight and the environment, respectively.

Today I am pleased to report that my request for proper financing of both the National Air and Space Museum and the National Museum of Natural History was warmly received. The chairman and the ranking Republican member, the distinguished Senator from Illinois (Mr.

PERCY) each indicated their considered support for full funding of these two units.

In order that all Senators may be aware of the convincing reasons which justify their backing for the entire amount of appropriations sought by these deserving national museums, I ask unanimous consent that the statement which I presented on their behalf be printed in the RECORD.

There being no objection, the statement was ordered to be printed in the RECORD, as follows:

STATEMENT BY SENATOR BARRY GOLDWATER OF ARIZONA BEFORE THE SENATE SUBCOMMITTEE ON APPROPRIATIONS FOR THE DEPARTMENT OF THE INTERIOR AND RELATED AGENCIES, MARCH 22, 1971

Mr. Chairman, it is my purpose today to ask that the Committee give its resounding approval to the full appropriations sought by the National Air and Space Museum. Also I shall verify the need for substantial increases in support at another important Smithsonian component, the National Museum of Natural History.

Mr. Chairman, last year when a House Subcommittee conducted the first far-reaching investigation of the Smithsonian in over a century, I presented documented evidence establishing a serious decline in support for these two museums. My testimony pointed out the strange happening that during a period when the total Federal budget for the Institution had doubled within six years, when the number of full-time employees had jumped by more than 700 positions, and when the Smithsonian had plunged into the creation of whole new units, such as the Cooper-Hewitt Museum in New York, the Archives of American Art, the Office of Academic Programs, and a Division of Performing Arts, the National Air and Space Museum and the Museum of Natural History were falling downhill in the degree of support they received from the Institution.

For example, at the end of the 1970 fiscal year, the museum of flight had only 31 employees, yet Congress had appropriated funds for 41. At the same time, the Museum of Natural History had 103 scientists supported by 87 technicians. Three years earlier the Museum had 111 scientists and 90 technicians.

The Air and Space Museum was without a director for 18 months even though the last director had given notice of his retirement 13 months in advance. Meanwhile, over at the Museum of Natural History, the Department of Vertebrate Zoology suffered such a drastic cut in funds that it could not even offer its scientists a research allotment as high as that provided to graduate students.

While I do not intend to rekindle these old coals today, I do feel it is essential the requested increases for these museums should be viewed against the backdrop of years of inadequate support.

It is true that since the summer of 1970 the outlook for these two units has improved. The Air and Space Museum has an outstanding director waiting in the wings with former astronaut Michael Collins about to take charge. And the museum has finally been given the go-ahead by the Smithsonian to fill its full allotment of 41 employees. The Museum of Natural History, in turn, has been allowed to request a budget increase large enough to restore most of its lost positions and revitalize its basic research abilities.

The one essential ingredient of this reconstruction program, however, is the willingness of Congress to appropriate the added monies which these museums have asked for.

Mr. Chairman, the top priority item in the National Air and Space Museum budget is the $1.9 million earmarked for planning and redesign of a new museum building. This request is combined with the firm deadline of July 4, 1976, which the Smithsonian has selected for the opening of the new structure.

The building project has been on dead center for five years now, though Congress provided authority for it in 1966. Land is set aside on the Mall and a complete set of blueprints are in hand, ready for use; but a combination of resistance by the budget bureau and a recommendation from the Senate Committee on Rules and Administration have held the building back.

The authorization statute itself does not contain any limitation. Nor did the House of Representatives offer any reservations. The only legislative restraint on the project is a sentence inserted in the Senate Committee report in the 1966 authorization law.

The language simply reads: "The Committee expressly recommends . . . that appropriations should not be requested pursuant to H.R. 6125 unless and until there is a substantial reduction in our military expenditures in Vietnam."

Mr. Chairman, there is good reason for belief this language is no longer binding. Certainly it has no effect at all on any action which the House of Representatives might take. Also, I feel it has been superseded by intervening events.

For one thing, it was written before the first manned lunar landing, which did so much to excite public interest in America's space exploits. Another thing we should consider is that Congress did not add any similar restriction in recent years when it approved $2.9 million for renovating the Smithsonian's newly acquired Renwick Gallery. Or when it gave the Smithsonian $2.6 million to refurbish the original S.I. building.

Nor did Congress impose any tie between Vietnam and the $7 million it appropriated for restoration work on the National Portrait Gallery of the Smithsonian or the $15 million it is laying out for construction of the Hirshhorn Museum.

Why the National Air and Space Museum should be singled out from all other Smithsonian projects and told its construction must be deferred is beyond me. In any event, the Senate Committee on Rules and Administration has recently announced it does not object to the Smithsonian's request for redesign funds, so we will not run into any jurisdictional conflict at this time.

Which brings me to the fundamental question of why a national museum of flight is needed in America. In short, it will tell the story of America's monumental achievements in flight. It will offer a mixture of regular and shifting exhibits of original aircraft and spacecraft from which the average citizen can see for himself that significant breakthroughs in flight and what lies beyond.

As Dr. Daniel Boorstin, director of the National Museum of History and Technology, so brilliantly pointed out in a recent address, America is once again in need of the inspirational lift which comes from experiencing the unknown and from embarking on this venture in community with our fellow people. With our nation expanded almost to the limits of its explorable land, the story of space pioneering told at the Air and Space Museum might be an excellent means for recharging our national energies.

The need for a central museum of air and space objects has never been in doubt among our friends in Europe. For starters, Britain has an outstanding aerospace display on an entire floor of its London Science Museum. In addition, a separate RAF Museum building is nearly completed. Also, the Deutche Museum in Munich contains a huge hall devoted to air and space displays nearly as extensive as our own. For their part, the French have on display in Paris six to ten times as many original aircraft and flight objects as we do. Italy is installing a major Air and Astro Museum at Turin in a magnificent pavilion erected during their 1961 Centennial. Even small Switzerland is developing an impressive Museum of Transportation at Lucerne, which can compete on close terms with what the United States now presents in the air and space field.

An American citizen returning from a tour of these museums, situated in nations one-fourth the size of our own, might easily feel a sense of embarrassment at how this country compares. He might look at the World War I hangar in which the United States flight collection has been displayed since 1919. Or he might go through the 90-year old Arts and Industries building in which other air and space exhibits have been housed on a "temporary" basis since 1914. One-third of the people who visit the Smithsonian do.

As interesting as these exhibits are, they are badly housed and incomplete. The Smithsonian itself admitted at the 1970 fiscal year hearings that the air and space exhibits "are outdated and shabby."

While the need for building a suitable and permanent home for the telling of America's accomplishments in flight seems nigh indisputable, there is a difficult question to resolve about the size and cost of the building. Since the structure was authorized in 1966 the estimated expense has gone up by leaps and bounds. From a projected cost of $40 million when the project was first authorized, I am told it has climbed to $70 million.

And yet the engineering and architectural plans are totally completed. It is a beautiful design, one which has been approved by the Fine Arts Commission and the National Capital Planning Commission. It is a plan which architects generally believe would be a valuable asset to the nation's capital. It received the highest praise from the architectural critics of the Washington Post and the New York Times—surely a singular occasion when their view coincided with mine.

Should we go ahead with the original plan? Or should we seek to reduce the scale of the project so it will find room in the national budget?

Mr. Chairman, for reasons of basic practical sense, I have decided to support the request for redesign as the surest and swiftest route toward completion of the project. The architect, Gyo Obata, contends it is feasible to develop a proper museum at a lower cost. In fact, he has estimated the rough dimensions which such a scaled-down building might have.

Its length will be nearly the same, 730 to 760 feet compared with the original 784. The height will stay near 97 feet, which is important because this would preserve the opportunity for installing some full-sized rockets or rocket sections inside the exhibit area. Most of the reduced scale would come out of the width. The new building might be 160 to 190 feet wide compared with 250 feet for the original plan.

While this would mean the floor area would be cut in half, I am told the actual exhibition area would be reduced by less than one-fifth, leaving 254,500 square feet for this prime purpose. This is more than three times greater than the maximum area which could be used for exhibits in the two buildings which presently house flight displays.

Assuming the ground might be broken by sometime in calendar year 1972, construction itself could be held at a cost below $40 million.

From what I have learned, the revised plan retains so much of the original form at a lowered cost, I believe it is just what is needed to get the museum off dead center.

My only reservation concerns whether it is necessary to obtain reapproval of the building from all the planning and art and traffic commissions which have a hand in Federal construction. But if these bureaucratic avenues should threaten to stifle the project in

a web of red tape, I know Congress could shortcut this route by enacting overriding legislation or even by returning to the original, approved design.

Also, in endorsing the proposal for a redesign, I am expecting the opportunity for a new look at the size of the building will not be taken as an excuse by critics of technological museums to prevent the museum from displaying full-sized original hardware. To be sure, the new museum can draw heavily on modern techniques of display, such as a mock-up of an Apollo Command module which families can enter and operate, and thereby gain some small degree of comprehension of what flight is all about. But these techniques should supplement, and never replace, the showing of some original aircraft, space objects, and boosters. The art and tea crowd had better take heed right here and now that I intend to scrutinize the museum's redesign carefully in order to make certain no one destroys its fundamental nature.

Before leaving the redesign, I would like to convey some impression of exactly what it is Congress will be spending its money for. The primary object, of course, will be to develop a complete set of working plans which can be turned over to the construction builder. Over 500 drawings will be made, pinpointing every detail from the location of thousands of electrical outlets to the placement of sewer lines. Lighting, heating, air conditioning, utilities, site landscaping, and the results of stress and strain studies will all be specified in the redesign. In essence, the product will be a creative, enormous undertaking which is the indispensible foundation of the entire project.

Accepting the wisdom of proceeding with the design, the new museum cannot fulfill its purpose without a team of employees ready and able to man it. This includes the Preservation and Restoration Division at Silver Hill which must be given the hands and funds essential to conserve the historic aircraft and spaceware which makes up the heart of the museum's program.

Believe me, the museum could use some additional manpower. The total number of employees on board, counting administrators, secretaries, curators, and the crew at Silver Hill is still under 40. This is incredible when one considers the needs of a national museum. These few persons assemble and catalogue hundreds of aircraft and astronautical specimens, run a major reference library, answer over 6,000 public inquiries a year, and administer an exhibit program which is currently viewed by nearly 4.5 million visitors each year. These work requirements will double or triple once the larger museum is opened.

The museum has requested an increase of $105,000 for carrying out its operations in 1972, and I can confirm this amount is honestly required. Even if the full amount of staff and program funds are appropriated, the museum will receive only 1.7% of the overall Smithsonian Federal budget. It is my sincere hope the Committee will not cut one penny out of this already miniscuel allotment.

Mr. Chairman, at this time I would like to turn my attention to another unit of the Smithsonian which deserves your attention. This is the Museum of Natural History which has come upon some pretty rough times of late.

From the early years, when the first Secretary of the Smithsonian, Joseph Henry, made pioneering discoveries in science, the Institution has generally held pure scientific research in high regard. During the mid-1960's, however, the course of the Smithsonian's priorities began to shift. As Paul Oehser writes in his recent history of the Institution: "Today, in contrast, the humanities are demanding an increasing role in Smithsonian programs . . ."

It is during this period that the Museum of Natural History began to slip back. Doctor Richard Cowan, director of the museum documented this problem publicly at the House Subcommittee hearings last summer.

Dr. Cowan testified that the lack of adequate technical assistance for his scientists results in an almost "criminal mismanagement of human resources" because highly trained scientists are required to waste their time doing routine chores.

He also confirmed that the employment picture at the museum is worse than several years ago. Dr. Cowan charged:

"The available pairs of hands, both professional and supportive, are fewer now than four years ago."

His statement was backed by a specific example of the cannibalism which ate away one-third of the staff of the Department of Vertebrate Zoology at the same time its workload was soaring.

In addition, Dr. Cowan exposed the severe and sudden drain on his museum's budget caused by a shift in Smithsonian policies which makes the museum purchase items that formerly had been provided to it without cost out of the Institution's Supply Division.

As strange as it seems, the museum must now purchase storage bottles and cases and some 400 other items which are essential for its operation and were formerly supplied at no cost to the museum. Why the museum must even purchase many of its reference books because the main Smithsonian Library cannot supply them. Given this unusual situation, I must observe that the Institution's decision to request an increase of $80,000 for personnel and only $65,000 for books at its main Library is most curious.

Mr. Chairman, it is my best estimate that the change in supply and service practices instituted by the Smithsonian management has chopped non-salary operating funds at the Museum of Natural History by almost 30%. For example, the purchase of specimen storage cases, which is one of the items the museum must purchase for itself, may represent the largest single expenditure of each science department. This expense presently exceeds $5,000 in one department alone.

Accordingly, the requested increases in the budget of Natural History should be viewed not only from the perspective of the need for correcting several years of decline, but also with the realization the museum has been loaded down by new and unexpected expenses for which it has been given no additional funds.

Another item for which the museum is seeking additional funds is the hiring of more technical aids. The Smithsonian management was informed of the need for additional technicians as far back as 1966, but this is the first year the museum has been permitted to ask for them. The increase sought would leave the museum with a ratio of only 1.6 technicians to every 1 scientist, which is still below the very minimum standard set by scientific organizations throughout the Government and country.

Nevertheless, these increases will be a big factor in helping the scientists perform their true role of basic research, and this leads to another area in which the museum is seeking an increase. For a major portion of its research is in the field of environmental sciences. Though it may not be widely known, right here, right now in Washington, we have the world's greatest collection of base data for information on the chemical makeup, structure, and ecology of the world's plants and animals.

There are over 50 million specimens in the National Collections stored at the Museum of Natural History. Often this is our nation's only resource for documenting our knowledge of earth's environment and the probable consequences of environmental manipulations. The importance of these samples is revealed in the fact that two-thirds of all the collections borrowed from all museums for study come from the Museum of Natural History.

Their value lies in this. The data inherent in these specimens provide an irreplaceable base line for knowing the composition of plants and creatures on earth before pollution from pesticides, automobiles, and industrial sources reached threatening proportions.

By examining the makeup of organisms and plants before modern changes occurred in the natural environment, we can know such things as whether water pollution actually exists and what pure water really means. If the effects of man-made pollutants are to be understood, we must also understand those that nature supplies. How can we restore quality if we do not know in what manner something has been degraded?

In other words, these millions of items which are stored, cared for, and studied by the Natural History scientists hold the key to providing the fundamental information which is essential to develop environmental standards, restore quality where it has been damaged, and assess the probable effects of future activities by man.

Therefore, the identification and protection of the specimens in the National Collections and the increased distribution of information about them must be given the highest priority in connection with our nation's environmental programs. The nation's research and work in the environmental sciences cannot succeed unless they are tied to the collections, data, and information available from the Museum of Natural History.

This is why I support so earnestly the new environmental research projects for which increased funds are requested, as well as the extra technical support which will allow the scientists to successfully achieve that research. It is also why I point to the directly related electronic data processing program of the museum as a necessary adjunct of the museum's research projects. Research will not serve its purpose if its results are not available. By converting manually recorded data into computer cataloging, the computer program will provide immediate and mass distribution of information to all those who are engaged or interested in the museum's scientific investigations.

Mr. Chairman, this completes my comments on the Smithsonian's Federal budget. The only advice I might add is the suggestion the Committee may wish to request a full disclosure from the Smithsonian on its private financing. An examination of this data might show Congress whether the Institution could be doing more for itself in meeting the cost of the programs it asks Congress to support.

It is my understanding the pool of private investments, gifts, and grants now brings in about $18 million annually and it seems fair to inquire whether this sum is being spent wisely so as to keep Federal expenditures at an absolute minimum. For example, is the Smithsonian getting a sensible return on its holdings of over $32 million in stocks, bonds, and endowment funds? Is the income growth uniform among its various funds? Could more privately funded employees be engaged at units which seriously need them, such as the Air and Space and Natural History Museums? Might the Institution actively be seeking more restricted gifts for those museums which have the greatest need?

The Committee can probably add several questions of its own to this list, and these are simply offered as reminders of what useful information might be acquired from a detailed disclosure of the Institution's private financing. This type of report was given to the House investigating subcommittee last summer, and I think it would be helpful if you would institute the practice on a regular basis.

Mr. Chairman, this concludes my statement.

## THE UNITED NATIONS IN THE MIDDLE EAST

Mr. HATFIELD. Mr. President, the United States has been urging and succeeding in United Nations mediated negotiations in the Middle East. Anyone concerned with the problems faced in that part of the world and the dimensions of the dilemma facing the countries involved cannot but be aware of the long role the United Nations has played there. It has had its successes and its failures in the Middle East and hopefully the present negotiations will bear the fruit of a just peace.

In the January 1971 "Current History," Dr. Harry N. Howard, adjunct professor of Middle East studies, School of International Service, American University, presented an article on the role of the United Nations in the Middle East. The article is the best summary on the subject matter that I have encountered I highly commend it to the Senate.

Mr. President, I ask unanimous consent that the article be printed in the RECORD.

There being no objection, the article was ordered to be printed in the RECORD, as follows:

THE UNITED NATIONS IN THE MIDDLE EAST

(By Harry N. Howard, Adjunct Professor of Middle East Studies, School of International Service, American University)

"Since the submission of the [Palestine] problem to the United Nations by the British government on April 2, 1947, it has proved to be . . . the most unyielding problem yet to confront members of the United Nations."

Now that the United Nations has passed its twenty-fifth birthday, it is possible to assess its successes and failures, its limitations and shortcomings as an international organization designed to contribute to international peace and security. As the charter was elaborated at San Francisco, the United Nations was established to "save succeeding generations from the scourge of war," to "reaffirm faith in fundamental human rights," to establish conditions under which justice and respect for obligations could be maintained, and to "promote social progress and better standards of life in larger freedom."

These ideals could not be achieved in such a short period of the long human story anywhere in the world, particularly not in the Middle East, because of the complex problems involved. While the United Nations has been able to meet some basic issues, it has failed to meet others, notably in the instance of the unyielding problem of Palestine. For this reason, it has been distrusted by the Arabs, Palestinian and others, and often scorned, vilified and held in open contempt by the state of Israel. Yet it should be recalled that the soldiers and diplomats of the United Nations have played a vital role in the Arab-Israeli conflict and that a United Nations peace-keeping force, since 1964, has held the ring between contending Greek and Turkish ethnic elements on the island of Cyprus. Whatever its obvious structural and political weaknesses, the United Nations remains the only instrument of international order and justice at the disposal of the peoples of the world.

The United Nations has been confronted with more persistent problems in the Middle East than in any other part of a troubled world. Even at the San Francisco Conference on International Organization, which was devoted to the elaboration of the charter and to the establishment of the new international organization, not to the consideration or solution of substantive problems, issues bearing on the Middle East were brought to the attention of the various delegations. Middle East problems were discussed at times in committees, more often in the corridors. This was true of the question of the withdrawal of Anglo-French troops from Lebanon and Syria, and the question of Soviet pressures on Turkey. But it was especially true of the problem of Palestine, particularly in its relationship to the new trusteeship system which was to be established under the United Nations. At one point, United States Secretary of State Edward R. Stettinius observed that "the Palestine question was dangerous. A combination of Palestine and the Arab League was dynamite ready to explode." Still another issue was that of the relationship of the newly formed League of Arab States (March 22, 1945) to the new international organization. Ultimately, it was to take its place loosely within the United Nations framework, along with other regional arrangements, essentially under Articles 52–54 of the United Nations Charter.[1]

The basic issues troubling the Middle East have endured and the United Nations has played an important role in the area in the fields of social and economic development, relief and technical assistance, as well as in the field of international security. Some problems have defied solution—those of Cyprus and Palestine, for example. As early as February, 1946, the Lebanese and Syrian governments brought to the attention of the Security Council the problem of the continued presence of Anglo-French troops in their countries. A satisfactory solution was worked out by the parties directly concerned, but met a Soviet veto, largely on the ground that Great Britain was not sufficiently chastised. The problem was later solved by the parties themselves.

Similarly, in 1946, the Iranian government complained against Soviet intervention in Iran and the Soviet failure to withdraw its troops from northern Iran. Ultimately Soviet forces were withdrawn, and Iran assumed control in Azerbaijan in December 1946.[2] The problem of Libya, involving the disposition of former Italian colonies after World War II, first came before the General Assembly in September, 1948. After long deliberation, on November 21, 1949, the General Assembly recommended that Libya (Cyrenaica, Tripolitania and Fezzan) become an independent state as soon as possible and, in any event, not later than January 1, 1952. A U.N. Commissioner and a Council were appointed to assist in the processes leading toward independence and, in fact, Libyan independence was declared on December 24, 1951.[3]

The role of the United Nations in the Greek case, 1947–1952, was much more significant and enduring, and it involved the United Nations not only in attempts at conciliation and political adjustment, but in the establishment of investigatory and observational machinery. Observation groups stationed along the northern frontiers of Greece set a precedent for later United Nations activities.[4] The actions taken had much significance not only for Greece in that difficult period immediately after World War II, but for the eastern Mediterranean, Turkey and the Middle East as a whole.

The case came before the United Nations in the fall of 1946 on a complaint of the Greek government that Communist-dominated guerrillas were crossing and crisscrossing the northern frontiers of Albania, Yugoslavia and Bulgaria, where they found both sanctuary and training. On December 19, 1946, the Security Council established an 11-member Commission of Investigation Concerning Incidents Along the Northern Frontiers of Greece, representing all members of the Council. The commission duly reported in the spring of 1947, found that the charges were justified, and recommended maintenance of a commission in Greece and the Balkan area to continue observation. This proposal met with five resounding Soviet vetoes. As a result, on November 21, 1947, the General Assembly established a U.N. Special Committee on the Balkans, with investigatory and observational functions. That body remained in being until November, 1951, when it was replaced by a Balkan Subcommission of the Peace Observation Commission, the problem having been solved in the meanwhile.

It is true that the Greek army, retrained and equipped by the United States and the United Kingdom, eliminated the Greek guerrilla effort to overthrow the Greek government an establish a "people's democracy," after the Balkan models. But it is not less true that the United Nations commissions rendered a great service in gathering evidence pinpointing the essential facts, and highlighting the issues. Had Greece fallen, perhaps to become a Soviet satellite, as United States President Harry Truman advised the Congress on March 12, 1947, "the effect upon its neighbor, Turkey, would be immediate and serious. Confusion and disorder might well spread throughout the entire Middle East." This, at least, was the view in West Europe and the United States, and it was the possibility that these wider implications were involved that led to the elaboration of the Truman Doctrine concerning aid to Greece and Turkey.[5]

In Lebanon, when revolt broke out against the regime of President Camille Chamoun during May-September, 1958, there were charges of massive intervention in that country on the part of the United Arab Republic. On June 11, 1958, the U.N. Security Council resolved to send an observation group (UNOGIL), composed of some 600 soldiers under the direction of Galo Plaza, former President of Ecuador, Rajeshwar Dayal of India, and Major General Odd Bull of Norway, to investigate and report, and to "ensure that there" was "no illegal infiltration of personnel or supply of arms or other material across the Lebanese borders."

It may well be true that the presence of some 15,000 United States troops, who began landing on July 15 in response to the urgent appeal of the Lebanese government, calmed the situation and enabled the Lebanese to choose a successor in accordance with constitutional processes. But it would also appear, despite restrictions on the movement of UNOGIL personnel and the fact that it could find little evidence of massive intervention, that UNOGIL rendered a very useful service. Its principal contribution to the settlement of the crisis lay in its moral influence and in its contribution to the establishment of conditions which helped to separate the domestic crisis from the external complications. During difficulties in Jordan in the same general period, the establishment of a symbolic U.N. presence had a salutary psychological impact. While the U.N. presence remained in Jordan for some years, United States forces left Lebanon on October 25 and British forces were withdrawn from Jordan on November 2, 1958.[6]

The United Nations action in Yemen, following the overthrow of the Imam in September, 1962, involved somewhat similar, if more limited, operations. The problem of Yemen was serious, not only because of its proximity to Saudi Arabia and oil-rich areas, but because of its strategic location on the Red Sea. Soon after the outbreak of the revolt, both the U.A.R. and Saudi Arabia became involved in support, respectively, of

Footnotes at end of article.

the republican and royalist elements, and the U.A.R. dispatched an estimated 30,000–50,000 troops to the area. While the U.N. Secretary General sent U.N. Under Secretary Ralph Bunche to Yemen as early as February, 1963, and asked UNTSO Chief of Staff General Carl von Horn to examine the problems of U.N. observation, it was not until July 4, 1963, that the United Nations Yemen Observation Mission (UNYOM), composed of some 200 officer-observers, began to function under General von Horn.

The essential UNYOM function was to supervise the implementation of an agreement on the part of the U.A.R. and Saudi Arabia, worked out by United States Ambassador Ellsworth Bunker, to withdraw assistance to the contending parties and not to attempt political settlement or peace-keeping. While the task of fact-finding was well implemented, the task of mediation and conciliation proved impossible. The mission was terminated on September 4, 1964. In evaluating the work of UNYOM, it should be recalled that the mission was small in numbers; the terrain was very rugged; the physical conditions were severe; and local supplies and facilities were meager. U.N. personnel and equipment, moreover, were often subject to gunfire and were frequently in danger. Nevertheless, it was clear to the Secretary General that the mission had "exercised an important restraining influence on hostile activities in the area"—which was a primary reason for sending it to Yemen.[7]

ROLE IN CYPRUS

The United Nations did not begin to play a role in Cyprus until 1964, although informally the question had come before various bodies in the United Nations as early as 1950. While an independent republic of Cyprus was established in 1960, the Greek and Turkish Cypriot communities, to say nothing of Greece and Turkey, were unable to resolve their problems relative to the island. During 1963–1964, further open conflict threatened, with all the implications which it might have for NATO, the eastern Mediterranean, and the Middle East. As a result, on March 4, 1964, the Security Council unanimously resolved to establish the United Nations Force in Cyprus (UNFICYP), under the command of UNEF General P. S. Gyani and composed of some 6,000 troops from the United Kingdom, Canada, Finland, Ireland and Sweden. Attempts at mediation and conciliation, both within and outside the United Nations, were unsuccessful. The Secretary General reported in September, 1970, that "no significant change" had occurred during the year, but, "by and large," "peace and quiet" had obtained on the islands. The elements for a political settlement existed, and despite financial difficulties, the UNFICYP had "steadfastly continued its efforts to maintain quiet on the island and to return the life of its citizens to normality," which, however, would "not be possible until the parties find a solution to the basic issues."[8]

THE PALESTINE PROBLEM

Like the Cyprus problem, the question of Palestine involved intractable issues of contending nationalisms over the same piece of land. Since the submission of the problem to the United Nations by the British government (which held the mandate of the League of Nations) it has proved to be the most complex and the most unyielding problem yet to confront members of the United Nations. In one form or another, the Palestine issue has been before the General Assembly and the Security Council of the United Nations more consistently, more regularly and more frequently than any other single question during the past 25 years, and no "solution" is even yet in sight. The origins of the problem as we know it today may be traced to the General Assembly's resolution of November 29, 1947, which had recommended the partition of Palestine into a Jewish and an Arab state, with Jerusalem and its Holy Places sacred to Jews, Christians and Muslims as an international *corpus separatum*, and cooperation between the two communities.

One result of the recommendation was the intensification of the conflict between Jews and Arabs in Palestine, beginning in the spring of 1948. Subsequently, President Truman, during March-April, 1948, sought to backtrack into a United Nations trusteeship over Palestine when he saw that the partition plan could not be implemented peacefully.[9] The conflict continued throughout 1948 and, basically, it has continued more or less violently (1956, 1967) to the present. Count Folke Bernadotte, as United Nation Mediator, sought unsuccessfully to conciliate the parties and paid with his life—at the hands of Jewish terrorists—in the process, although Ralph Bunche, as Acting United Nations Mediator, worked out a series of armistice agreements during February–July, 1949.

During the same period United Nations peace-keeping and peace-observation machinery was established—the United Nations Truce Supervision Organization—to keep watch over violations of the truce and armistice agreements. Drawn from the military forces of a number of states—the United States, France, Canada, Sweden, Norway, Ireland, and so forth—and numbering at various times some 700 personnel, the UNTSO performed indispensable services in arranging cease-fires and presenting unbiased reports to the United Nations Security Council as a basis for resolutions which attempted to deal with the continuing conflict. Despite the severe restrictions which were often placed on the movements of the UNTSO, that body was able to act as a deterrent, limiting the hostile activities of both parties to the conflict. The Mixed Armistice Commissions (Israeli-Lebanese, Israeli-Syrian, Israeli-Jordanian, and Israeli-Egyptians) served, in effect, as part and parcel of the UNTSO machinery. While there has been much propaganda against the UNTSO, its work needs to be put into perspective, and it may be observed that substantially since 1951 the Israeli government refused to cooperate with the Israeli-Syrian Mixed Armistice Commission, as it refused to cooperate with the Israeli-Egyptian MAC after 1956.[10]

Similarly, the work of the United Nations Emergency Force (UNEF), established in November, 1956, in the immediate wake of the Israeli-Anglo-French attack against Egypt, needs to be put into perspective. With some 5,000–6,000 soldiers, drawn largely from "neutral" states, this body performed most effectively in the Gaza Strip and on the Sinai Peninsula in maintaining the peace along the Israeli-Egyptian demarcation lines, and its success there probably contributed to easing the situation elsewhere. It was withdrawn on May 18, 1967, on Egyptian demand, immediately prior to the June, 1967, *Blitzkrieg*. But in fact Israel had never permitted it to function on Israeli-held territory, on the ground that such action would prejudice Israel's sovereignty.

The Conciliation Commission for Palestine, established in January, 1949, and composed of representatives of France, Turkey and the United States, set forth comprehensive proposals for peace during 1949–1951, which neither Israel nor the Arab states accepted. After 1951, it was able only to bring about the unfreezing of Arab blocked accounts in banks in Israel (some $10,000,000). Despite the efforts of Special Representative Joseph E. Johnson during 1961–1962, it could do nothing with regard to the problems of Arab refugee repatriation, or resettlement with compensation, under a free and realistic choice for the refugees, since the Israeli government rejected any substantial repatriation and the Arab governments were skeptical as to resettlement. On the other hand, the Arab governments did a great deal to assist the refugees, providing some $130 million in direct and indirect assistance over the years, while UNRWA continued to provide relief, health and education services to some 1,400,000 refugees.

The Conciliation Commission is now substantially out of the picture; after the June, 1967, conflict the problem was placed in other hands. On November 22, 1967, the United Nations Security Council laid down the general guidelines for a possible general settlement, which stressed the inadmissibility of the acquisition of territory by force and the need to work for a just and lasting peace in which every state in the area could live in peace and security.[11] A just and lasting peace application of two basic principles: 1) the withdrawal of Israeli armed forces from territories occupied in the conflict; and 2) the termination of all claims or states of belligerency and respect for and acknowledgment of the territorial integrity and political independence of every state in the area and its right to live peacefully within secure and recognized boundaries.

The resolution also affirmed the necessity of 1) guaranteeing freedom of navigation through international waterways in the area; 2) achieving a just settlement of the refugee problem; and 3) guaranteeing the territorial inviolability and political independence of every state in the area, through measures including the establishment of demilitarized zones.

United Nations Ambassador Gunnar V. Jarring was chosen as the Secretary General's emissary to bring the parties together for peaceful adjustment, but he has thus far been unable to do so. Since the spring of 1969, discussions have taken place (for the most part within the United Nations framework) among France, the United Kingdom, the Soviet Union and the United States, and on June 25, 1970, the United States revealed a new initiative, suggesting a cease-fire based on the principles of the U.N. resolution of November 22, 1967. These were steps in the right direction and they were accepted by the United Arab Republic, Jordan and Israel. A 90-day cease-fire began on August 7. The United States proposals were flawed in their failure to make explicit provision for consideration of the Palestinian demand for participation in any discussions and for self-determination. Subsequently, there was renewed violence in Jordan during September-October, 1970, and serious charges and counter-charges of cease-fire violations were made both by Israel and by the Arab states.

If there is to be a settlement of the long-standing conflict, it seems clear that the Palestinian demand for self-determination based on free and realistic choice can no longer be ignored.[12] Similarly, whatever the skepticism and mistrust, the United Nations will have to play a continuing role in new security arrangements, either through an enlarged and strengthened UNTSO, or a force like that of UNEF. While some observers have proposed an additional special United States guarantee to Israel within this framework, it is possible that the Locarno formula, with guarantees against a possible aggressor, might prove less prejudicial in concept and more acceptable in practice.[13]

From the cases examined, it would appear that the United Nations has had limited success in dealing with problems in Lebanon, Syria and Iran in 1946; its investigatory and observational functions were well performed in Greece, and somewhat less well in Yemen. In the instance of Cyprus, the United Nations Force has certainly contributed to the maintenance of a degree of stability and order, even if the solution of basic problems of na-

Footnotes at end of article.

tional and communal conflict has not been achieved.

The United Nations has not succeeded in achieving peaceful adjustment of the Palestine problem, largely because of the very complicated issues centering around the enduring conflict of two nationalisms over the same territory and the inability of the greater powers to face this conflict frankly. Nevertheless, the UNTSO and UNEF have rendered very useful services in the security field, while UNRWA has served the Arab refugees in the fields of relief, health and education. The General Assembly considered the Palestine problem—the Arab-Israeli conflict—in the fall of 1970. It seemed clear to thoughtful and informed observers that, if there were to be any hope of peaceul adjustment in this area of conflict, with all its potential for uncontrolled escalation, the United Nations would have to reassert the interests of the international community, make appropriate recommendations and decisions, and take constructive action.[14]

FOOTNOTES

[1] See especially Department of State, Historical Office, *Foreign relations of the States. Diplomatic Papers*, 1945. Vol. I. *General: The United Nations* (Washington, D.C.: U.S. Government Printing Office), pp. 859–860, pp. 888–889, p. 925, pp. 950–954. For detailed studies of U.N. peacekeeping activities in the Middle East see Rosalyn Higgins, *United Nations Peacekeeping: Documents and Commentary: The Middle East*. Vol. I (New York: Oxford University Press, 1969); David Wainhouse et al., *International Peace Observation: A History and Forecast* (Baltimore, Maryland: Johns Hopkins Press, 1966).

[2] World Peace Foundation, *Documents on American Foreign Relations, 1945–1946*, VIII (Princeton, N.J.: Princeton University Press, 1948), pp. 851–859; George Lenczowski, *Russia and the West in Iran, 1918–1948* (Ithaca: Cornell University Press, 1950).

[3] Adrian Pelt, *Libyan Independence and the United Nations; A Case of Planned Decolonization* (New Haven: Yale University Press, 1970). Independence was declared by the former U.N. Commissioner, who played a leading role in the preparations of Libyan independence during 1950–1951, especially in elaborating a constitution.

[4] Harry N. Howard, "Greece and its Balkan Neighbors (1948–1949): The United Nations Attempts at Conciliation," *Balkan Studies*, VII (1966), pp. 1–26; "United States Policy Toward Greece in the United Nations, 1946–1950," *Ibid.*, VIII, pp. 263–296.

[5] See *Congressional Record* (1947), Vol. 99, p. 1999; *Aid to Greece and Turkey: A Collection of State Papers*. The Department of State *Bulletin Supplement*, Vol. XVI, No. 409A (May 4, 1947), pp. 827–909. The President was authorized to withdraw assistance not only when requested by the two governments, or if he thought the purposes had been substantially achieved, but if the Security Council or the General Assembly found that further assistance was unnecessary or undesirable.

[6] For a convenient selection of pertinent documents see Department of State, *American Foreign Policy: Current Document, 1958* (Washington, D.C.: U.S. Government Printing Office, 1962), pp. 944–1067. See also Wainhouse, *op. cit.*, pp. 373–390; Robert Murphy, *Diplomat Among Warriors* (New York: Pyramid Books, 1965), ch. 27.

[7] See Wainhouse, *op. cit.*, pp. 421–455; John S. Badeau, *The American Approach to the Arab World* (New York: Harper and Row, 1968), ch. VII; Major-General Carl von Horn, *Soldiering for Peace* (New York: McKay, 1967), chs. 24–25; Manfred W. Wenner, *Modern Yemen, 1918–1966* (Baltimore: Johns Hopkins Press, 1967), ch. VIII. For convenient documentation see Department of State, *American Foreign Policy: Current Documents 1963*, pp. 601–614; *1964* pp. 724–729.

[8] See U.N. Doc. A/8001, Add. 1, paras. 51–54; Wainhouse, *op. cit.*, pp. 441–460.

[9] The most comprehensive study is that of Fred J. Khouri, *The Arab-Israeli Dilemma* (Syracuse: Syracuse University Press, 1968). See also Nadav Safran, *From War to War: The Arab-Israeli Confrontation* (New York: Pegasus, 1969).

[10] Wainhouse, *op cit.*, pp. 272–273. See also the memoirs of two UNTSO Chiefs of Staff: Lieutenant-General E. L. M. Burns, *Between Arab and Israeli* (New York: Obolensky, 1962); Major-General Carl von Horn, *Soldiering for Peace* (New York: McKay, 1967).

[11] See Arthur Lall, *The U.N. and the Middle East Crisis, 1967* (New York: Columbia University Press, 1968).

[12] On this aspect see Don Peretz, Evan M. Wilson and Richard J. Ward, *A Palestine Entity?* (Washington, D.C.: Middle East Institute, 1970); Senator Mark Hatfield, "Search for Peace in the Middle East," *Congressional Record*, Vol. 116, No. 99, S9021–9039; Lord Caradon, "A Plan for Peace," *The Sunday Times* (London), July 5, 12, 19, 1970.

[13] See Senator J. William Fulbright, "Old Myths and New Realities—II. The Middle East," Address of August 24, 1970, *Congressional Record*, vol. 116, no. 147; John C. Campbell, "The Arab-Israeli Conflict: An American Policy," *Foreign Affairs*, October, 1970, pp. 51–69; Nahum Goldmann, "The Future of Israel," *Foreign Affairs*, April, 1970, pp. 443–459.

[14] See especially American Friends Service Committee et al. *Search for Peace in the Middle East* (Philadelphia: 1970).

## URBAN TRANSPORTATION: A SOLUTION

Mr. SCHWEIKER. Mr. President, of all the problems confronting contemporary America, urban transportation is one of the most critical. Every morning and evening, millions of our fellow citizens experience the frustrations, crowding, and pollution of inadequate, smog-ridden transportation systems.

Mr. Stewart F. Taylor, a transportation expert, has offered a realistic solution in an article appearing in Traffic Quarterly, of October 1970. Entitled "The Rapid Tramway: A Feasible Solution to the Urban Transportation Problem," Mr. Taylor's article makes a strong case for a new look at the tramway to provide clean, efficient, and fast urban transportation. I ask unanimous consent that the article be printed in the RECORD.

There being no objection, the article was ordered to be printed in the RECORD, as follows:

THE RAPID TRANSIT TRAMWAY: A FEASIBLE SOLUTION TO THE URBAN TRANSPORTATION PROBLEM

(By Stewart F. Taylor)

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The problem of urban transportation in America has endured for so many years that it is assuming the characteristics of an unfortunate but inseparable component of our national life. If it stood apart, the problem might be tolerated as a necessary cost of the country's enviable achievements. Current events indicate, however, that the shortcomings of transportation hinder the remedy of other ills which threaten our urbanized society.

The search for solutions has also been long. Governments at all levels have expended billions of dollars in enlarging and improving our networks of public streets and highways. Hundreds of millions more have been committed to improving or, at the very least, resuscitating the mass transit industry, and its transition from private to public ownership has moved rapidly. Legal structures have been altered to improve the financial and operating climate for public transportation. In the areas of conceptualization and planning, activity has been equally vigorous. Scores of proposals for new transportation techniques and hardware—from the conventional to the visionary—have received serious consideration. Nearly every large city in the United States has been the subject of a plan emphasizing the role of one or more transportation modes.

Few will gainsay the tangible accomplishments to date. Some critics complain that fiscal emphasis on highway development has only intensified the problem, but other authorities have marshaled statistics demonstrating these programs as appropriate responses to the massive shift in demand from public to private transportation. The fact remains, however, that in spite of obvious improvements there is almost universal dissatisfaction with today's urban transportation. The critical issue is, therefore, what courses of future action can produce effective solutions.

CONVENTIONAL ANSWERS DISCREDITED

In recent years a vast array of concepts have been offered as instruments for achieving plan objectives. Many claim technical and economic superiority over a wide range of circumstances. It must be recognized, however, that preeminence in these areas is often irrelevant to the problems of today. Not long ago technology stood as the challenge as well as the touchstone for commercial development of new transportation schemes. On the other hand, evidence seems to indicate that sociological factors now predominate—with economic criteria playing an important but lesser role. The most formidable victim of the new environment is the urban highway program. For decades most transportation experts have held out the public road as the panacea for our increasingly dispersed and automobile-oriented urban society. Yet in spite of an abundance of impressive cost-benefit statistics vital freeway projects have been arrested for years or irrevocably annulled in such important cities as San Francisco, New Orleans, Philadelphia, New York, and Boston. This has been achieved by local interests in spite of full recognition that their direct funding burden would be insignificant. Construction programs will continue in the years ahead, but the recent, widely separated defeats are not isolated aberrations. The popularity of this approach has unquestionably waned.

Mass transit proponents have been heartened by the growing disillusionment with automobile-based programs, yet their efforts have been less rewarding. In the rail transit field only one totally new system has been completed since World War II, and in the minus column laborious proposals have been overturned by taxpayer referendums in

Seattle, San Francisco,[1] Los Angeles, and Atlanta. The primary issue in each of these defeats was obviously economic: the individual citizen recognized his personal cost burden and was unwilling to carry it; but the diversity of circumstances suggests that sociological factors also influenced the outcome. It is all too evident that the nation must simultaneously cope with more problems at home and abroad than its resources will allow. Taxes have been increased, but at the same time priorities for the application of public revenues have, perforce, been established. It must be acknowledged that these rapid transit proposals—of such elaborateness and complexity as to entail billions in capital construction cost—could not match such claims as national defense, space, crime, and poverty. Requiring support from all, they were viewed as exorbitant luxuries for the relatively few who found them convenient.

New schemes for bus transit have been similarly frustrated. In spite of decades of advocacy and trivial capital requirements, reserved busways in city streets have never gained wide acceptance. Optimum economics are beside the point to motorists observing unencumbered and seemingly underutilized thoroughfares forbidden to them while they are confined to plodding in overburdened lanes. Practical reality also points to the difficulty of policing curbside street space, which is essential to local bus operations. More recently there has been a surge of interest in reserved expressway lanes. This concept has merit as a solution to the line-haul segment of bus service.[2] The question remains, however, as to the downtown distribution function. Even if allocated street lanes can be guaranteed a high degree of immunity from parallel traffic, Central Business District (CBD) intersection delays are less amenable to solution. Grade separation would obviate the problem, but to date no bus subway scheme has been carried beyond the stage of cost estimation. Paramount among several adverse factors is the high capital construction requirement for a mode of limited capacity: 5,000 to 8,000 passengers per peak hour per direction in contrast with 45,000 to 55,000 for rapid transit.

If conventional approaches are meeting with disfavor, what of the more advanced schemes for improving urban transportation? The record of success is equally spare. For more than a decade a parade of concepts have been winning professional recognition. Some have enjoyed substantial federal support. However, while the need is now, none has materialized into commercially acceptable operation. Nor does the near future hold promise for greater success. A forward look becomes conjecture, but the impediments to most of these schemes—their technical problems aside—appear to have continuing validity. Most new concepts can be divided into two categories: the guided transit capsule and the guided personal vehicle. The common denominator is the fixed pathway to permit automated control which, in turn, provides high speed, close spacing, and maximum capacity with safety. Total segregation from free-flowing traffic is mandatory, so a choice must be made between subterranean and elevated planes. The provision of origin-and-destination convenience proximately equal to the automobile would require a large and complex network of lines. As a consequence, the tunneling necessary in a Central Business District for trunk lines, feeders, junctions, and drop-off points severely tests the imagination. On the other hand, it is difficult to envision community acceptance of overhead guideways lacing a metropolitan area when elevated highways and railways have become anathema.

Transit capsules offer greater frequency of service than train systems. Against this, however, must be measured the safety and psychological aspects of no on-board attendant, lesser capacity, and the greater problems arising from malfunctions. Their outstanding characteristic—automated control—is hardly revolutionary. This technology will soon be demonstrated in commercial service on the San Francisco Bay Area Rapid Transit System. The guided personal vehicle raises its own set of questions. If the conveyance is designed exclusively for "tracked" operation, what incentive is there to purchase (or rent) for such a limited scope of travel—particularly if it successfully accomplishes its objective of reducing conventional highway congestion? On the other hand, it is difficult to envisage a completely versatile dual-mode car offered commercially at a price competitive with a new or used automobile. It must be remembered that a current social goal is to provide conveyance for all segments of the urban population including those who cannot afford private transportation. Moreover, irrespective of cost, those handicapped millions who are unable to drive because of age or infirmity can never benefit from advancements in this technology.

THE RAPID TRAMWAY CONCEPT

Stress upon the drawbacks of revolutionary concepts is not intended to discredit their eventual utility. It would be presumptuous to predict the technological and sociological environment of metropolitan areas toward the end of this century. The point is that a present need exists for faster, safer, more reliable and harmonious urban transportation. It has already been noted, however, that conventional concepts face serious resistance. What, then, is the answer? One near-term technology that has attracted little interest in this country but has seen wide adoption on the continent of Europe is the rapid tramway,[3] a mass transit concept which can be simply described as an innovative fusion of conventional technologies.[4] Salient features consist of lightweight, electrically powered vehicles with flanged wheels operating singly or in trains on dual rail trackage. Separation from other traffic is material to optimum performance. This is accomplished by subways in central urban areas and by surface segregation on highway medians or along separate routes in less congested peripheral districts. Characteristics of the concept suggest a broad range of application: 1) lower cost and less environmental intrusion than conventional rapid transit; 2) a promising instrument for integrating urban mass transportation; and 3) a capability for upgrading and conversion to the highest levels of automation and passenger-carrying capacity. Each will be briefly considered.

*Lower Cost and Less Environmental Intrusion than Rapid Transit.* A basic characteristic of the rapid tramway is overhead power collection. In addition to its relatively low capital cost and greater ease of maintenance compared with third-rail systems, it opens the door to other benefits. As was stated earlier, separation from other circulation systems is important, but total isolation—required of the dangerous powered-rail configuration—is unnecessary. Outside of the CBD, land values permit conventional rapid transit to be located in the open, but the third rail dictates a high degree of property protection as well as separation of unattended grade crossings. The latter is accomplished by a depressed or elevated right-of-way. Both approaches present problems. Cuts entail special drainage systems, and unless substantial retaining walls are employed land-use requirements are trebled for a typical two-tract line. Aerial structures are more costly, while they—as well as earthfills—obtrude conspicuously into the communities through which they pass.

Above a certain intensity of land use, open-cut or elevated construction for rapid transit is either too costly or aesthetically unacceptable, and subway operation becomes mandatory. Tramways, on the other hand, can be inoffensive and function effectively on the surface in reserved rights-of-way of boulevards or parkways passing through urban sectors of similar density. Hence, while both forms must operate underground through core areas, the tramway may be brought to the surface sooner in a radial direction. This can reduce overall subway requirements, the construction costs of which are at least five times as great as open rights-of-way.

It must be recognized that median strip operation on other than limited-access highways introduces the cross movement of other traffic at grade, leading to slower operation and the possibility of schedule interruption. Steps can be taken to minimize these drawbacks: train-controlled traffic signals, the closing of minor cross streets, prohibiting left-hand turns, and employing as yet untried designs of low cost, modular construction overpasses. The fact is, however, that this type of operation can only be marginally satisfactory. On the other hand, the tramway mode is also employed in other configurations with superior characteristics. And while median strip running is less effective than pure rapid transit, it is a vast improvement to rush-hour circulation of general traffic on most urban arteries. More importantly, as this type of operation is unavailable to conventional rapid transit, paying the price of lower speed and reliability over limited sections of a comprehensive system can spell the difference between realizing a broadly attractive mode or no effective mass transit at all.

A more desirable method of surface operation can be achieved at less cost by exploiting little-used or abandoned railroad rights-of-way. Every city in the United States with a population in excess of a quarter million is the focal point of railroad lines radiating in several directions. With the vast corporate merger movement in progress and the shrinkage of passenger business to less than 500 scheduled intercity trains a day throughout the nation, the utilization of all or portions of surplus rights-of-way becomes increasingly plausible.[5] High voltage power transmission lines also frequently require property tracts of sufficient width to be suitable for sharing with a fixed-rail transport system.

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[1] This was a rejection by city voters on November 8, 1966 of a $96.5 million bond program initiating a $495 million comprehensive modernization (including new subways) of the San Francisco Municipal Railway and was unrelated to previous three-county approval of the Bay Area Rapid Transit District.

[2] While only a modicum of freeway mileage has been opened for practical tests of this approach, it has already been subject to compromise. The United States Department of Transportation recently contracted for a feasibility study of sharing freeway bus lanes with car-pool vehicles, i.e., those carrying one or more passengers.

[3] The concept and its close variations have been identified by a number of terms. Among the more common are "Limited (or) Express Tramway," "Light Rapid Transit," "Subway-Surface System," "Semi Metro" and "Intermediate Capacity Rapid Transit."

[4] For a detailed description of an antecedent approach see Henry D. Quinby, "A New Concept in Transit," *Traffic Quarterly*, April 1962.

[5] In July 1959, the former Metropolitan Transit Authority of Boston inaugurated rapid tramway service on 9.4 miles of discontinued diesel railroad line which was converted to electrified, signal-protected operation for a turnkey cost of $6,994,000.

A necessary adjunct to any safe and efficient urban rail operation is a train control system. Again, the requirements for tramways are less burdensome than those of full-fledged rapid transit. Lower maximum speeds (ca. 50 mph vs. 75 mph) and higher braking power made possible by shorter and lighter-weight trains reduce the structure of essential safeguards. Sectional division of lines into protective "blocks" demarcated by train actuated wayside signals is a minimal requirement, but automatic train control, overriding train stop or on-board signal indicators are superfluous under normal circumstances. Obviously the performance and capacity of any system has a direct relationship to the extent that these latter devices are employed, but route segregation is the principal factor permitting multiple-unit train operation and point-to-point speeds substantialy higher than rush-hour general traffic. Less pronounced is the degree of improvement over the tramway provided by rapid transit with its more complex and costly safety equipment.

Aside from roadway and track the largest segment of capital required for rapid transit fixed facilities is ordinarily allocated to stations. In rapid tramway development this figure can be materially reduced. Vertical dimensions for platforms can be selected from a range of options. Those designed to be level with car floors obviate steps and thereby reduce station dwell time. This is important at high loading points, but in outlying areas of lighter traffic density they can be lowered, and requirements for stairways, structural members, and foundations are correspondingly reduced. Variations in height within the same system have been made feasible by a car-mounted device—utilized by several European transit systems—which enables the operator to adjust the number of exposed boarding steps from station to station. Typically close operating headways minimize passenger waiting, and the need for elaborate shelters is also eliminated.

Cost characteristics of rapid tramway vehicles correspond to those of the system's fixed facilities. They offer a lower, narrower configuration and carry less undercarriage gear than standard rapid transit rolling stock. This results in less weight per unit of linear dimension, and propulsion requirements are correspondingly reduced. Traffic-inducing performance levels can thereby be achieved at relatively lower first cost and with less power consumption. At the same time, standard production tramcars display acceleration and braking potentials corresponding to maximum levels of rider acceptability. Their movement is also as free of vertical and lateral vibration as the most advanced high-capacity vehicles.

*A Promising Approach to Integrated Mass Transportation.* An important characteristic of the rapid tramway is close station spacing within the CBD. Subway designs for five European systems call for an average of 1,500 to 2,000 feet between stops. This intense coverage exists only in sectors of highest population density. Station intervals lengthen as distance from the CBD increases until a typical suburban surface running pattern will call for spacing of 2,300 to 3,300 feet. In no instance is the central area of any city—irrespective of its size—to be served by a single line. However, the universal *modus operandi* is to construct and open for service one tunnel (or only a portion thereof) at such a time as moneys are periodically appropriated. This provides, at the earliest possible moment, an incentive to sustain the patronage of regular riders as well as a tangible demonstration of the potential worth of a well-planned public transportation system. Beyond the core area a previously described advantage obtains: The lower cost of right-of-way construction permits the development of more and/or longer routes for each dollar of available capital, and greater geographical coverage is effectuated than is possible with totally segregated rapid transit.

The concert of these two features offers an attractive level of convenience to most population strata of a metropolitan area. In the CBD, pedestrian travel from a tramway stop to any destination can be a practical reality. In peripheral areas walking becomes feasible for a greater proportion of the population, while accessory transportation by private or public means can be quicker and more convenient. But the principal virtue lies in combining the speed and reliability of rapid transit with the convenience of the bus to achieve a genuinely integrated public transportation system performing three essential functions of collection, line haul, and distribution. The boon of this concept is the reduction in passenger-transferring, a task ranging from inconvenient to onerous. The only auxiliary requirement is a thin network of feeder bus routes. For example, upon completion of projected tramway tunneling in Cologne, Germany (population: 1,400,000), the CBD of approximately 1.7 square miles will be served by surface transit (buses) operating on only one street.

*A Capability for Upgrading to the Highest Levels of Automation and Passenger Capacity.* Events in Europe make clear that development of the rapid tramway does not require an irrevocable commitment to this technology. To the contrary, it can be—and is frequently—a preliminary step toward the implementation of conventional rapid transit. Permanent way structures, such as track, tunnels, and stations can be so constructed to serve ultimately as maximum capacity facilities merely by the introduction of faster and more capacious rolling stock. The inverted "T"-shape design of the continuously welded running rails for the precedent-breaking San Francisco Bay Area Rapid Transit is virtually identical with those of tramway systems operating on the Continent. Other devices, such as centralized, automated train monitoring and control can be added in a building block pattern. Requisite segregation of the right-of-way can be achieved by a staged procedure. Surface routes can be depressed, elevated, or tunneled in segments where the needs are greatest, and the gradual conversion will further enhance the pre-existing service. Several systems currently in construction or operation are designated "Pre-Metro," signifying that the initial service is only preliminary to a metropolitan railway, the European term for full-scale rapid transit.

THE EUROPEAN EXPERIENCE

Table I is a list of European cities where rapid tramway systems are either planned, under construction, or in operation. While this demonstrates a widespread adoption of the technology, it is worthwhile to examine five differing situations in some detail. Populations of the cities to be discussed are indicated in the table.

*Gothenburg, Sweden.* This industrial and maritime center is the second largest city in this prosperous Scandinavian nation. It is served by a public transportation network of 65 route-miles of tramway and 152 of bus. The rail system, 65 percent of which lies in reserved rights-of-way, carries 70 percent of the annual passenger volume. Only two of the 33 bus lines pass through the CBD; the function of the latter mode is principally oriented toward tramway feeder service. The predominance of rail transportation cannot be attributed to a paucity of motor vehicles or to a captive mass transit market. A total of 123,000 vehicles are registered in the city, and the ratio of 4.0 persons per passenger car compares with a 3.5 average for the ten largest cities of the United States.

The tramway network has been gradually expanded since World War II, and plans call for an additional eight percent increase in mileage over the next five years. The delivery this year of 60 new units will expand the rail car fleet by 16 percent. A notable landmark was the opening late last year of a 5.1-mile line constructed on the roadbed of an abandoned railroad. Trains have a start-to-stop schedule of exactly ten minutes for the entire route, including discharge and pickup at an intermediate station. This service will be performed by regeared conventional vehicles in trains of up to four cars with a total seating and standing capacity of 496 passengers. They will be operated by a single employee.

*Rotterdam, Netherlands.* Intensive destruction of the CBD during World War II enabled planners to execute a thorough restructuring of its traffic arteries. The principal boulevards are sufficiently wide to accommodate six lanes of automobile and commercial traffic, motor/bicycle lanes, wide sidewalks, two or three tramway tracks, commodious loading platforms as well as extensive landscaping between transit stops. This has resulted in the placement of 49 percent of the tramway system—totaling 52 line-miles—in reserved rights-of-way.

In early 1968, service was inaugurated on an impressive, high-capacity (35,000 passengers/hour/direction) double-track rapid transit line. Approximately one-half of the 3.6-mile route lies underground and the balance on a reinforced concrete aerial structure. The total cost, excluding rolling stock: $61.5 million. Since then two new rapid tramway lines have opened. One acts largely as a suburban feeder to the rapid transit. Eighty percent of the six-mile lateral line is new and situated on separated right-of-way. Rail underpasses avoid several active intersections. A half-mile branch is under construction, and the remaining 20 percent will be relocated away from general traffic. The other line is a radial extension of a route originating in the CBD, entirely separated from other traffic. This was accomplished most noticeably by a 3,000-foot viaduct spanning a canal and other intercity transportation facilities. The line totals five miles of single track and cost $4,760,000. Passenger traffic has increased 12 percent over that of the bus line which was replaced. These two capital projects are an indication that rapid tramway technology is not confined to the role of substituting for pre-existing street railway operations.

*Brussels, Belgium.* Over 950 streetcars and half as many buses provide frequent but slow transit service in this capital city. Since its origins as a center of commercial activity can be traced back nearly a thousand years, most downtown streets are narrow and ill-suited for a full range of transportation modes. As the initial step of a comprehensive program for improving public transportation which will extend over two decades, the first section of a contemplated 36-mile metropolitan railway system was opened in December, 1968. The "cornerstone" is a subway 2.2 miles in length which serves in a pre-metro phase as a funnel for several surface lines radiating at both ends. Fifty of the newest streetcars have been equipped with high-speed, overhead current collectors and automatic train stop devices to override driver failure. Another fifty-five 173-passenger vehicles are on order. A second tunnel approximately two miles long is scheduled to begin analogous service toward the end of this year.

It is interesting to note that full-scale rapid transit rolling stock was to have been ordered late last year, but available funds under a national program affecting the five largest Belgian cities were redirected to initiate the construction of a tram subway system in Antwerp. Tramcars will, therefore, serve the Brussels subway system for an indefinite period of time. When these vehicles are eventually phased out, they will be as-

signed to a planned network of 42 miles of rapid tramway—including a mile of subway—largely in peripheral areas.

*Cologne, Germany.* Encompassing 210 square miles, this metropolitan center has been enhanced by the development of a prime example of the rapid tramway concept. Subway construction was initiated in 1963, and the first section of 4,600 feet was opened in the spring of 1968. A second section of 5,300 feet, intersecting the first, began revenue service in October, 1969. The third, extending operations another 4,000 feet, will be brought "on stream" late this year, and it is anticipated that by 1974 approximately six miles of tramline will be located in tunnels or on aerial structures. Arithmetic projections are simplified by a straightforward capital program: By a ratio of 50%–30%–20%, respectively, the federal, land (state), and municipal governments will contribute $16,000,000 annually for the construction of approximately 1.3 miles of double-track subway. Ultimately, 15 percent of the total system will lie underground. The present 186-mile network of surface routes, two-thirds of which lie in reserved zones, is in the gradual process of extension and upgrading by relocation in underpasses or on viaducts.

Five tramlines operate in the present subway sections. At the temporary underground terminal for all routes, the operators of each vehicle manipulates a wayside control before starting on his run. This device not only operates all track switches and signals to guide and protect the vehicle along its assigned route, but it also actuates highly visible signs over all subway platforms to display the route number and destination of the approaching car.[6] When the temporary terminal is nullified by the opening of the next tunnel section, this function will be taken over by a central dispatcher who can presently monitor the exact location and direction of every train. As is the case with many European systems, all tramcars are equipped with on-board automatic fare collection devices, public address systems, and two-way radios.

*Bonn, Germany.* The status of public transportation in this seat of federal government is particularly relevant to a large stratum of urban areas in the United States. On August 1, 1969, by political annexation of surrounding communities the city expanded its population from 144,000 to approximately 300,000. It is now comparable to Omaha, Nebraska, which is forty-second in this country in the number of inhabitants. In addition to a handful of motor and trolley bus routes the area is served by a tramway system consisting of 31 miles of urban and suburban line and a fleet of 72 cars.

The significant fact is that in spite of its still modest size the city will open a three-mile subway this year which will remove most rail operations from the narrow streets of the CBD. A second tunnel branching from the first will complete the transition. The initial undertaking links the older city with the government quarter to the south. As the reunification of Germany has become more distant, an extensive office-building program and restructuring of the traffic system have been carried out in the new administrative district. The principal north-south artery has been upgraded in speed and capacity, and a reserved median strip provided for the tramline. Pedestrian access to several stations can only be gained by underground passageways which also serve as avenue crosswalks.

It is also important to note that capital projects have not been confined to improving existing rail operations. Nearly a mile of new line was opened in 1966; more than two miles are planned in connection with a new Rhine River bridge; and discussion has dealt with replacing a suburban bus route with rail service. Together, the various programs and undertakings initiated by Bonn demonstrate that rapid tramway technology has practical application for urban areas other than the largest metropolitan centers.

### POTENTIAL APPLICATION IN AMERICA

Undoubtedly the European milieu in which the rapid tramway has developed differs on many counts from that of the United States. Among other conditions, urban population densities are higher and private car ownership lower. These factors do not, however, negate the soundness of the rapid tramway concept and, in fact, encourage a thorough, practical appraisal of its applicability. Higher motor vehicle populations make grade-separated transit systems all the more compelling, while the increasing dispersion of our metropolitan areas militates against high-capacity, high-cost rapid transit.

What kinds of urban traffic corridors are suitable for rapid tramway application in the United States? While it lies across our border, Toronto, Canada, offers a valid example for larger population centers. The Toronto Transportation Commission, an unquestioned leader in accomplishing improvements in all modes of public transportation—including conventional rapid transit—plans to construct an eight-mile rapid tramway as a northeastward extension of the recently opened Bloor-Danforth subway. The line will run through medium-density residential areas and terminate at a future housing development for 40,000 residents. Commission planners observe that the tramway bridges a service gap between low-capacity buses and subways which do not become economical until patronage reaches 20,000 per hour. It is expected that the line will attract peak loads of 10,000 to 15,000 passengers per hour. If successful the line will be extended in a 35-mile circumferential loop around the northern and western portions of the metropolitan area.

For smaller cities the Regional Transportation Plan of Dayton, Ohio, is pertinent. It proposes a nine-mile "rapid transit" line in a corridor linking the two fastest growing suburban quadrants (northwest and southeast) with the CBD. While a conventional, high-platform subway or elevated facility is described as undesirable for the foreseeable future because of its high capital cost, the study looks with favor on a lightweight, semigrade separated system to serve as the "backbone" of public transportation for this metropolitan area of approximately 750,000 population.

### CONCLUSION

The need for more efficient and attractive urban transportation in America has never been greater, yet current trends suggest that the possibility of widespread improvement is remote. Sociological forces are impeding massive highway programs as well as the broad development of costly rail rapid transit systems. On the other hand, in spite of strenuous research effort the practical success of more technically advanced concepts remains elusive. Without doubt this nation is capable of establishing new transportation media which will markedly improve urban life, but the necessity to arrest a rapid and already profound deterioration is immediate.

Recent developments beyond our national boundaries suggest that the situation is not hopeless. Numerous European cities of varying size are meeting problems analogous to those in the United States with an evolutionary technology known as the rapid tramway. This concept displays the following characteristics which are essential to an antidote for our urban transportation malaise:

1. An independent physical plant of minimal unit cost and a capability for staged development which establish the plausibility of community acceptance.
2. Segregated rights-of-way in areas of potential traffic conflict and congestion to ensure speed, safety, and reliability.
3. Vehicles which are totally pollution-free today.
4. Versatility in operation and physical plant configuration making possible its exploitation as a fully integrated system for performing the roles of collection, line haul, and distribution.
5. Engineering and design which are not locked into a given technology.

Together these factors offer a promise of early improvement and a footing for more distant technological achievement.

[6] Radio transmitters carried on the rapid tramcars of Frankfurt, Germany, are preset at the start of a run to the assigned route number and automatically operate, in succession, the same wayside equipment by remote control.

TABLE I.—EUROPEAN RAPID TRAMWAY DEVELOPMENTS

| City | Population served | Current status [1] | Underground lines [2] | New extensions of surface lines [2] | Future role of metropolitan railways (heavy rapid transit) |
|---|---|---|---|---|---|
| Amsterdam | 854,000 | In operation | Plans not finalized | Plans not finalized | Plans not finalized. |
| Antwerp | 700,000 | do | Under construction | Long-range possibility | Conversion to Metro is only long-range goal. |
| Basle | 345,000 | do | do | Planned | Rapid tramway only. |
| Belgrade | 850,000 | do | do | | Long-range plans uncertain. |
| Bern | 210,000 | do | In operation | Planned | Rapid tramway only. |
| Bielefeld | 170,000 | Under construction | Under construction | | Do. |
| Bochum | 1,117,000 | In operation | Planned | Under construction | Planned integration with Ruhr Valley high-speed network. |
| | | | | Planned | |
| Bonn | 300,000 | do | Under construction | do | Rapid tramway only. |
| | | | Planned | | |
| Bremen | 596,000 | do | do | Planned | Long-range conversion plans. |
| Brussels | 1,090,000 | do | In operation | None | Conversion of urban lines but preservation of rapid tramway suburban feeders. |
| | | | Under construction | | |
| | | | Planned | | |
| Charleroi | 161,000 | Planned | do | None | Rapid tramway only. |
| Cologne | 1,400,000 | In operation | In operation | Planned | Do. |
| | | | Under construction | | |
| | | | Planned | | |

Footnotes at end of table.

TABLE I.—EUROPEAN RAPID TRAMWAY DEVELOPMENTS—Continued

| City | Population served | Current status [1] | Underground lines [2] | New extensions of surface lines [2] | Future role of metropolitan railways (heavy rapid transit) |
|---|---|---|---|---|---|
| Dortmund | 774,00 | In operation—continued | Planned—Continued | Planned | Planned integration with Ruhr Valley high-speed network. |
| Duisburg | 496,000 | do | do | do | Do. |
| Essen | 729,000 | do | In operation | | Do. |
| | | | Under construction | | |
| | | | Planned | | |
| Frankfurt | 1,100,000 | do | In operation | None | Hybrid Metro-Tramway plus rapid tramway. |
| | | | Under construction | | |
| | | | Planned | | |
| Geneva | 299,000 | Planned | do | | Rapid tramway only. |
| Ghent | 246,000 | do | do | | Do. |
| Gothenburg | 422,000 | In operation | None | Under construction | Do. |
| | | | | Planned | |
| The Hague | 685,000 | do | do | do | Do. |
| Hanover | 743,000 | do | Under construction | None | Do. |
| | | | Planned | | |
| Kosice | 102,000 | do | None | | Do. |
| Leipzig | 850,000 | do | Planned | | Do. |
| Leningrad | 3,300,000 | Planned | None | | Both systems will be employed. |
| Ludwigshafen | 173,000 | In operation | In operation | | Rapid tramway only. |
| | | | Planned | | |
| Mannheim | 330 | do | None | Planned | Do. |
| Milan | 1,583 | do | Favored but no specific plans | do | Conversion to Metro. |
| Oslo | 483 | do | In operation | | Long-range conversion plans. |
| Rome | 2,500 | do | Planned | Planned | Both systems will be employed. |
| Rotterdam | 897 | do | None | Under construction | Do. |
| Stuttgart | 870 | do | In operation | do | Rapid tramway only. |
| | | | Under construction | | |
| | | | Planned | | |
| Vienna | 1,780 | do | In operation | | Long-range conversion plans. |
| | | | Under construction | | |
| | | | Planned | | |

[1] This refers to segments of each transmit system.
[2] All stages are indicated.

SOURCES: Modern Tramway, Ian Allan, Ltd., Shepperton, Middlesex, England, vols. 26 (1963) and 29–32 (1966–69). Reynaert, P., A Consideration of Underground Urban Transport Systems: Metropolitan Railway, Underground Tramway or Motorbus Tunnels?, a paper presented to the 37th International Congress of the International Union of Public Transport, Barcelona, 1967. Statistics of Urban Public Transport, The International Union of Public Transport, Brussels, Belgium, 2d edition, 1968. Tchebotarev, E. V., Study of New Systems of Public Transport: Air Cushion Vehicles, Conveyor-Belts, Monorails, Ropeways, etc., a paper presented to the 38th International Congress of The International Union of Public Transport, London, 1969. Van Der Gragt, F., Europe's Greatest Tramway Network, Leiden, Netherlands, E. J. Brill, 1968.

## RETIREMENT OF NORMAN E. ROWLEY FROM SOIL CONSERVATION SERVICE

Mr. BELLMON. Mr. President, an Oklahoman who has gained a wide reputation as one of our State's most experienced and better known conservationists retired this month after 36 years of service with the Soil Conservation Service. I wish to join in the tributes that have been expressed in behalf of Norman E. Rowley, whose contributions as an educator and a dedicated promoter of wise soil and land use practices have earned him widespread respect and admiration.

Both his immediate superior, State Conservationist William L. Vaught, and State ASCS Director Harold Hunter have spoken highly of the work Mr. Rowley has done.

Mr. President, an article published recently by the Stillwater News-Press tells the story of Mr. Rowley's career. I ask unanimous consent that the article be printed in the RECORD in recognition of the accomplishments of this outstanding public servant.

There being no objection, the article was ordered to be printed in the RECORD, as follows:

NORMAN ROWLEY DUE RETIREMENT

Norman E. Rowley, one of Oklahoma's most experienced and well known conservationists, will retire from USDA's Soil Conservation Service on March 12, according to State Conservationist William L. Vaught.

Vaught stated in making the announcement that Rowley's leadership, imagination and his unusual abilities in dealing with people had won him the respect of conservationists and others throughout Oklahoma and the entire nation.

Rowley is state resource conservationist on the State SCS staff in Stillwater, a position he has held since 1954.

A Roger Mills County native, the conservationist received his B.S. degree in agricultural education from Oklahoma State University in 1930. Following graduation, he taught vocational agriculture at Rush Springs and Tuttle for five years.

Rowley launched his 36-year-long career with the Soil Conservation Service at Broken Arrow. He has served as a soil conservationist, regional training officer, technician in land utilization projects, administrator for 26 soil erosion Civilian Conservation Corps Camps, assistant state coordinator, and assistant state conservationist. In addition to Broken Arrow and Stillwater, Rowley has been stationed at Salina, Kansas; Fort Worth, Texas; and Hugo and Oklahoma City, Oklahoma.

In his present position as state resource conservationist, he has staff leadership for conservation planning, plant science and biological science technology, research needs, recreational developments, and liaison responsibility with the Agricultural Conservation Program section of the Agricultural Conservation and Stabilization Service.

The Soil Conservation Society of America named Rowley a fellow of the organization at its 25th annual meeting in the summer of 1970. An SCSA member for 24 years, he was president of the Stillwater chapter in 1963 and president of the Oklahoma Council of SCSA Chapters in 1967.

He is a member of Lions International, Oklahoma State University Alumni Association, and Alpha Gamma Rho social fraternity.

The Rowley's have two daughters—Mrs. M. B. (Joyce) Woolsey, Chicago, Illinois, and Mrs. Henry (Diane) Featherly, Oklahoma City.

## GOVERNOR OGILVIE'S MESSAGE ON CONSERVATION

Mr. PERCY. Mr. President, I invite the attention of Senators to the special message on conservation delivered to the Illinois General Assembly of Gov. Richard Ogilvie. Governor Ogilvie has launched a broad program for development of parks and recreation areas in the State. His message very appropriately points out that Illinois has 5.6 percent of the country's total population, but only one-half of 1 percent of the Nation's outdoor recreation lands. Illinois has devoted only 1.58 percent of its total land area to recreation purposes.

Through the Governor's program, however, the current budget request will allocate $20 million to park land acquisition. Seven new State parks have been opened and six more are named for development. To insure that valuable river valleys are preserved, proposed State legislation calls for a Scenic and Recreational Preserves Act to designate certain areas for protection against development that would damage their present qualities. The Governor has also called for new legislation to ban strip mining where reclamation is not possible and to toughen reclamation standards.

These State efforts are vitally important. They will not be enough, however. In my opinion, we must establish National Park Service areas within Illinois. Once these sites are authorized I shall do everything I can as the ranking minority member of the Interior Appropriations Subcommittee to see that they are appropriately funded.

I ask unanimous consent that Governor Ogilvie's message be printed in the RECORD.

There being no objection, the message was ordered to be printed in the RECORD as follows:

SPECIAL MESSAGE ON CONSERVATION, RICHARD B. OGILVIE, GOVERNOR OF ILLINOIS, TO THE 77TH GENERAL ASSEMBLY, FRIDAY, FEBRUARY 26, 1971

Nick slipped off his pack and lay down in the shade. He lay on his back and looked up into the pine trees. His neck and back and the small of his back rested as he

stretched. The earth felt good against his back. He looked up at the sky, through the branches, and then shut his eyes. He opened them and looked up again. There was a wind high up in the branches. He shut his eyes again and went to sleep.—HEMINGWAY, *Big Two-Hearted River*.

Nick Adams knew the feel of an outdoor moment. For him it was easy. He put on his pack and he walked and he was there.

For us, it is increasingly difficult. Our open spaces are too few and too far away. Their value is too often forgotten—even as we automate and computerize, adding hours of leisure to each week.

Two years ago, I pledged to protect our open spaces and to provide land for our leisure. Much has been accomplished. We are no longer quitclaiming our open spaces by inaction and neglect. But much remains to be done.

It is, therefore, with urgency and some pride that I present to the General Assembly this message on the Administration's conservation program.

Only the state can provide the parks and open spaces our people need as we become increasingly urbanized. The counties and the cities are limited by geography. The federal government is limited to sites of national or historic interest.

For too long in Illinois, however, the state's critical role was neglected. The state failed to keep pace with the increasing needs and it failed to maintain existing parks. Almost at random, roads were built, rivers were dammed and streams were channelized. The public interest in open space was not protected.

Even if a governor had the fiscal means and wanted to do something for the state's park system, the only information he had was occasional and limited. He had no professional assessment of the needs and the resources necessary to meet those needs. Parks were acquired by political accident, not by professional plan.

As a result, Illinois parks deteriorated both in quantity and in quality. While the population grew and became more urbanized, the parks grew smaller and more rural. For ten years, the parks acquired by Illinois were small parcels that would have made nice county parks. Lakes were built, and a few local sportsmen were able to fish closer to home. Only one major acquisition was completed, and that was a strip-mine in Southern Illinois that will be difficult to develop into a usable park.

Meanwhile, near the growing population centers, available open space was blotted out by concrete and lookalike homes. What few parks were available were neglected.

By 1969, Starved Rock State Park, one of the few state parks within 100 miles of the state's most populous area, and fallen into ruin. Roads, trails, and campsites were crumbling. The legendary rock—which commands the Illinois River and the meadow where Pere Marquette celebrated the first Mass in Illinois—had become almost inaccessible.

Our state, one of the nation's leaders in virtually every significant social and economic index, ranked dead last in the number of park acres per capita. Although we had about 5.6 per cent of the total population, we had only one-half of one per cent of the nation's outdoor recreation lands. While the nation as a whole devoted 12.2 per cent of its land to recreation, Illinois dedicated only 1.58 per cent.

Also contributing to the need for immediate action were the backward geography of the existing parks and the rapidly increasing cost of vacant land. What few parks we did have were unreachable. Six million Cook County residents had their choice of three parks—Illinois Beach, Chain O'Lakes, and McHenry Dam, with 3,435 acres—while 121,000 residents of six rural counties could choose from five parks with 3,763 acres.

The number of city and suburban residents was growing. Across the state, nearly 96 per cent of our population growth was being registered in our urban areas, and more than 80 per cent of our people lived in these areas. More of their time was devoted to leisure and recreation. When compared with national averages, Illinois' urban residents were younger, had greater disposable income, and worked in occupations which permitted more leisure.

While the leisure hours grew, the cost of a place to enjoy them was soaring. Any open space is a prize to be protected. But in our urban areas, the protection becomes more difficult. Increasing at an annual rate of seven per cent, the value of land now doubles every ten years. In most areas, the pace is even quicker. Farmland on the urban fringe can be expected to increase in value by 10 to 15 per cent each year, pushing up the cost of park acquisition 100 per cent in only seven years.

Faced with these facts, our job was clear. We undertook the most aggressive park land acquisition program in the nation. We multiplied our efforts to develop and maintain our parks. And we professionalized the management of Illinois' natural resources.

LAND ACQUISITION

In the first full fiscal year of my administration, we spent $14.2 million for park acquisition. In the current year we will spend $18.1 million for parks. In the next budget, we will present another request for more than $20 million to continue our acquisition program.

These investments in the environment constitute the most aggressive land acquisition program ever undertaken in Illinois, or in any other state. As of today, we have added 41,456 acres to the state's park system, an increase of more than 85 per cent, in two years. The $20 million in the 1972 budget will allow acquisition of another 17,000 acres.

Through this program we are bringing parks closer to the people. We are expanding recreational opportunities, and protecting important ecological phenomena.

Until we began, the areas with the highest population had the fewest parks. A four-sided area stretching from Chicago to Danville to Springfield to Rockford had more than 80 per cent of the population, but less than 22 per cent of the park acreage. Of the 41,000 acres we have acquired, more than half are within a two-hour drive of metropolitan Chicago.

To relieve the congestion that was destroying Starved Rock State Park, we purchased 2,200 nearby acres along the Illinois River. This additional acreage provides a total of 8,000 acres for camping, hiking and boating. The acquisition will further protect the scenic beauty of the Illinois River.

Lake DePue in Bureau County will provide excellent boating, hunting and fishing immediately adjacent to Interstate 80 and close to several population centers.

The acquisition of the Silver Springs State Park, a 1,314-acre tract in Kendall County, will also add to the open space in Northern Illinois. The existing facilities in this beautiful area along the lower Fox allowed us to open the park for daytime use and nature study without extensive development. This park has already become an environmental classroom for schoolchildren.

We are nearly doubling the state-owned shoreline of Lake Michigan, adding 2.7 more miles of precious lakefront at Illinois Beach State Park, the state's most heavily used park. We now have six miles of beach and dunes along the lakeshore there. Another 248 acres will be added to Illinois Beach when the National Guard vacates Camp Logan.

At Chain O'Lakes State Park, we are adding 2,000 acres to the existing park and conservation area, increasing the total available land up to 6,700 acres, including the state's largest camping facility. These new acres will add new fishing ponds and will protect against overcrowding this popular park.

We have also protected important ecological phenomena from the bulldozer. In 1969, the only virgin prairie left in the Midwest was in danger of becoming an industrial park. Now it is a state park. The acquisition of Goose Lake Prairie will give succeeding generations a look at the grassy swales that once prevailed in many areas. In the coming months, we will be acquiring additional land around the prairie to accommodate the many visitors expected at this remarkable site.

In the Castle Rock area, picturesque formations on the upper Rock River were similarly endangered. These also were acquired. Although immediate development is not necessary, inaction would have made subsequent development impossible.

Near McHenry, we are acquiring Lake Defiance, an unspoiled 90-acre glacial lake containing a rare leatherleaf bog and several natural marshes which provide excellent wildlife habitat and spawning ground for northern pike. We also acquired enough land around the Volo Bog to protect the state's only mature tamarack forest, as well as the unique Wilson and Brandenburg bogs.

With the help of the special concern of this Assembly and the federal government, most of the Edgewater site in Chicago was saved from the developers. This is the most significant state contribution in history to open space in the city itself.

Other acquisitions have made small existing parcels into viable parks or added to our inventory for future development. In McLean County we added 843 acres to a county conservation area to allow development as a modern, multi-purpose state park.

In Calhoun County, we acquired 1,231 acres of frontage on the Mississippi River. The recent acquisition of additional property at nearby Pere Marquette State Park makes immediate development of this new land unnecessary, but it is an excellent investment in the future, near the growing population of the Metro East area. After years of public demand, Horseshoe Lake in the heart of the Madison-St. Clair population center is finally being acquired and developed.

In Southern Illinois, we are making a special effort to realize the potential of the great reservoirs of Carlyle, Rend Lake and Shelbyville. Development of parks and recreation facilities along their shores will provide access which multiples the opportunity to explore and enjoy these great, unfolding lakes.

These examples demonstrate the kind of investments we are making to expand recreational opportunities for the people of Illinois. We have added more park land in the last two years than the state acquired in the previous 12 years. At a time when our people see their great natural environment deteriorating around them, there is no more far-sighted investment we can make.

DEVELOPMENT AND PLANNING

Already we have opened seven new state parks. Next month, we will request an appropriation that will allow us to open six more.

At the same time, we have been expanding and rebuilding the facilities at existing parks. Long neglect made immediate action essential to preserve and restore our existing properties.

In undertaking these projects we have employed planning that will produce maximum benefit to the people of Illinois. Development alternatives are now evaluated by a planning staff trained to obtain a maximum recreation return on the investment in land.

Traditionally, the plans developed by the state have too often been based on the needs of the people *managing* the parks rather than

on the needs of those *using* the parks. We will not permit that to happen any more in Illinois. I have ordered the planning staff in the Department of Conservation to anticipate public recreation needs and to plan our development program to meet them.

The University of Illinois is now developing for the department a comprehensive, long-range plan for acquisition and development of state parks. Detailed data on park use, land prices and population density are being gathered and analyzed. From this base we will be able to make the decisions that will protect our open spaces for generations to come.

The most immediate needs are already being met. At Starved Rock, for example, the roads, trails, picnic areas and camping facilities will be rebuilt by the time the summer season opens.

In other parks, more than 2,800 new hard-surface camping pads have been installed to meet the increasing demands of campers. New roads have been built at 18 state parks and conservation areas. Sewage treatment plants have been completed at two major parks, and another five are under design. Modern toilet facilities are under construction in 18 parks.

More far-reaching developments are also proceeding. A new dam was recently completed at Morrison-Rockwood State Park to provide another fishing lake, and another dam is under construction at Sam Parr State Park.

Early development at the massive Carlyle Reservoir is already under way, including camping, boating and picnic facilities. Similar development will begin this spring at two other reservoir sites—Shelbyville and Rend Lake. We have also added more than 4,000 acres of wildlife habitat in the waterfall areas below various dams.

In the coming year, new facilities will be installed at seven new parks, including a new dam and lake in DeKalb County, an interpretive education building at Goose Lake Prairie, and new campgrounds and picnic facilities at Silver Springs. At ten existing parks, we will repair roads that were built in the 1930s and which are so impassable during spring thaws that the parks must be closed. Campground improvements will be installed at six parks. Development will continue at the three large federal reservoirs, including boating and campground facilities.

PROFESSIONAL STAFFING

Additional acres and vigorous plans are not enough. To complete the job of protecting our open spaces, we also need a dedicated, professional staff. In two years, we have established new positions and new standards which will guarantee protection for our natural resources.

Our superintendent of parks is a professional park administrator. He has hired 11 district managers, all with bachelor of science degrees in forestry, landscape architecture or an allied field. All have at least three years experience in park management. New standards have also been established for park rangers, the men in charge of each park's operations.

Our planning staff is equally qualified. Its dedication is to the future and its talent will allow us to obtain maximum benefit for our land acquisition dollar.

LEGISLATION

From this Assembly we will request enactment of the appropriations necessary to carry out this program. In addition, I propose the following legislation to complement the state's acquisition efforts.

*1. Preservation of scenic and recreational areas*

We cannot preserve all of our important open areas by a state acquisition program. The job is too big; there are not enough funds to do it all at once.

But we can act now to prevent exploitation of remaining scenic and recreational areas of Illinois. I propose that we start this year by enacting a Scenic and Recreational Preserves Act, in which this Assembly designates certain scenic and recreational river valleys and prohibits further development damaging their present qualities. Other states have done this successfully, and recent court decisions have upheld this exercise of the police power for the benefit of future generations.

The designation of extensive areas for preservation requires the sort of policy determination that should be made by this Legislature, as contemplated by the law I propose. The act will also vest the Department of Conservation with authority to administer the restrictions on development, under standards set by the Legislature.

On the advice of the Department of Conservation, I recommend that we begin with the still-scenic reaches of the Fox, Embarass, Apple, Rock, Kankakee, Mackinaw, Lusk and Spoon rivers. I also recommend that the historic Illinois and Michigan Canal be preserved as a unique resource for hiking, boating and bicycling.

*2. Authority to take scenic easements*

Preservation of scenic and historical qualities and prohibition of the development of open lands can be accomplished in many cases by taking easements which control less than full, fee-simple ownership of the land.

The extent of the state's authority to acquire such easements is presently unclear. This authority should be clarified and expanded, and the Department of Conservation should be given power to take easements by condemnation, just as it has power of condemnation to take fee ownership.

*3. Stronger strip mine reclamation*

The state's and the public's concern with strip mining is natural and compelling. We are increasingly aware of the extensive acreage in Illinois that is scarred with unnatural ridges and denuded slopes—a bleak and barren land. Trees cut. Shrubs and grass stripped. Topsoil scraped away. Flooding aggravated by the run-off. Mine acids which sour streams and ground waters.

It is true that most of this unsightly landscape was exploited and despoiled before Illinois enacted legislation to require reclamation. But in our determination to improve the environment and to insist on better care and use of the land, we must reexamine and improve our program of regulation to secure maximum practical enhancement of reclaimed areas for agriculture, forestry, wildlife habitat and recreation.

If we do not arrive at an improved program of strip mine regulation and reclamation—practical and enforceable—then we would face the alternative of banning surface mining altogether—an alternative being pressed seriously in other states.

I am therefore proposing strip mine reforms. They will ensure that stripped land is returned to productive use. New legislation would eliminate forever creation of incurable scars on our land by providing power to ban strip mining entirely in areas where satisfactory reclamation is impossible. It would also toughen land reclamation standards, requiring restoration of natural topography and retrieval of original value.

We can all share a measure of pride in what we have accomplished in the past two years. We turned from neglect to action—action that someday will help our children feel the thrill and know the renewal that Nick Adams found.

When we take the journey to nature, each of us, with Thoreau, may "step to the music which he hears, however measured or far away." But to preserve that opportunity for individual self-renewal through nature, we must joint together and act now.

I hope you will join with me to sustain the momentum we have started and to achieve the new initiatives which I propose.

## THE GYPSY MOTH

Mr. BYRD of West Virginia. Mr. President, the hardwood forests of West Virginia and nearby States are in grave danger from the gypsy moth, an insect that strips hardwood trees of their leaves.

Mr. President, this harmful insect was imported into Massachusetts in the 1800's. The moth, being in a climate colder than its native home, was slow to reproduce. However, the insect did adapt to the northern climate and soon became a villain to hardwood forests. By the time the insect had become economically damaging, lead arsenate was in widespread use as a pesticide and was effective in controlling the moth. But this solution was to be short-lived. Labor costs increased and the moth began to show signs of immunity to the pesticide.

The next weapon that came into use was DDT, and the control goal became one of eradication. DDT proved so effective that the insect was eradicated from New Jersey in the mid-1950's and it was thought that the moth would be driven into the ocean.

Then came the public controversy over the use of DDT and its dangers to the environment. When the aerial spraying of DDT was discontinued, the gypsy moth again proliferated.

To date, no truly effective and safe insecticide has been found to combat this insidious threat to our forests.

As the moth moves southward, it more nearly approaches the climatic conditions of its native home. The increased activity that can be expected of the insect in a warmer climate could spell disaster for West Virginia's hardwood forests. Many of our trees are in poor vigor anyway, due to drought and other conditions; and a single defoliation, resulting from the moth, could result in the death of the hardwoods.

Mr. President, the research and control dealing with this problem are split between the Agricultural Research Service and the U.S. Forest Service. These agencies have jointly developed a 5-year research program that should provide the solution to the control problem. The proposed program could be implemented for $825,000 a year for 5 years. Planning would require $425,000 for the first year, including $275,000 for the Forest Service and $150,000 for the ARS. The second year, an additional $400,000 would be added to make up the total of $825,000. This would be needed for 3 additional years and would be split on the basis of $550,000 for the Forest Service and $275,000 for the ARS.

To the great disappointment of all of us who are greatly concerned about this threat to our hardwood forests, budget officials have chosen to delete any requests in the fiscal year 1972 budget for this vital research program.

We cannot sit back and invite a disaster to the hardwood forests of the Eastern United States. Excellent laboratory facilities are available and the researchers of the ARS and the Forest Service are ready to embark on the task at a moment's notice. The 5-year crash research proposal is the product of over 2 years of preliminary thinking by the people who would ultimately handle the project. All are confident of success.

I plan to do all that is in my power to see that proper funding for this essential research is provided. I shall be alert to the need for appropriations in this direction when the pertinent bills are before the Appropriations Committee.

The amount of money needed for this project is negligible when compared with the devastating economic losses that will be incurred if the gypsy moth is allowed to attack our precious hardwood forests.

The gypsy moth is already out of control. The hands of the ARS and Forest Service are tied until the funds are made available. A response must come that will enable us to control this dangerous pest.

## ARMED FORCES DAY COMMUNICATIONS TESTS

Mr. GOLDWATER. Mr. President, because of my longstanding interest in amateur radio operations I should like to take this occasion to call the Senate's attention to the 1971 Armed Forces Day communications tests. Each year, Mr. President, on the third Saturday in May, the Department of Defense sponsors the observance of Armed Forces Day. As a part of this observance the Departments of the Army, Navy, and Air Force annually conduct communication tests designed to demonstrate to the world the close partnership and mutual respect enjoyed between U.S. amateur radio operators and the U.S. military. This year's program will be conducted on Saturday, May 15, 1971, and all licensed radio amateurs are encouraged to participate.

The radio amateur's contributions to communication training, international good will, military morale, and emergency services are recognized by every echelon of the military services. The Armed Forces Day communication tests are designed to be a tangible demonstration of the firm and longstanding Department of Defense policy to encourage and support amateur radio activity. On this 22d observance of Armed Forces Day, all radio amateurs are invited to participate and demonstrate to the world the close partnership and mutual respect that U.S. amateurs and U.S. military enjoy.

Once again this year, several military radio stations will participate in communication tests which include military-to-amateur crossband operations and receiving contests for both continuous wave—CW—and radioteletypewriter—RTTY—modes of operation.

Special QSL cards confirming crossband communications will be forwarded to those amateurs who establish two-way contact with participating military stations. Certificates will be awarded to those who aptly demonstrate their operating ability and technical skill by receiving a perfect copy of the Secretary of Defense originated "CW" and/or "RTTY" message transmitted during the receiving contest portion of the communication tests. Interception by short wave listeners—SWL—will not qualify for a QSL card in confirmation of crossband communications. However, anyone who has the equipment and abilities may copy the Secretary of Defense messages and receive a certificate.

### MILITARY-TO-AMATEUR CROSSBAND TEST

Military radio stations WAR, NSS, NPG, and AIR will be on the air from 15/1400 GMT to 16/0245 GMT. During this test of crossband operations, the military stations will transmit on specified military frequencies while amateur stations will transmit in the indicated portions of the amateur bands. Contacts will consist of a brief exchange of locations and signal reports. No traffic handling will be permitted.

| Station | Military frequency KHz unless otherwise noted | Emission | Appropriate amateur band (MHz) |
|---|---|---|---|
| WAR (Army Radio Washington, D.C.) | 4001.5 | CW | 3.5 – 3.8 |
| | 6997.5 | CW | 7.0 – 7.2 |
| | 14,405 | CW | 14.0 – 14.2 |
| NSS (Naval Communication Washington, D.C.) | 3385 | CW | 3.5 – 3.65 |
| | 4012.5 | RATT | 3.65– 3.8 |
| | 4040 | LSB | 3.8 – 4.0 |
| | 6970 | LSB | 7.2 – 7.25 |
| | [1] 7301 | CW | 7.1 – 7.2 |
| | 7380 | RATT | 7.0 – 7.2 |
| | 7385 | CW | 7.0 – 7.1 |
| | 13,827.5 | RATT | 14.0 – 14.1 |
| | 14,385 | USB | 14.2 – 14.35 |
| | 14,400 | CW | 14.0 – 14.2 |
| | [2] 21,500 | CW | 21.0 – 21.25 |
| | [3] 27,900 | USB | 28.5 – 29.7 |
| | [3] 49,692 | AM | 50.1 – 54.0 |
| | [3] 143,820 | AM | 144.0 –146.0 |
| NPG (Naval Communication Station, San Francisco, Calif.) | 4001.5 | LSB | 3.8– 4.0 |
| | 4005 | CW | 3.5– 3.65 |
| | 4016.5 | CW | 3.65–3.8 |
| | 6971.5 | CW | 7.0– 7.1 |
| | 7301.5 | LSB | 7.2– 7.3 |
| | 7365 | CW | 7.1– 7.2 |
| | 7347.5 | RATT | 7.0– 7.2 |
| | 13,922.5 | RATT | 14.0–14.1 |
| | 14,356 | LSB | 14.2 –14.275 |
| | 14,375 | CW | 14.1 –14.2 |
| | 14,389 | LSB | 14.275–14.35 |
| | 20,983 | CW | 21.0 –21.15 |
| | 21,475 | CW | 21.15 –21.25 |
| | 21,600 | LSB | 21.25 –21.45 |
| | [4] 143.700MHz | AM | 144 –148 |
| | [5] 148.410MHz | FM | 144 –148 |
| AIR (Air Force Radio, Washington, D.C.) | 4025 | LSB | 3.8 –4.0 |
| | 7305 | LSB | 7.2 –7.3 |
| | 7315 | CW | 7.0 –7.2 |
| | 13,995 | CW | 14.0 –14.2 |
| | 14,397 | USB | 14.2 –14.35 |
| | 20,994 | CW | 21.0 –21.1 |
| | [6] 143.950 MHz | AM | 144 –146 |

[1] To be operated from 15/1400 G.m.t. to 15/2200 G.m.t.
[2] To be operated from 15/2200 G.m.t. to 16/0245 G.m.t.
[3] Provided it is consistent with operational and training commitments, this frequency will be keyed from a U.S. Navy aircraft flying between Washington, D.C., and Maine, during the major portion of the time allotted for military to amateur crossband contacts. The call sign NSSAM will be utilized on the aircraft.
[4] Provided it is consistent with operational and training commitments, this frequency will be keyed from a U.S. Navy aircraft flying between San Diego, Calif., and Seattle Wash., during the major portion of the time allotted for military to amateur crossband contracts. The call sign NPGAM wil be utilized on the aircraft.
[5] To be operated from Mt. Diablo.
[6] Provided it is consistent with operational and training commitments, this frequency will be keyed from a U.S. Air Force aircraft flying between Virginia, and Maine, during the major portion of the time allotted for military to amateur crossband contacts.

### CW RECEIVING CONTEST

A "CW" receiving contest will be conducted for any person capable of copying International Morse Code at 25 words per minute. The "CW" broadcast will consist of a special Armed Forces Day message from the Secretary of Defense addressed to all radio amateurs and other participants. The schedule for this broadcast is as follows:

| Time | Transmitting station | Frequencies (KHz) |
|---|---|---|
| May 15, 1971: | | |
| 16/0300 G.m.t. | WAR—Army | 4001.5, 6997.5, 14,405. |
| 15/2300 EDST | NSS—Navy | 3385, 7385, 14,400 21,500. |
| 15/2000 PDST | NPG—Navy | 4005 6971.5, 14,375, 20,983. |
| | AIR—Air Force | 7305, 13,995. |

### RTTY RECEIVING CONTEST

A radioteletypewriter "RTTY" receiving contest will be conducted for any individual amateur or station possessing the required equipment. This is a test of the operator's technical skill in aligning and adjusting his equipment, and serves to demonstrate the growing number of amateurs becoming skilled in this method of rapid communications. The "RTTY" broadcast will consist of a special Armed Forces Day message from the Secretary of Defense to all radioteletypewriter enthusiasts. The message will be transmitted at 60 words per minute in accordance with the following schedule:

| Time | Transmitting station | Frequencies (KHz) |
|---|---|---|
| May 15, 1971: | | |
| 16/0335 G.m.t. | WAR—Army | 4001.5, 6997.5, 14,405. |
| 15/2335 EDST | NSS—Navy | 4012.5, 7380, 13,827.5. |
| 15/2035 PDST | NPG—Navy | 7347.5, 13,922.5. 21,600, 148.410 MHZ, FM. |
| | AIR—Air Force | 7305, 13,995. |

### SUBMISSION OF COMPETITION ENTRIES

Transcriptions should be submitted "as received." No attempt should be made to correct possible transmission errors.

Time, frequency, and call sign of the station copied as well as the name, call sign—if any—and address of the individual submitting the entry must be in-

dicated on the page containing the text. Each year a large number of perfect copies are received with insufficient information, thereby precluding the issuance of a certificate.

Completed entries should be submitted to the Armed Forces Day Contest: ATTN: Chief, Air Force MARS, Headquarters, U.S. Air Force (PRCOM), Washington, D.C. 20330, and postmarked no later than May 31, 1971.

## PENTAGON CONCEALS FACTS ON $3 BILLION ELECTRONIC BATTLEFIELD

Mr. PROXMIRE. Mr. President, the Pentagon is concealing essential facts regarding its expenditure of more than $3 billion on the electronic battlefield.

Recent Pentagon testimony before a Special Senate Armed Services Subcommittee, merely lifts a corner on the veil of secrecy which has surrounded this program from its inception.

The subcommittee, which is ably chaired by the Senator from Nevada (Mr. CANNON) concluded in a report released March 1, that $3.25 billion has been spent thus far on the program, which in its Southeast Asia application utilizes sensors, laser target designators, and a wide variety of data relay and processing devices to improve battlefield surveillance of enemy movements.

The Defense Department has concealed the facts concerning the overall costs, the intended future costs, and the present ineffectiveness of this program.

When I charged last summer that over $2 billion had already been spent on these then undefined electronic battlefield programs, I was accused of exaggeration. It now seems clear that my estimate was too conservative.

But even this new estimate of $3.25 billion may not include various Army research and Air Force munitions costs, or all the costs of supplying the South Vietnamese and other countries with electronic systems.

It admittedly does not include almost $700 million originally appropriated for electronic battlefield systems but later reprogramed by the Pentagon for totally unrelated work.

I am disappointed that the Pentagon failed to disclose more than barest outlines of its plans for developing new surveillance systems for application in other areas of the world.

One Pentagon witness speculated about the use of sensors for broader surveillance and the countering of large-scale enemy forces in Europe.

On which side of the border do we propose to deploy these sensors, at what cost in increased international tensions, and for what intelligence gains in this clearly nonjungle environment?

And do we really propose to turn the whole battlefield into a seismic or acoustic Christmas tree, at what costs both in sensors and data-processing gear, and at what risks if a central computer should suddenly break down or be eliminated by enemy attack?

I do not object to the pursuit of programs which increase battlefield intelligence of enemy tactics. But we must guard against mindless applications of new technology just because it exists, applications which have little or no chance of success.

I question the Pentagon's assertions that Southeast Asian applications of sensor technology have been uniformly successful. The McNamara Wall—a sensor and obstacle course barrier system along the DMZ—was abandoned as a failure soon after it was initiated.

And how about the alleged success of the Air Force sensor system, designed to impede, enemy supply shipments down the Ho Chi Minh trail through Laos?

The best indication of the effectiveness of this system would be proof that it has succeeded in reducing the movement and supplies from one end of the trail to the other. There is no concrete evidence of a reduced flow cited in Air Force testimony.

And why if this system has been so effective in disrupting enemy supply lines are we now engaged in the support of South Vietnamese ground operations designed to disrupt those same supply lines?

It is imperative to have close congressional scrutiny of future electronic battlefield expenditures.

While wartime conditions in Southeast Asia may perhaps have justified some of the secrecy and some of the trial and error experimentation which have characterized the initiation of this program, there is no reason whatsoever why we cannot now proceed far more visibly and far more cautiously in its continued development.

Mr. President, the special Armed Services Subcommittee established last summer to study the Defense Department's electronic battlefield program recently issued a report on the results of its investigation. That report, together with the hearing transcript on which it was based, at least lifts the corner on the veil of secrecy which has surrounded this program from its inception.

I am gratified that many of the basic facts surrounding this program have now been placed in the public record. Better information regarding the program was my primary objective when I raised it as an issue on the floor last year. Press reports had come to my attention indicating that up to $2 billion had already been invested in the program, despite the fact that few Members of Congress knew very much about it or were even aware of its existence. I did not want to prejudge the merits of the program. But I did feel it was high time, especially in light of claims that the program would ultimately revolutionize modern warfare, that the American people learned some basic facts about it.

What exactly was the program? How much had we actually spent upon it? How effective did it appear to be? What future applications were foreseen, where, by whom, and at what costs?

Thanks to the work of the distinguished Senator from Nevada (Mr. CANNON) and the other members of the special subcommittee, some of these questions can now be answered. They did a marvelous job of uncovering information and making it available to us.

Regretfully, however, I cannot myself share the great enthusiasm about the program reflected in the subcommittee's report. My own reading of that report and the hearing transcript leads me to the following conclusions:

That the electronic battlefield program is not so much a single program as a series of separate technologies and programs with a common objective, the instrumented or electronic battlefield of the future;

That not just $2 billion, but far in excess of $3 billion—more, in fact, than the subcommittee itself uncovered—has been spent to date in pursuit of this objective;

That while some of this money has been spent productively, even more has perhaps been wasted, especially the funds devoted to the Air Force anti-infiltration program, which itself should be the subject of further investigation;

That future program costs may be far more than the approximately $150 million per year estimated by the subcommittee; and

That both the Defense Department and the Congress face a major challenge in the years ahead in seeing to it that new electronic battlefield technologies and programs are managed and monitored effectively.

Let me now indicate in greater depth the facts on which these conclusions are based.

### THE SCOPE OF THE ELECTRONIC BATTLEFIELD PROGRAM

One of the obvious and uncontested facts now on the record is the fact that there is no electronic battlefield program as such. Instead, an instrumented or electronic battlefield is the ultimate objective of a series of separate technologies and programs with a common conceptual goal. That goal, expressed simply, is to "find and fix the enemy."

First. DCPG systems. One set of programs is the sensor-aided combat-surveillance systems developed in the past 5 years by the Defense Communications Planning Group—DCPG—an Office of the Secretary of Defense level organization which to date has had primary responsibility for our sensor-related activities. While its own staff and direct expenditures have been small, it has had the authority to require the military services to follow its directives and to set aside large portions of their individual budgets in support of its sensor programs.

The DCPG has developed several sensor-aided systems. All of them consist basically of the following components: detection devices, in the form of seismic or acoustic sensors, which pick up the movement of enemy vehicles or troops; communications links, usually radio, from the sensors to readout devices; the readout devices themselves, which receive sensor transmissions and

show when individual sensors are picking up potential targets; and various types of data handling equipment to assist in counting the targets and determining their direction and rate of movement.

The two most important systems developed by the DCPG are the ground tactical system of the Army and the air-supported anti-infiltration system of the Air Force, both now deployed in South Vietnam.

The former is used to protect our fire bases and other fixed-point installations from possible enemy attack. Sensors are ground emplaced along the often very limited access routes to these installations, and their activation serves as a warning of impending enemy actions.

The latter system is designed to monitor the movement of enemy trucks and supplies down the Ho Chi Minh trail in Laos. It is by far the more complicated of the two systems. Its sensors are air-delivered by specially equipped planes. Specially developed airplanes are used for data-relay purposes. Data interpretation is handled by a highly computerized ground facility operated by several hundreds of men, and special munitions have been developed for use against targets identified by the system.

Second. Individual service programs to date. DCPG-directed programs have been specifically designed to improve our sensor-aided combat system capabilities in Vietnam itself. Already, however, the services have been at work designing sensor programs of their own with worldwide applications. They have also been developing other kinds of technology designed to "find and fix the enemy." While the Navy has been relatively quiescent in this regard, the Army and the Air Force have been quite active.

ARMY

The Army, for example, has established a surveillance, target acquisition, and night observation—STANO—program, where it is working on such things as night vision systems, thermal imaging, and new kinds of radar, together with observation planes and helicopters incorporating these devices.

The Army is also concerned about its ability to integrate into useful information the increasing variety of data turned up by its new devices. As Army witnesses testified before the subcommittee, present Army information processing procedures are essentially manual in nature, with usable information reaching high level commanders only after it is hours old. To better enable it to accommodate the increasing information it expects to receive in the future, the Army is prepared to embark on the development of its integrated battlefield control system, its version of the electronic battlefield of the future.

Unfortunately, virtually all details regarding this new system have yet to appear on the public record. The subcommittee contended itself with public disclosure of the fact that this program "is presently in the concept formulation stage" and that several "ongoing programs for tactical automated data processing systems are to be integrated into the overall concept, such as TOS, TACFIRE, TSQ-73, and SAFOC." Even these ongoing programs, however, are referred to only by acronym. Not a word of explanation is publicly offered about them.

AIR FORCE

The Air Force, meanwhile, has itself been pursuing work on new kinds of detection devices, highly classified in nature, as well as work on the development of laser target designators, laser guided bombs, and other special types of munitions integral to its future surveillance programs.

It, too, is looking forward to worldwide application of its sensor systems. Deemed necessary for this are battery design improvements to allow operation in colder weather, the identification of a frequency band which will allow worldwide applications, new relay platforms less vulnerable to enemy action, protection in communications against the jamming techniques of more sophisticated enemy devices, and a variety of improved sensor-delivery and data-relay aircraft.

Such then in brief scope are the major technologies and programs designed to bring us to the age of the electronic battlefield. Many of them remain shrouded in secrecy, but at least their outlines are now on public record. Perhaps some inkling of their future potential and costs can be gathered from an analysis of present systems to date.

THE COST OF ELECTRIC BATTLEFIELD PROGRAMS TO DATE

When I charged last summer that over $2 billion had already been spent on these then undefined electronic battlefield programs, I was accused of exaggeration. It now seems clear that I was quite conservative, and that no one in Congress had the faintest idea of just how much we had invested in them. Let us examine the record on this score.

First. DCPG systems. These systems alone, as indicated in the tables below, taken from the subcommittee report, have consumed about $1.7 billion in tax dollars:

BUDGET DISTRIBUTION, BY SYSTEMS

[In million of dollars]

| | Fiscal years | | | | | 5-year total |
|---|---|---|---|---|---|---|
| | 1967 | 1968 | 1969 | 1970 | 1971 | |
| Conventional barrier system | 15.6 | 16.9 | 2.3 | 0.3 | 4.3 | 39.4 |
| Air-supported system | 137.4 | 182.4 | 175.6 | 92.4 | 118.8 | 706.6 |
| Ground tactical system | | 12.1 | 174.2 | 81.1 | 128.8 | 396.2 |
| Munitions | 177.0 | 212.6 | 59.6 | 39.2 | 50.0 | [1] 538.4 |
| Total | 330.0 | 424.0 | 411.7 | 213.0 | 301.9 | 1,680.6 |
| Budget distribution, by military service: | | | | | | |
| Army | 165.6 | 222.4 | 160.7 | 52.2 | 99.3 | 700.2 |
| Navy | 65.4 | 40.6 | 24.4 | 22.0 | 25.9 | 178.3 |
| Air Force | 91.7 | 138.6 | 210.1 | 124.3 | 161.0 | 25.77 |
| DCPG Headquarters | 7.3 | 22.4 | 16.5 | 14.5 | 15.7 | 76.4 |
| Total | 330.0 | 424.0 | 411.7 | 213.0 | 301.9 | 1,680.6 |
| Budget distribution, by appropriations category: | | | | | | |
| R.D.T. & E | 51.6 | 88.8 | 66.5 | 41.2 | 45.0 | 293.1 |
| Procurement | 250.2 | 300.2 | 301.6 | 117.3 | 203.7 | 1,173.0 |
| O. & M | 10.5 | 35.0 | 43.6 | 54.5 | 53.2 | 196.8 |
| MILCON | 17.7 | | | | | 17.7 |
| Total | 330.0 | 424.0 | 411.7 | 213.0 | 301.9 | 1,680.6 |

[1] Associated with the air-supported system.

In a very real sense, they have cost us even more. Originally, over $2 billion was appropriated for these systems. According to the subcommittee's report, however:

**As the program developed and more knowledge became available, it was possible for the DCPG to return $678 million of the $2.348 billion that was appropriated for the program.**

But where were these funds returned? Not to the taxpayers, one can rest assured. Instead these almost $700 million of DCPG-controlled funds in the services' budgets were given on a no-strings-attached basis to the services themselves, who programed them for work not requested in their original budgets.

Which leads one to a question asked repeatedly during the hearings by a subcommittee interrogator but unfortunately not followed up on in the hearing report:

**Why could these funds not have been retained by the DCPG and used to reduce its budget request for the following fiscal year instead of being returned outright to the services?**

That, of course, would have been the best way to pass these alleged savings to the taxpayer.

Second. Individual service programs. But this $1.7 billion—or $2.4 billion—in DCPG funds is only a part of total expenditures to date on electronic battlefield programs.

The subcommittee also uncovered an additional $1.1 billion of Army STANO expenditures, $450 million of Air Force expenditures, and $2 million of Navy funding as well, as indicated in the following table from its report.

ARMY—STANO FUNDING

[In millions of dollars]

| | 1967 | 1968 | 1969 | 1970 | 1971 | Total |
|---|---|---|---|---|---|---|
| R.D.T. & E: | | | | | | |
| Total | 72.0 | 102.4 | 78.2 | 49.9 | 44.0 | 346.5 |
| DCPG | (20.7) | (30.0) | (21.8) | (9.2) | (10.0) | (91.7) |
| PEMA: | | | | | | |
| Total | 305.7 | 422.8 | 337.0 | 159.9 | 172.2 | 1,397.6 |
| DCPG | (144.9) | (192.4) | (131.4) | (35.4) | (78.0) | (582.1) |
| OMA | | | | | | |
| Total | 0 | 6.9 | 7.5 | 11.2 | 17.5 | 43.1 |
| DCPG | 0 | 0 | (7.5) | (7.6) | (9.3) | (24.4) |
| Total | 377.7 | 532.1 | 422.7 | 221.0 | 233.7 | 1,787.2 |
| DCPG | (165.6) | (222.4) | (160.7) | (52.2) | (97.3) | (698.2) |
| Other than DCPG | | | | | | 1,089.0 |

Note: The figures for DCPG in parenthesis are a part of the total funds in the figure listed directly above each parenthetical figure.

AIR FORCE—NON-IGLOO WHITE SENSOR AND SENSOR-RELATED ITEM COSTS

[In millions of dollars]

| | Fiscal years | | | | | |
|---|---|---|---|---|---|---|
| | 1967 | 1968 | 1969 | 1970 | 1971 | Total |
| Tropic moon I, II, III (A-1E/B-57G) | 1.4 | 30.1 | 47.4 | 0.2 | | 79.1 |
| Laser target designator | 5.8 | 4.5 | 12.3 | 1.7 | | 24.3 |
| Laser, guided bomb | 2.1 | 6.1 | 25.7 | 23.7 | 42.2 | 99.8 |
| Gunships (AC-47/119/130) | 7.9 | 119.3 | 38.1 | 72.3 | | 237.6 |
| Black spot (C-123) | 7.8 | .6 | 1.0 | | | 9.4 |
| Total | 25.0 | 160.6 | 124.5 | 97.9 | 42.2 | 450.2 |

NAVY—REMOTE SENSOR PROGRAM FUNDING ALLOCATIONS

| | R.D.T. & E. | OPN |
|---|---|---|
| Fiscal year— | | |
| 1969 | [1] $600,000 | |
| 1970 | [2] 920,000 | [3] $560,000 |

[1] Riverine and special warfare.
[2] Riverine and special warfare (TSOR 38-17).
[3] Procurement of MIDS.

Note: Use of funds (planned).

Taken together, these programs yield total costs to date of $3.25 or $3.95 billion on electronic battlefield programs, depending on how one treats the almost $700 million of excess DCPG funds.

The subcommittee is to be congratulated for digging deep, finding these additional costs, and making them known to the Congress and the public.

But even these figures may not be complete. Perhaps answers to at least some of the following questions would yield additional costs which should justifiably be included in a record of those costs.

First. How much have we spent on TOS, TACFIRE, TSQ-73, and SAFOC, on-going programs ultimately to be incorporated into the integrated battlefield control system? These programs may not themselves produce additional surveillance data, but if they are needed to make adequate use of data produced by other programs they must be regarded as an integral part of our "find the enemy" programs.

Second. At present approximately 50 percent of the sensors in the ground tactical system in Vietnam are controlled by the South Vietnamese, and Navy and Air Force items are also being turned over to them. The subcommittee report indicates that the $301 million fiscal 1971 budget for the DCPG included support for the sensor requirements of the Vietnamese Armed Forces. What have been the total costs to date of equipping the South Vietnamese Government with ground and air sensor capabilities and other related technologies—not only the sensors themselves, but delivery, communications, readout and data processing capabilities, associated munitions, and STANO-type items—and if all of these costs have not been included in the fiscal 1971 and prior DCPG system budgets, where have they been funded?

Third. To what governments or other entities in addition to the South Vietnamese have sensor capabilities and related items been made available? What costs have these programs entailed and where have they been funded?

Fourth. I also wonder whether all separately funded Air Force surveillance expenditures have been included in reaching the $450 million Air Force total. The variety of special Air Force items referred to in the course of testimony by Air Force witnesses is almost mind-boggling, but let me raise two particular points:

On page 164 of the hearing transcript, there is a table covering several Air Force munitions, referred to in the text above the table as surveillance capability-related and exclusively Air Force funded. That table, reproduced below, shows munitions costs of almost $100 million.

[Dollars in millions]

| Munition | Procurement cost: Development cost | Procurement cost: Fiscal year | Procurement cost: Amount |
|---|---|---|---|
| CBU-24/49 | $1.32 | 1969 | $1.14 |
| CBU-46 | .7 | 1969 | 33.0 |
| CBU-52 | 1.263 | 1969 | 7.0 |
| CBU-38 | 1.3 | 1970 | 3.37 |
| CBU-58 | .25 | 1970 | 46.695 |

Have these costs been included in the table depicting $450 million in separate Air Force expenditures, and if so, in which of the five line items of that table?

(b) The transcript also refers from time-to-time to the specially-equipped squadron of F-4 aircraft used by the Air Force specifically for sensor deliveries and therefore an integral part of its surveillance operations. The cost of these aircraft is clearly not included in the table of $450 million in separate Air Force expenditures, and since the aircraft procurement funds of the Air Force DCPG budget are not broken down into specific aircraft buys, it is impossible to tell whether their cost is included there. What has been the cost of this squadron, and where was it funded?

Let me assure the distinguished Senator from Nevada (Mr. CANNON) that I ask these questions of him, as Chairman of the Subcommittee, not to disparage

his own investigation but because I strongly doubt, even after his fine work, that we have yet identified all our electronic battlefield program costs to date.

THE EFFECTIVENESS OF OUR PROGRAMS TO DATE

According to the subcommittee, our presently deployed systems have been highly effective and have made a major contribution to saving the lives of our troops in Vietnam.

My own feeling, Mr. President, is that we could best save lives—American and Asian—by bringing this tragic war to a prompt and complete conclusion as soon as possible and hopefully by the end of this year. But within the context of our present policies, which require a continued presence of our troops in Indochina—just how effective have these systems been in reducing allied casualties?

On this point I cannot share the highly optimistic conclusions of the subcommittee. It is a matter of public record that the "McNamara Wall"—a sensor and obstacle course barrier system along the DMZ—was abandoned as a failure soon after it was initiated. And on any fair reading of the hearing transcript, the effectiveness ratings given the Army's ground tactical and the Air Force's anti-infiltration systems would have to vary greatly.

The ground tactical system, the subcommittee concluded, has proved extremely valuable. Subject to doubts expressed below, I must admit in all candor that I accept this conclusion. The hearing transcript details many instances in which this system has made a major contribution to saving allied lives. Used defensively, to warn allied troops located at a given point of impending enemy attacks upon them, it indeed seems to have been effective. When the lives saved are considered, together with the equipment at various installations which might have been destroyed had the attacks succeeded, our expenditures on this system appear well worth the cost.

My lingering doubts concern the sensors' discrimination capabilities. The hearing transcript does indicate that considerable difficulty was encountered in the early days of sensor use in discriminating between enemy troop activity and activities of a very different kind—the falling of heavy rains, movements of birds and other animals, to say nothing of the difficulty of distinguishing between enemy troops and a group of woodcutters coming back down the trail. I was myself informed, in mail received last summer from a former Army lieutenant familiar with the sensor system, that on several occasions after heavy sensor activation the night before, morning patrols sent out in search of enemy bodies found dead water buffalo instead. The Army contends, and for the sake of argument I am willing to accept, that experience in sensor use led to a drastic reduction in the frequency of such false alarms—or nontargetable activations, as the Army prefers to call them. I would feel better, however, had more probing questions been asked about the technical reasons for this alleged improvement and also about the precautions taken to avoid targeting civilians, especially around areas such as the outskirts of Saigon, where their presence presumably could not always be ruled out.

But my verdict on the Air Force's anti-infiltration system is altogether different. This, I deeply fear, may have been a gigantic waste of money.

The purpose of this system has been to cut the flow of North Vietnamese supplies to its forces in the South. It follows that the single most effective criterion of the effectivenes of the system would be the changes it has effected in the movement of supplies.

But not once was the obvious question asked: Just what changes have occurred from year to year since the Air Force system was instituted—from one dry season to another and from one wet season to another—in the number of trucks which have made it from one end of the supply system to another?

The hearing transcript consumes reams of paper addressing the technological wonders of the new Air Force sensors, the relay aircraft, and associated munitions. But the really crucial issue was never faced directly, and when one interrogator at least managed to skirt it, by asking about the flow of supplies during one very short and recent period, the only answer allowed to stand on the public record was the following:

> Out of (deleted) trucks that he started with, he got (deleted) into South Vietnam.

It is high time that we got on the public record a concrete picture of what our interdiction campaigns in Laos over the past several years have actually accomplished, in terms of the clearly most relevant criterion—the movement of supplies over comparable periods from one end of the pipeline to the other.

And why, if this system has been so effective in disrupting enemy supply lines, are we now engaged in the support of South Vietnamese ground operations designed to disrupt these same supply lines. What I fear we might then see is that our bombing policies have in fact accomplished nothing—that the enemy has been able by simple changes in tactics to offset every increase in our bombing and truck destruction capability in such a way as to keep undiminished the same flow of supplies.

The tactics of the enemy are clear from the hearing transcript. He has multiplied the number of usable roads perhaps tenfold, as the maps on pages 109 and 110 clearly indicate. He has also multiplied greatly the number of trucks at his disposal:

> In 1967–68, we estimated trucks in the system to number around (deleted). Our latest intelligence estimate is almost (deleted) times that many, for a total of (deleted) trucks.

And he has also erected more numerous, heavier antiaircraft defenses.

I had hoped, Mr. President, that the effectiveness of our interdiction policy would have been explored by the subcommittee in considerably greater depth. I intend to address this issue separately in the near future.

THE FUTURE IMPLICATIONS OF THE ELECTRONIC BATTLEFIELD PROGRAM

For now, however, my point is only this. From all that we have on the public record, we have no way of knowing whether the Air Force system has been effective or not, whether it may not really be an object lesson of the dangers which must be guarded against as we develop the "electronic battlefield."

I do not object to the pursuit of programs and technologies which increase our ability to find and fix the enemy. I recognize that our battlefield intelligence of enemy tactics has always lagged behind our ability to bring our fire power to bear once he is found. Even large-scale expenditures would be justified for usable improvements in our surveillance capabilities.

But we must guard against mindless applications of new technology just because it exists, applications which have little or no chance of success.

That is why more information is needed about future "electronic battlefield" programs.

The Army's STANO and Integrated Battlefield Control Systems—IBCS—are now being developed, but only the broadest outlines of their nature and applications are suggested on the public record.

There is speculation in the hearing transcript about the use of sensors for border surveillance in Western Europe. On which side of the border do we propose to deploy these sensors, at what cost in increased international tensions, and for what intelligence gains in this clearly nonjungle environment?

There is speculation also about the use of advanced sensors to counter large forces on the battlefield in a full-scale conventional war. Do we really propose to turn the whole battlefield into a seismic or acoustic Christmas tree, at what costs both in sensors and data-processing gear, and at what risks if a central computer should suddenly break down?

I am even skeptical about the use of sensors in nonjungle environments for purely defensive purposes, similar to those of the ground tactical system in Vietnam. Areas remote from population will be more difficult to find in Europe, say, than Vietnam. The Army admits this problem and suggests a possible solution—adding to a seismic intrusion device unable to distinguish between friend and foe a magnetic device capable of picking up weapons or ammunition. But such a device would probably be similar to the magnetic detectors now used in airport passenger checks, which themselves cannot distinguish between different types of metal objects. At airports these limitations do not matter, but on the battlefield what of "woodcutters, coming back down the trail?"

The Air Force, meanwhile, has a 5-year development plan looking to its worldwide surveillance system of the future. Plans have not been made final, but one Air Force spokesman talked of a full-fledged hardware system, deployed in the United States under the direction of the Tactical Air Command, and capable of emergency deployment anywhere in the world.

Before large-scale expenditures on these programs can be justified, we will need more information on their nature and rationale. Many of the technical details will have to be kept classified, as is the case with all our programs. But

surely more public information is needed than we have now.

In its own discussion of the future costs of these programs, the subcommittee report is no doubt a vast underestimate. Its estimate of approximately $150 million per year is expressly not meant to include long-range program costs either of STANO, the Integrated Battlefield Control System, or the new Air Force system. If these programs ever generate large-scale production and operation requirements, the annual costs will significantly balloon.

But even over the near term, $150 million annually seems far too low an estimate. What it envisages is a drop in overall electronic battlefield program funding of approximately $330 million in fiscal 1972 from the fiscal 1971 funding of $480.5 million, a figure which itself fails to include the costs of TOS, TACFIRE, TSQ-73, and SAFOC programs identified to date by these acronyms only.

The only things included in the roughly $150 million estimate are Army IBCS/STANO costs of $125-$150 million, Air Force costs of $4 million, Marine Corps costs of less than $3 million, and Navy costs too negligible to mention. Consider these projections for a moment.

The Army IBCS/STANO costs conceivably might be accurate. In the past, however, the Army budget has not identified STANO programs as such, except in the R.D.T. & E. account. The subcommittee insisted on such an identification in the course of its recent hearings and in the process hundreds of millions in unsuspected costs turned up. I urge the Committee to make as vigilant and as insistent an examination of the fiscal 1972 budget as it has just made of past budgets.

The Air Force estimate of $4 million is clearly only an R.D.T. & E. estimate. On page 165 of the hearing transcript, the Air Force projected a total fiscal 1972 budget of [deleted] million, of which the $4 million was stated to be only a part.

Navy and Marine Corps expenditures have always been small, but fiscal 1971 costs of $21 million are considerably larger than the $3 million plus projection.

One perhaps significant difficulty which may exist in tracking fiscal 1972 funds is the apparently pending dissolution in June of this year of the DCPG. This organization, established in 1966 to coordinate "electronic battlefield" programs in the early years of their development, appears to be being phased out, with the individual services to run their own programs. Its activities, however, will continue and will have to be tracked in the fiscal 1972 budget.

It is for these reasons that I have doubts about the $150 million estimate.

In conclusion, Mr. President, I commend the Electronic Battlefield Subcommittee for the light it has shed on this undeniably complex area.

I hope that the Armed Services Committee will continue this work in the months ahead.

I hope that the committee will demand from the Pentagon and present to the Senate a clearer indication of what long-range "electronic battlefield" programs are pointing at, together with evidence that the services are proceeding cautiously and with sound planning procedures on these long-range programs.

I hope that it will satisfy itself and demonstrate to the Senate that the Defense Department, if the DCPG is to be dissolved, has established alternative coordination procedures both to avoid the present duplication in the development of service programs and to insure their use can be coordinated on any future battlefield.

I hope, also, that the committee will develop and present to the Senate a clearer picture of fiscal 1972 and also long-range funding on "electronic battlefield" programs. I see no reason why fiscal 1972 figures could not be broken out for each of the services into the R.D.T. & E., procurement, and O. & M. appropriations, with the specific program elements, hardware purchases, and the like, themselves very clearly indicated, except for legitimate classified items for which only costs were shown. Ball park estimates of long-term program costs for IBCS/STANO and the new Air Force system—showing perhaps a low range and a high range of what these costs could be—also should be possible.

The three actions I have just suggested are, in my opinion, consistent with and clearly required to implement the three sound recommendations of the subcommittee report.

While wartime conditions in Southeast Asia may perhaps have justified some of the secrecy and some of the trial and error experimentation which has characterized the initiation of this program, there is no reason whatsoever why we cannot now proceed far more visibly and far more cautiously in its continued development.

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## SOUTH DAKOTA HOUSE CONCURRENT RESOLUTIONS

Mr. McGOVERN. Mr. President, I ask unanimous consent that four house concurrent resolutions adopted by the 46th legislative session of the house of representatives of the South Dakota State Legislature be printed in the RECORD.

There being no objection, the concurrent resolutions were ordered to be printed in the RECORD, as follows:

HOUSE CONCURRENT RESOLUTION NO. 504

A concurrent resolution expressing the support of the Legislature of the State of South Dakota for a study by the United States Department of Health, Education and Welfare relative to the feasibility of developing an automobile fuel by blending gasoline with grain alcohol in order to reduce air pollution, which study was approved as an expression of legislative intent in the House debate on the Clean Air Act Amendments of 1970

Whereas, the major source of air pollution is from automobile exhausts, and our nation is aware of the urgent need to clear up and protect our environment; and

Whereas, we have an urgent need to use our greatest weapon for peace—our willingness to share our abundance with developing nations of the world—to fight hunger and malnutrition, and also the need to continue our efforts to fight hunger and malnutrition in our own country; and

Whereas, there is an urgent need to find new markets for wheat and other grain, and a possible answer to all three of the aforementioned problems is the substitution of grain alcohol for lead in gasoline fuel for automobiles:

Now, therefore, be it resolved, by the House of Representatives of the Forty-sixth Legislature of the state of South Dakota, the Senate concurring therein, that the Legislature of the state of South Dakota hereby urges the United States Department of Health, Education and Welfare to undertake such a study and expresses the hope that should a pilot demonstration project be involved in the study, that such project be located in the state of South Dakota as a major wheat producing state; and

Be it further resolved, that the Chief Clerk of the House of Representatives is hereby directed to transmit a copy of this Resolution to each member of the South Dakota congressional delegation and to the Secretary of Health, Education and Welfare.

Adopted by the House: February 23, 1971
Concurred in by the Senate: March 8, 1971

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HOUSE CONCURRENT RESOLUTION NO. 503

A concurrent resolution memorializing the Congress of the United States to appropriate the necessary funds and to direct the Weather Bureau in the United States Department of Commerce to set up a weather forecasting station in Miles City, Montana

Be it resolved by the House of Representatives of the State of South Dakota, the Senate concurring therein:

Whereas, during the past several years, ranchers in South Dakota have suffered severe economic losses through the loss of livestock during winter storms; and

Whereas, much of this loss may be related to a lack of adequate weather forecasting facilities within the area; and

Whereas, much of this livestock loss may have been avoided had adequate weather forecasting facilities been available within the area; and

Whereas, improved weather forecasting facilities and services would be of great benefit to the citizens of this area as well as travelers through the area; and

Whereas, the most feasible location for an adequate weather forecasting station for this area, is in Miles City, Montona:

Now, therefore be it resolved, by the House of Representatives of the Forty-Sixth Legislature of the state of South Dakota, the Senate concurring therein, that the Congress of the United States be respectfully urged and requested to appropriate the necessary funds and to direct the Weather Bureau in the United States Department of Commerce to set up an adequate weather forecasting station in Miles City, Montana; and

Be it further resolved, that copies of this concurrent resolution be transmitted by the Chief Clerk of the South Dakota House of Representatives to the chairman of the committee on commerce of the Senate of the United States, the chairman of the committee on interstate and foreign commerce of the House of Representatives of the United States, each member of the Congressional Delegations of the states of South Dakota, North Dakota, Montana and Wyoming, and to the Honorable Maurice H. Stans, Secretary of the United States Department of Commerce.

Adopted by the House February 5, 1971.
Concurred in by the Senate March 4, 1971.

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HOUSE CONCURRENT RESOLUTION NO. 511

A concurrent resolution, urging the United States Congress and the administration to make more funds available for Farmers Home Administration loans

Be is resolved by the House of Representatives of the State of South Dakota, the Senate concurring therein:

Whereas, it is in the best interest of all the citizens of our state and Nation that more of our people remain in rural communities, both from the standpoint of stabilizing the social and economic life of the rural areas and of alleviating some of the problems caused by population pressure in urban centers; and

Whereas, if the family size farm is to remain in existence, it is necessary that adequate financing be available to enable young farmers to become established and, once established, to remain competitive; and

Whereas, the Farmers Home Administration is one of the principal sources of credit for the family farmer in South Dakota; and

Whereas, the demand for credit for both real estate and operating purposes far exceeds the funds the Farmers Home Administration has available for these purposes; and

Whereas, the size of the family farm has increased and the investment necessary in both real estate and equipment to remain competitive has greatly increased, thereby creating more demand for farm credit; and

Whereas, the funding for the Farm Ownership Loan Program of the Farmers Home Administration has been cut back by over twenty-two percent in the past two years, thereby reducing sharply the amount of credit available to the family farmer for farm ownership purposes; and

Whereas, the Operating Loan Program of the Farmers Home Administration has been funded at the same level for the past several years, which has not taken into account the increased costs and investment necessary in modern farming operations:

Now, therefore, be it resolved, by the House of Representatives of the Forty-sixth Legislature of the state of South Dakota, the Senate concurring therein, that the United States Office of Management and Budget is urged to increase the insured loan authorization for Farm Ownership loans by one hundred million dollars for the remainder of the 1971 fiscal year and that an increase of at least that amount be included in the budget proposal for the 1972 fiscal year; and

Be it further resolved, that the Congress of the United States is urged to provide seventy-five million dollars in additional operating loan funds for the balance of the 1971 fiscal year and to provide one hundred million dollars in additional funds for the 1972 fiscal year; and

Be it further resolved, that copies of this resolution be forwarded by the Clerk of the House of Representatives to the Secretary of Agriculture, the Administrator of the Farmers Home Administration, the Director of the Office of Management and Budget, the Chairmen of the Agriculture Appropriations Subcommittees in the United States House of Representatives and the United States Senate, and to each member of the South Dakota Congressional Delegation.

Adopted by the House February 24, 1971
Concurred in by the Senate March 3, 1971

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HOUSE CONCURRENT RESOLUTION No. 516

A concurrent resolution, To the Congress of the United States, South Dakota Congressional Delegation, Interior Committee of the United States Senate, Interior Committee and the Interior Subcommittee of the Appropriations Committee of the United States House of Representatives requesting the passage of legislation and appropriations supporting the construction of a large magnetohydrodynamics (MHD) pilot power plant to implement the techniques which have been developed through intensive research since 1957

Be it resolved by the House of Representatives of the State of South Dakota, the Senate concurring therein:

Whereas, magnetohydrodynamics (MHD) power generation would provide new opportunities for utilizing the vast, untouched coal resources of the state of South Dakota and the northwest region; and

Whereas, MHD power generating plants operate without the need for the large amounts of water required by conventional steam and turbine systems, MHD electric power generating plants would offer new opportunities for developing the economic resources of the state of South Dakota and other areas lacking water needed to sustain conventional generating systems; and

Whereas, the MHD method of producing electrical energy would raise the efficiency use of coal from forty percent (40%) by conventional methods to sixty percent (60%); and

Whereas, there are present or planned conventional power generating plants in the region to which a MHD pilot plant could be attached for experimental testing as well as switchyard facilities; and

Whereas, this more economical method of producing electrical energy is also being advanced by other nations such as Japan, West Germany and Russia where a pilot plant is now nearing completion; and

Whereas, the MHD electric generating system eliminates water and air pollution common to conventional steam turbine and nuclear systems and reduces air pollution to a minimum:

Now, therefore, be it resolved, by the House of Representatives of the Forty-sixth Legislature of the state of South Dakota, the Senate concurring therein, that the Congress of the United States appropriate funds for the development work leading to the construction, at the earliest possible time, of a MHD pilot plant.

Be it further resolved, that copies of this Concurrent Resolution be forwarded by the Chief Clerk of the House of Representatives of the state of South Dakota to the Chairman of the Interior Committee of the United States Senate, the Chairman of the Interior Committee and the Interior Subcommittee of the Appropriations Committee of the United States House of Representatives, and to each member of the South Dakota Congressional Delegation.

Adopted by the House: February 26, 1971
Concurred in by the Senate: March 10, 1971.

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## WHITNEY YOUNG: A BLACK MAN WHO CARED

Mr. McGOVERN. Mr. President, with other Americans, I mourn the loss of a gallant leader, Whitney Young. In a time of extremes, he advocated restraint; in a time of impatience, patience. Those qualities, seemingly too slow and ineffective, are in fact the key to the success of this dedicated black man. In his scheme of things, no personal sacrifice was too great and no injustice too small to gear up his amazing energy and intelligence for finding jobs, for training the unskilled, for locating housing, food, and all the needs that afflicted his people so acutely. For that, all of us are in his debt. And we share in a legacy of commitment and devotion to our fellow human beings that is indeed a treasure.

Mrs. McGovern and I express our sympathy to Mrs. Young and her family, and we express our appreciation for Whitney Young's enduring contributions to our society. As Carl Rowan stated so well in his column of March 17, Mr. Young's warning is a legacy, a lasting challenge to "the establishment." I ask unanimous consent that the article, from the Evening Star, be printed at this point in the RECORD.

There being no objection, the article was ordered to be printed in the RECORD, as follows:

WHITNEY YOUNG'S CHALLENGE AWAITS ACTION

(By Carl T. Rowan)

This is a society that devours its leaders. "If you want something done, ask a busy man to do it" is a rule of life that throws man-killing burdens on those who illustrate by deed that they care about this nation and their fellowman.

The burdens and responsibilities are piled on mercilessly when it is a black man who cares, who is selfless, articulate, intelligent.

It is a speech here tonight, a breakfast meeting there tomorrow; it is a seminar here in the forenoon, a presidential commission meeting on some burning issue in the afternoon, assistance for some charity drive or attendance at some benefit in the evening.

With tragic frequency, the big-hearted men who take on these burdens find their hearts giving out too soon.

And that is how this troubled nation has drained life away from Whitney Young at the untimely age of 49.

Young drove himself beyond the point of survival because he had commitment; he felt a compulsion to do those things that, left undone, would leave both the nation and mankind poorer.

It is so typical that the Urban League leader's heart gave out while he was on a mission to improve relations between Africans and Americans. He sensed, as many Americans do, that in American governmental and private circles, Africa is back-burner, whether it comes to aid or attention.

Whitney Young was one of my oldest friends. I often saw him bone-weary, but I never heard him complain about how much he had to go and go, give and give. I only heard him express fear that, even after so much sacrificing and struggling by himself and others, the nation still would not rise up to its great social challenges.

He watched his old friend, Roy Wilkins, executive director of the NAACP, sacrifice days on the Kerner Commission, trying to show the nation the path away from civil strife. Then Americans turned in petulance and ignored the commission's recommendations.

Young himself devoted much of his time and energy to helping the Pentagon wipe out racial discrimination in the armed forces.

Young pointed the way and he got promises, but the bold steps were never taken, and racial antagonisms are today a festering cancer inside the armed forces.

There were many reasons why Young might have given up the faith and turned to the rhetoric of anger and despair that would have caused newspapers to cease referring to him as a "moderate" and left him with a bigger hero's mantle among alienated blacks.

But Young clung to the belief that there had to be a major ingredient of intellect, of articulation, of persuasion if the black man ever was to achieve first-class citizenship in America.

Some months ago, when Young was honored by the Four Freedoms Foundation, I said: "What caught my attention even 22 years ago was Young's ability to tell the American power structure the unpalatable truth and make that power structure listen. For two decades now Whitney Young has said this to those white Americans who have the capacity to change things:

*All right, sit on your derrieres and ignore the black man's grievances and frustrations; count on the police force, the National*

*Guard, to put down the black revolution; on a white backlash to suppress and oppress black people when the chips are down. Do you know who will wind up losing in the long run? You of the white power structure! You, who have the most to lose because you possess the most of all that is deemed good in this affluent society?*

Obviously, not enough Americans listened to Young. If they had, we would not face the mess that our urban areas are in today.

But Young's warning is a legacy, a lasting challenge to "the establishment."

And this wise and perceptive leader has also left a vital legacy to young blacks. He exemplified a new measure of manhood. He helped them to understand that it may not take nearly as big a *man* to stand in the street and curse whitey as it does to walk into the White House or the board rooms of great corporations and speak eloquently those truths that the leaders of government and industry would rather not hear.

Yes, we weep at this loss of a good friend and great leader. And we weep for a nation that needed him so desperately—but still seems unable to comprehend the wisdom of his counsel.

## RESOLUTIONS OF GEORGIA LEGISLATURE RELATING TO VIETNAM WAR

Mr. GAMBRELL. Mr. President, I ask unanimous consent to have printed in the RECORD two resolutions relating to this country's involvement in the Vietnam war, which were recently adopted by the Georgia Senate and the House of Representatives.

I think it is of particular significance to note that the principal sponsors of the resolutions were State Senator Max Cleland and State Representative Walter Russell, Jr., and it will be of particular interest to Members of this body that Representative Russell is the nephew of the late Senator Richard B. Russell of Georgia.

Representative Russell is 41 years of age. He was graduated from West Point in 1951, served in the Korean war and became a lieutenant colonel in the U.S. Army. He suffered a paralyzing head wound in Vietnam and has been retired with 100-percent disability since 1966. Among his decorations for bravery, he has received the Silver Star, the Distinguished Flying Cross, and the Legion of Merit. Since his discharge from the Army, he has completed law school at Emory University, where he was president of the student body. He is also a Democrat, having been elected to his first public office in last year's general election.

Senator Cleland is 28 years of age. He was a captain in the U.S. Army, and became a triple amputee as a result of wounds, he suffered when he shielded members of his unit in Vietnam from an exploding enemy handgrenade. For his bravery he has been decorated with the Silver Star.

As a result of his wounds, he will be confined to a wheel-chair for the balance of his life. Since his discharge from the Army, he has received his masters degree in political science from Emory University. He is a Democrat and was elected to his first public office in last year's general election.

The resolutions offered by these men are substantially identical in terms and intent. They put the Georgia State Senate and the Georgia House of Representatives on record as favoring negotiations toward an early end of the hostilities in Southeast Asia including the possible establishment of a day certain for withdrawal of ground troops and the return of our prisoners of war. One suggests that if the President has tried to accomplish this and has decided that such action is inadvisable or impossible to accomplish, then he should, within the limits of national security, explain why this cannot be accomplished.

Both Colonel Russell and Captain Cleland are personal friends of mine. They are quiet, sincere, and humble men. They represent a heroic group of young Americans who have paid dearly for the mismanagement of this country's commitment to combat in Southeast Asia.

It seems to me that Americans of the generation of these two men, who have paid the price in Vietnam, deserve to be heard in their own voices. The credibility of those who have been in positions of power and responsibility during the period of our involvement in Vietnam is necessarily impaired. The responsible tone of these resolutions, carefully drawn, and deliberately presented for adoption in a regular way, appeals to me. We have much to learn from such men. I commend them and their approach to this difficult problem to the leaders of this Senate and to our fellow Americans.

There being no objection, the resolutions were ordered to be printed in the RECORD, as follows:

RESOLUTION

A resolution supporting negotiations to obtain a further withdrawal of American land forces from Vietnam in exchange for a battlefield cease-fire and return of our prisoners of war; and for other purposes

Whereas, the war in Vietnam has affected every county, city and community in Georgia; and

Whereas, almost 1,500 Georgians have lost their lives in the war; and

Whereas, thousands of Georgians have been wounded, and at least 67 Georgia families have fathers or sons listed as prisoners of war or missing in action; and

Whereas, the United States is beginning its second decade of involvement in the longest war in our history; and

Whereas, the Vietnam War is exceeded only by World War II as the most expensive in our history; and

Whereas, the Vietnam war is exceeded only by the two world wars and the Civil War in casualties; and

Whereas, the President of the United States has stated that we do not seek a military victory in this war and has committed us to a policy of military withdrawal; and

Whereas, American men are still being killed and maimed, and Americans are still being held as prisoners of war.

Now, therefore, be it resolved by the Senate that this body hereby supports negotiations to obtain a further withdrawal of American land forces from Vietnam and, if necessary, to set a date certain for such withdrawal, in exchange for a battlefield cease-fire and return of our prisoners of war.

Be it further resolved that the Secretary of the Senate is hereby authorized and directed to transmit appropriate copies of this Resolution to the President of the United States, and to each member of the United States Senate and House of Representatives from the State of Georgia.

RESOLUTION

A resolution expressing the opinion of the Georgia House of Representatives on the manner and timing of the withdrawal of the armed forces of the United States from Vietnam; and for other purposes

Whereas, the war in Vietnam has affected every county, city, and citizen of Georgia, to some degree; and

Whereas, Georgia has had almost 1,500 of her citizens killed and many thousands wounded, and at least 67 families in Georgia have loved ones who are prisoners or missing as a result of the war in Vietnam; and

Whereas, the United States is beginning the second decade of the longest war in its history; and

Whereas, the war in Vietnam has been exceeded only by the two world wars and the Civil War in terms of human sacrifice; and

Whereas, it is the publicly announced policy of the United States not to seek a military victory in Vietnam, to cease the bombing, and to withdraw its armed forces, apparently without any reciprocal concession on the part of North Vietnam; and

Whereas, Georgians are still being killed, wounded and captured, and there appears to be no progress being made in the peace negotiations now taking place in Paris; and

Whereas, the Georgia House of Representatives feels that it has the right, if not the duty, to express an opinion on such a vital matter affecting the people of this State.

Now, therefore, be it resolved by the house of representatives that this body hereby recommends that the President of the United States attempt to obtain, through negotiations, a cease-fire and exchange of prisoners of war and, if necessary, set a date certain for the withdrawal of American ground troops from Vietnam in order to bring this about; and

Whereas, the Georgia House of Representatives recognizes that the President might have already attempted this, but, because of classified information available only to him, might have decided that such action is inadvisable or impossible to accomplish.

Now, therefore, be it further resolved that if such a situation does exist, this body hereby requests that the President explain, insofar as it does not affect national security, why this cannot be accomplished.

Be it further resolved that this Resolution is in no way to be taken to support the government of North Vietnam or to reflect on military actions by members of the armed forces of the United States who are now serving, or who have served, in Vietnam.

Be it further resolved that the Clerk of the House of Representatives is hereby authorized and directed to transmit appropriate copies of this Resolution to the President of the United States and to each member of the United States Senate and House of Representatives from the State of Georgia.

## STRONGER DAIRY PRICE SUPPORTS NEEDED

Mr. McGOVERN. Mr. President, on April 1, 1970, the Agriculture Department set dairy price supports for the ensuing year at $4.66 per hundredweight of milk. At the time of this announcement—April 1, 1970—this amounted to 85 percent of parity. During the ensuing year, however, increasing farm costs

have caused the $4.66 price to drop to about 80 percent of parity.

The Agriculture Department has recently announced that the price support level would be changed. If present trends continue this would mean that April 1, 1972, dairy supports would drop to 75 percent of parity.

Together with the Senator from Wisconsin (Mr. NELSON) and a number of other Senators I have introduced proposed legislation to provide that dairy price supports for the next dairy marketing year—starting April 1, 1971—should be at least at 85 percent of parity. This would increase the support level from $4.66 to close to $5 per hundred pounds of milk.

This measure would merely retain the support level at the same percentage as was established a year ago. It would insure that dairy farmers are not made to bear the heaviest burden resulting from the current inflation.

At the moment, dairy prices to farmers are at approximately the projected support level of 85 percent of parity. Therefore this measure could now be taken without increasing consumer prices. But, unless the support prices are increased, milk prices are expected to drop sharply soon. This could mean a loss of $300 to $500 million in dairy farm income during the next year.

It is unfortunate that when the administration claims it wants to stimulate the economy, that it should further threaten the ability of dairy farmers to keep their heads above water.

## QUORUM CALL

Mr. BYRD of West Virginia. Mr. President, I suggest the absence of a quorum.

The PRESIDING OFFICER. The clerk will call the roll.

The second assistant legislative clerk proceeded to call the roll.

Mr. BYRD of West Virginia. Mr. President, I ask unanimous consent that the order for the quorum call be rescinded.

The PRESIDING OFFICER. Without objection, it is so ordered.

## CONCLUSION OF MORNING BUSINESS

Mr. BYRD of West Virginia. Mr. President, I ask that morning business be closed.

The PRESIDING OFFICER. Without objection, morning business is closed.

## FURTHER CONTINUING APPROPRIATIONS, 1971

The PRESIDING OFFICER. Under the previous order, the Chair now lays before the Senate the unfinished business. The time is equally divided and controlled by the two leaders or their designees.

The joint resolution will be stated by title.

The assistant legislative clerk read the joint resolution, as follows: House Joint Resolution 468, making certain further continuing appropriations for the fiscal year 1971, and for other purposes.

The Senate proceeded to consider the joint resolution.

The PRESIDING OFFICER. Who yields time?

QUORUM CALL

Mr. BYRD of West Virginia. Mr. President, on behalf of the majority leader, I ask unanimous consent that there be a quorum call, the time to be equally divided between both sides.

The PRESIDING OFFICER. Without objection it is so ordered.

Mr. BYRD of West Virginia. Mr. President, I suggest the absence of a quorum.

The PRESIDING OFFICER. The clerk will call the roll.

The second assistant legislative clerk proceeded to call the roll.

Mr. BIBLE. Mr. President, I ask unanimous consent that the order for the quorum call be rescinded.

The PRESIDING OFFICER. Without objection, it is so ordered.

Mr. BIBLE. Mr. President, I yield myself such time as I may need. I shall probably speak for 10 minutes.

The chairman of the full committee is scheduled as the leadoff floor advocate of House Joint Resolution 468. He is detained at a policy committee meeting, and he has sent me a message asking that I proceed, and I anticipate that he will be here very shortly.

Mr. President, tomorrow afternoon we will vote on the committee amendment to House Joint Resolution 468 to provide funding for the civil supersonic transport prototype program. This subject has been a matter of national debate and great concern in the Senate since August of 1970.

Mr. President, in my view, it is about time that we—the highest legislative body of the most progressive nation in the world—separated emotionalism from realism, sensationalism from fact, and rhetoric from commonsense.

We are faced with an issue which has become so clouded by words, allegations, and clamor that the bare simple facts, and the options we face have, unfortunately, been lost in the shuffle.

We Americans have always been and still are, the most ingenius and inventive people this world has ever known. We have become masters at science and technology—it is a way of life for us and we are proud of it. We have always prided ourselves in being able to find a better way of doing just about anything. The high standards of living the American people enjoy today are a direct product of purposeful and intelligent decisions on technological development.

Innovations in the field of transportation have brought us lasting fame. Clipper ships, steamboats, and railroads are as much a part of American folklore as are pioneers, Indians, and the great western movement.

The automobile, jet liners, and space vehicles are now an integral part of our daily life. Yet every schoolboy knows of Fulton's Folly, the preposterous claims of disaster associated with the early railroads, and unfounded fears that accompanied the digging of the Panama Canal.

Each and every innovation in transportation has been plagued by its share of critics—its prophets of doom and gloom. Cooler heads have always prevailed, however, and the problems have been solved one by one through the ingenuity of talented Americans. Indeed, we have already seen, in the case of the American supersonic transport, many of the so-called problems disappear through better understanding, research, and advanced design. As the critics see their arguments drop by the wayside, they invent new ones—they demand absolute proofs of solutions even when little or no evidence exists that there is a problem. In my view, this is not an appropriate or reasonable standard when the issue is funding for research and development of two—and only two—prototype aircraft.

The efficiency and productivity which has always accompanied speed has made the era of supersonic air travel as inevitable as the railroad. People have historically always shown a preference for speed. Time has always been man's most precious commodity—time to be more productive—time to relax—time to spend with one's family. Time spent traveling is not productive; hence, speed in travel increases our ability to utilize our precious time in the best possible manner. Each of us here has firsthand knowledge of how necessary this is today.

We need an SST for the same reasons we have always needed faster, better, and safer transportation.

Our decision here today is not whether or not we build a better subsonic airplane—it is whether or not we build a better, safer, environmentally clean, more productive supersonic airliner—truly a new generation of air transportation.

The alternative, of course, is that domestic and international airlines will buy a foreign product. Why, at this stage in history, are we so willing to accept second best? Are we so enthralled with our technical capability that we do not believe someone else can do it? I believe we have had ample evidence in space, electronics, automobiles, and surface trains to know this is not realistic. The proof is in our pocketbook—in our balance-of-payments accounts, in employment for American workers, and in the strength of American companies.

Let us examine what we are being asked to do—we are being asked to give American scientists, technicians, and working men the opportunity and the tools to do a better job. We are not being asked to provide funds for a fleet of airplanes. All we are talking about is continued funding of two prototype aircraft on which to exercise American science, technology, and ingenuity. Nine years ago we started a slow, carefully designed program to develop two prototypes. We have with great deliberation, proceeded two-thirds of the way down the road to successful development. Twelve long years of research, design, redesign, and now development are involved in this effort. The program is directly employing the talents of some 14,000 Americans right now. By the end of the year, if the program is continued, more than 20,000 skilled workers spread all over the country will be devoting their expertise to keeping America a world leader.

We have backed this team solidly up to this point with $864 million. Yet now, with the attainment of our objectives on the horizon we are seriously questioning our capability and our success. It is neither logical nor is it fiscally responsible to throw away the monetary, the intellectual, and the human investment at this point.

Completion of the prototype program requires a total Government investment of $1,342 million; if we refuse further funding the Government will have invested $983 million including payback to the contractors and airlines. In other words it will cost us only $359 million more to finish the job we set out to do 9 years ago than to quit today.

If we stop now we are certain of losing at least $1.1 billion in Government and private investment—and we will have thrown away the opportunity of attaining the final payoff of success.

There is no substantiated reason to do this. We are legislators, as Members of the Senate, will have failed—not our engineers, scientists, and working men and women. All they need is the chance to prove they can do now what they have always done—keep the United States a leader—a leader in technology, a leader in environmental protection, and a leader in world aviation. To withdraw our faith and support now is neither in the national interest nor does it conform to American tradition.

As a member of the Appropriations Committee and as the acting chairman on the Department of Transportation bill in the last Congress, I must say in all candor that the facts do not support termination of this program. The facts, when studied and analyzed, do not provide a basis on which to vote against the program.

Mr. President, as of March 30, 1971, the Federal investment in the civil supersonic aircraft development program will be $864 million. This consists of the $708 million appropriated between fiscal years 1962 through 1970; and $156 million in temporary continuing appropriations through March 30, 1971, as provided under the $210 million rate contained in Public Law 91–645. The record clearly shows that an additional Federal investment of $478 million to provide a total of $1,342 million would complete the construction of two prototypes and 100 hours of flight testing with the first flight to be made in March 1973. In addition to the Federal cost of $1,342 million, there would be additional cost sharing of $381 million to be provided by the industry and airlines for a total of $1,723 million to complete the prototype phase.

In the event it was the decision of the Congress to terminate the program rather than provide additional funding after March 30, it was testified that a minimum additional appropriation of $97 million would be required, consisting of $85 million in contractors' shares and $12 million in miscellaneous liquidation or termination costs.

Over and above this $97 million appropriation, there is the probable refund of the $22 million airline delivery deposit escrows and the question as to refund of the $59 million in airline risk capital investment. In all, this could amount to $178 million. This amount, together with the $864 million provided through March 30, would total $1,042 million in Federal funds, approximately $300 million less than the amount estimated to complete the Federal share producing the prototypes. It should be noted that the committee recommendation, $289,965,000, would provide an additional $134 million over the $156 million already provided through March 30.

In other words, if this is allowed, and the committee's recommendation is approved, there will be $135 million provided for the next 3 months and to remain available until expended.

Information supplied to me by the Office of Supersonic Transport indicates that with the allowance of the 1971 budget amount they would try to regain time lost to keep the schedule of a first-quarter 1973 first flight and hold the program costs so that the Government share will not be greater than $1,342 million.

It should be noted that the resolution, as passed by the House and reported by your committee, includes language to preclude the obligation of any funds for the commercial production of a civil supersonic aircraft. The authorizations under which the prototypes are funded are not sufficient authority for any type of production financing so the present Federal commitment cannot be extended to include the financing of commercial aircraft production.

That is an important point because it is one that came up frequently during the course of the hearings.

During the course of the hearings, the committee asked as to the availability of product financing from the private sector, and in the record will be found correspondence that states:

> At a time in the future when the aerospace and transportation industries are both viable, and the abnormal hazards involved in the development of a state of the art craft are behind us, it seems proper that private enterprise can and will support SST production and sales.

It was also testified that the financial community will respond to the combination of a proven product, willing buyers, and a healthy industry.

I have confidence that American ingenuity can overcome any problems and create a plane which will have no damaging effect on the earth's environment. Completion of the final 2 years of this 12-year program will answer remaining questions. Without the experimental program we will have lost our opportunity to test the technical, environmental, and economic feasibility of this plane.

I hope that the Senate will support the committee recommendation and that the test program will be continued.

Mr. President, I suggest the absence of a quorum.

The PRESIDING OFFICER (Mr. GRAVEL). The clerk will call the roll.

The legislative clerk proceeded to call the roll.

Mr. BIBLE. Mr. President, I ask unanimous consent that the order for the quorum call be rescinded.

The PRESIDING OFFICER. Without objection, it is so ordered.

The clerk will state the committee amendment.

The legislative clerk read as follows:

> On page 2, after line 4, add the following new section:
>
> "SEC. 2. During the period from March 30, 1971, activities under the appropriation "Civil Supersonic Aircraft Development" may be conducted at a rate for operations not exceeding $289,965,000, but otherwise to the extent and in the manner provided for in the bill (H.R. 17755, Ninety-first Congress), as modified by the House of Representatives on December 15, 1970."; and at the beginning of line 12, strike out "SEC. 2." and insert in lieu thereof "SEC. 3.".

Mr. PROXMIRE. Mr. President, will the Senator from Nevada yield to permit a parliamentary inquiry?

Mr. BIBLE. I yield for that purpose.

The PRESIDING OFFICER. The Senator will state his parliamentary inquiry.

Mr. PROXMIRE. Mr. President, I inquire whether this committee amendment which is pending now is the amendment on which there will be a vote, according to the unanimous consent agreement, at 4 o'clock tomorrow, and that no action will be taken under the agreement until that time. Is that correct?

The PRESIDING OFFICER (Mr. GRAVEL). That is the vote which will occur tomorrow at 4 o'clock, but the amendment could be amended prior to that time, in which case the vote at 4 o'clock would be on the committee amendment as amended.

Mr. PROXMIRE. I understand. But under the agreement there will be no action taken before that time; it will be unnecessary for any Senator to be concerned about guarding the floor or anything like that; no action will be taken, under the agreement, until 4 o'clock, when the amendment or the modified amendment will be acted on?

The PRESIDING OFFICER. Unless the agreement is changed, there will be no final action on the amendment until 4 o'clock tomorrow.

Mr. PROXMIRE. I thank the Chair.

Mr. BIBLE. Mr. President, I yield the floor.

Mr. JACKSON. Mr. President, the issue before the Senate in connection with tomorrow's scheduled vote on the committee amendment to House Joint Resolution 468 is the completion of two prototype supersonic aircraft in which more than $1 billion of precious national resources have already been invested. I ask the Senate to give American science and technology a chance to complete this important and revolutionary transportation development. I ask the Senate to give our working men and women a chance to compete on the world labor market and to show their skills in building a better, a safer, a more efficient, and productive aircraft.

Mr. President, I ask the Senate to reconsider last December's vote on this issue in light of the new facts, the new evidence which was heard by both the

House and Senate committees over the past few weeks.

When the facts, all of the facts, are honestly and objectively considered, I believe that only one answer can be justified. That answer is to proceed with the development of the prototypes.

The building of two prototypes will provide us a sound basis upon which we can judge whether to proceed into the production phase. It will provide a rational basis on which to determine whether regulation of foreign supersonic aircraft is necessary or justifiable. The appropriation of funds for this important program will allow us to keep open America's option to compete in the world market for supersonic commercial transports. The issue is that simple. But, let us look at what keeping that option open means to us in terms of the national good for the country.

Millions of Americans take our country's economic progress and strength for granted. They should not. Today's strength and the high standard of living we enjoy was hard earned. Since the Industrial Revolution and the advent of mass production, the greatness of this country has come largely because we have excelled in advanced technology. We have built better products more efficiently than anyone else. This has been especially true in the aerospace field. We build the best and the safest aircraft in the world.

The SST will mean thousands of jobs for American workers. It will strengthen U.S. aerospace industries for the future. This is one of the few segments of the world's commerce in which American industries can compete with other nations and still maintain wage levels to give Americans the high standard of living we all enjoy. It is estimated that $100 billion worth of new aircraft will be constructed between now and 1990. The SST share of this market will be at least 25 percent. This kind of business cannot be ignored or written off by responsible representatives of the public on the basis of the factual record we have before us.

These jobs will last over a period of at least 15 years and will increase as the market increases in the future. These SST jobs will be distributed throughout the Nation. This is already starting as work on the engines and prototype aircraft accelerates. In all, the SST production program will involve some 150,000 people and this does not include the impact of the supersonic air transports in creating jobs for Americans in the airline industry's operation.

Mr. President, I would like to quote from a true expert on jobs. He is not an economist speaking from text book theory about the operations of the marketplace. He is a self-made man who rose through the ranks of labor to his present position representing over 16 million union members.

During the Senate Appropriations Committee hearings earlier this month, George Meany, President of the AFL–CIO, presented the most reasonable, commonsense statement on the importance of the SST to the Nation that I have had the honor to hear.

George Meany said:

> The AFL–CIO takes pride in its record of support for programs and policies that benefit all people.

He continues:

> The decision that this Committee and eventually the whole Congress must make is a decision that involves much more than the mere funding of two SST prototypes. It involves the future of the American aerospace industry . . . Too many Americans have become complacent about the development of U.S. production and the loss of American jobs. They have hardly noticed the extent to which producers in other nations . . . have eroded the job opportunities of American workers. At one time, for example, America was the world leader in the production of electronic goods. Today, electronic plants have either closed or are closing all over the country. Aerospace is still potentially one of the strongest of America's remaining industries. But if America lets it slip away . . . this country will lose more employment opportunities for its people and a source of overseas earning power. America will lose a critical national resource. And America will deprive itself of the highly skilled, intensively trained research, development, and production teams that are so vitally necessary to national security.

George Meany concluded by stating:

> We are not asking for a handout. We are asking Congress to fund a program which will not only keep people off unemployment and welfare rolls, but which will create billions of dollars worth of new revenues . . . We are trying to insure that America maintains its technological lead in its most sophisticated industry. We do not view the SST as a "plaything for the international jet set" but as the top of a product line that can help to stem and reverse the nation's dollar drain.

Mr. President, taking into account the return of the Government's investment in the development of the SST, through royalties on sales if it is decided to produce the plane in quantity, the favorable impact on balance of trade, and the tax returns from workers and manufacturers, the Department of Transportation foresees a net benefit of over $30 billion that flows back to the people—to all the taxpayers who are paying the costs of the development program, not just the passengers who will fly in the SST. That is the option that is being kept open by continuing the prototype program. Kill this option and we will have squandered a billion of our taxpayers' money without allowing the plane to prove itself.

Mr. President, I cannot, I will not associate myself with this kind of irresponsibility and waste of hard-to-come-by taxpayers' dollars. We cannot and should not stop this program when it is two-thirds completed.

Advancements in science and technology are fundamental and basic to the economic progress of the country. The mass of social programs needed by this country to overcome poverty, illness, and hunger can only be accomplished as a result of the Nation's continued economic progress and strength. On the scale of national priority, the SST program is not—as some have characterized it—an alternative to the support of social programs. It is only as a result of the Nation's business prosperity, favorable international trade positions, and increasing job opportunities that resources to support and pay for important and necessary national social programs can be provided. The SST program is an investment in the future well-being of these programs.

Mr. President, the hearing records of the House and Senate are detailed and thoroughly cover the program and the latest information available. A general conclusion was well put by Dr. Singer, Deputy Assistant Secretary, Department of the Interior, and chairman of the Environmental Advisory Committee, in his statement before the Senate Appropriations Committee earlier this month. As a recognized expert, he concluded:

> Let's then put matters into perspective. There is no question whatsoever that many human activities are affecting the environment, are changing the atmosphere, and are putting out pollutants that are spread throughout the world. There is no question that the SST is going to release some pollutants into the atmosphere, but it is doubtful whether they will be of any significance. In the balance, I believe that the question of whether we should or should not have an SST must be decided on the basis of economics, with environmental effects having a very small weight indeed. If the SST is going to be turned down, let's not turn it down for the wrong reasons.

Dr. Beranek, a foremost expert in noise and acoustics, testified that the SST can meet the noise levels of new subsonic jets. He concluded:

> There does not appear to be any technical reasons why a commercial supersonic transport cannot be built which will be acceptable with regard to noise.

Now, Mr. President, one would expect that those who have expressed opposition to the SST on the basis of its being an "environmental monster" and making a "terrible racket" would be pleased with the considerable research and technological improvements that have been made since last fall. I thought the opponents would be pleased with the breakthroughs in the noise area and with the objective analysis of upper atmospheric effects. Apparently, however, they are not. The arguments used have only shifted to different areas and I can only assume the opponents have their minds made up and cannot be swayed by recent developments.

I am confident that the Senate will see the wisdom of fully funding this important program and, given another chance, it will clear the other body as well. I have confidence in our American democratic procedures, and I feel that the Senate and the Congress will rise to the occasion on this important issue and make the right decision when the chips are down.

Mr. President, the chips are now down on the SST. I urgently implore my colleagues not to stop in midstream on this vitally important program. I urge my colleagues in the other body as well as in this Chamber to keep open the option of having an economically viable, environmentally acceptable SST. An American SST. History is being made on this decision. Let us not look back on March 24, 1971, as the date when we hamstrung America's aerospace leadership. Instead, let us look back upon it as

the day that we accepted the challenge of our new era of social awareness, of environmental awareness, of directing technology to serve the betterment of mankind.

We must preserve our option for the future and vote for the continuation of funding this nationally vital program.

Mr. President, I ask unanimous consent to have printed in the RECORD the statement of George Meany, president of the AFL–CIO, before the Senate Appropriations Committee on March 10.

There being no objection, the statement was ordered to be printed in the RECORD, as follows:

STATEMENT OF GEORGE MEANY, PRESIDENT, AFL–CIO

We in the AFL-CIO are here today to tell you why we believe that continued development of two prototypes of a made-in-the-USA supersonic transport is decidely in the interest of America.

It is ironic that the fight over the appropriation needed to complete these two prototypes has stirred up serious opposition among many individuals and groups with whom we are normally allied. Conservationists fear that the SST will create unforeseen risks to the environment. Many liberals believe that we should forego further development in favor of a general reshaping of national priorities.

Mr. Chairman, the AFL–CIO takes pride in its record of support for programs and policies that benefit all the people.

And so we have looked at the SST closely from that viewpoint. We have studied the evidence now available on the probable ecological effects of supersonic flights. On the basis of our inquiries, we are convinced that the opposition of the conservationists is based more on emotion than on fact. At least two government studies have concluded after extensive tests that there is no concrete evidence that a fleet of supersonic airline's will damage or threaten the earth's atmosphere.

If the environmentalists feel that the dangers are as great as they contend, then it seems to me they should be pursuing a campaign for international agreement to abolish the SST everywhere. Unilateral action by the United States, against an American SST, would not protect the world's environment. Only complete abolition would do the job and that would require international agreement.

And, of course, no possible environmental risk can come from the completion of the two prototypes.

We have also considered the "reordering of national priorities" arguments. We have long maintained that America needs to do much more in the future than it has done in the past or is doing now to meet the nation's deficiencies in housing, education, health, recreation, pollution control, mass transit and the like. But we are realistic enough to know that solutions of social problems depends in large part on solution of economic problems. We cannot hope to construct a better social environment without a strong economic foundation. I will touch on this in a little more detail in a moment. At this point just let me note that aerospace is vitally important to the country's economic base. When it operated at full capacity aerospace directly and indirectly employed the skills of a great percentage of the workers in manufacturing. Moreover, the sale of American-made aircraft has been one of the nation's primary sources of export income. Last year, for example, we sold $3.4 billion worth of aerospace products overseas—including $1.5 billion in commercial transport planes alone. Without these sales, the United States would have had a sizable deficit in its balance of trade.

This is why I say that aerospace is important to the total economy. Its needs extend to—and create jobs within—thousands of factories and hundreds of communities from one end of the country to the other. But just as aerospace is important to the economy, the SST is important to the aerospace industry. There can be no doubt that this is the plane of the future. The question is not whether there is going to be an SST. That question has already been answered by the French, the British and the Russians.

This plane will not only be built but it will be flown.

If anyone doubts that fact, they have only to look at this two-page ad in the December 28, 1970, issue of Aviation Week and Space Technology. The Russians are already advertising for sale "in any part of world" the Supersonic TV–144 airliner—their version of the SST.

Though air travel is now in a slump, because of the depressed condition of the economy generally, all forecasts project long range increases in over-the-ocean air flights. Air travel doubled in the 1960's. According to informed projections, it is expected to triple by the end of the 1970's. To accommodate increased travel, the world's air lines will continue to increase their capacity not only with more planes but bigger and faster planes.

What I'm saying, in short, is that the air lines of the world—including American carriers—will fly the best planes available. In the past they have purchased such planes from U.S.-based producers. But if they cannot get them with a made-in-the-U.S.A. label, they will get them elsewhere. This would mean a long term loss in U.S. balance of trade composed of sales of American aircraft overseas that would not be made as well as spending by domestic air lines to purchase foreign-made SST's.

In effect, then, the decision that this committee and eventually the whole Congress must make is a decision that involves much more than the mere funding of two SST prototypes. It involves the future of the American aerospace industry.

Unfortunately, the industry is already in a state of economic shock. If the state of the economy as a whole can be termed a recession, with unemployment at 6% of the work force and the number of serious and chronically depressed areas up from 40 to 45 in the last month alone, then the state of the aerospace industry can only be described as a depression.

Bad as conditions are in the nation as a whole, they are even worse in centers of aerospace production. As Floyd Smith, president of the Machinists and Aerospace Workers told the House Appropriations Committee last week, "The nation's aerospace centers have been disaster areas." It doesn't take much digging into the facts to verify this description. In Connecticut, where United Aircraft is the major manufacturing employer, unemployment is 7½%. In California, in communities surrounding Lockheed, McDonnell-Douglas and Aero Jet-General the jobless rate is almost 9%. In Seattle and its suburbs, the home base of Boeing, unemployment has risen to almost twice the national average.

In the past, when aerospace has experienced periodic declines, the companies have always tried to keep their pools of technological expertise intact. The axe generally has fallen heaviest on production workers. They have felt it heaviest again this time. But now, for the first time, hard-to-replace teams of engineers, scientists and technicians are also being chopped off.

During the last 18 months alone, 300,000 people have been let go in aerospace plants around the country. This includes 18.3% of the technicians, 12.9% of the scientists and engineers and 27½% of the production workers.

Declines of such magnitude cannot be easily and quickly absorbed by other industries. In fact, the shock waves of aerospace unemployment have hit employers in other industries. In Seattle alone, 71,500 people are out of work. And not all of them are aerospace workers. New and used car dealers report that their sales have fallen from 30% to 50%. As a result more than a dozen have already gone out of business. Hundreds of other small businessmen are suffering. Apartment vacancies are running as high as 40% in some suburbs.

The general economic anemia that afflicts the community as a whole has created a crisis in public assistance. Some 66,000 people are on welfare and 72,000 are drawing food stamps. For every child who was receiving a free school lunch two years ago, 50 are getting it today. And yet, while such needs are growing the revenues—and thus the ability of local and state governments to respond—are declining.

Seattle may have been hit harder than other communities by the current depression in aerospace but human suffering—due to widespread aerospace unemployment—is not confined to Seattle. It can be found in centers of aerospace production everywhere.

I realize that members of the U.S. Senate are not unaware of—or unmoved by—the human toll that the depression in aerospace has caused. But some of the arguments from opponents of further development of the SST, that the skills of unemployed aerospace workers be converted to programs that will meet the nation's deficiencies in education, health, pollution control, mass transit and the like, just don't stand up.

We in the AFL–CIO insist on the need for greater efforts in all of these—and many other—areas. But, as I indicated earlier, we cannot base a healthy social environment on a sick economy. We need basic industries that provide jobs and create dollar earnings in markets both at home and abroad. Aerospace is one of the nation's basic industries. It creates billions of dollars worth of taxable revenues and it is from such revenues that the nation finances public efforts in education, health, pollution control, mass transit and all these other needed programs.

To help this industry—and to insure its future—we are asking this Congress to make an appropriation that amounts to less than one-tenth of one percent of the total federal budget and less than 3 percent of the budget request for other forms of transportation. From this relatively small investment it has been estimated that the nation will receive back at least $6 billion to $7 billion in taxes over the next 20 years. The Congress can provide a lot of education, health, pollution control and mass transit with that kind of money. And this does not include all the other economic activity that will be generated by the purchasing power of the workers who will be directly and indirectly employed on the SST.

Having said all this let me very candidly admit that continued development of two SST prototypes—which is the immediate issue here—will not restore the aerospace industry to health. In fact, the immediate impact will be small. The appropriation we are seeking will provide only 14,000 direct and 28,000 indirect jobs. That's only a drop in the total pool of aerospace unemployment. But what's really involved here is not just these two prototypes. It is the future of the aerospace industry.

We're already behind in the race to provide the air lines of the world with the SST's, they will start flying sometime in the 1970's. The Russians are well along—so far along,

in fact, that we know their TU–144 has been flown supersonically. The French and British-built Concordes have already gone through 400 hours of flight testing including 90 hours at supersonic speeds and 15 hours at twice the speed of sound.

So their planes are almost ready. And we know we cannot catch up in time for the first generation SST's—the SST's of the late 1970's. But we can still enter the competition for the second generation—the SST's of the 1980's and 1990's. And I am confident that if we can build them, we can sell them. U.S. aerospace technology was good enough to capture world markets in the past. Since we know that the American SST is bigger, better and faster than either the Concorde or the TU–144, we should be able to recapture them in the future.

Once we get by the prototype development and testing state, we can get into production. And that's when this investment—the investment that this appropriation represents—will pay off.

According to informed estimates, the SST will eventually provide 50,000 direct jobs in the aerospace industry as well as 150,000 indirect jobs in electronics, basic metals, machine tooling and scores of other subcontracting industries throughout the country. The benefits—in payrolls, business activity and public revenues—will filter throughout local communities in at least 40 states.

Mr. Chairman, our concern about the SST and the future of the American aerospace industry is part of our larger concern for the future of the nation's economy. Too many Americans have become complacent about the development of U.S. production and the loss of American jobs. They have hardly noticed the extent to which producers in other nations—with the help of planned economies, subsidized industries and U.S. multi-national companies—have eroded the job opportunities of American workers. At one time, for example, America was the largest shipbuilding nation in the world. Today the U.S. shipbuilding industry is in a state of decay. No less than 10 other countries build more ships than American yards do.

At one time—not too long ago—America was the world leader in the production of electronic goods. Today, electronic plants have either closed or are closing all over the country. Aerospace is still potentially one of the strongest of America's remaining industries. But if America lets it slip away—as it has other important industries—this country will lose more employment opportunities for its people and a source of overseas earning power. America will lose a critical national resource. All America will deprive itself of the highly skilled, intensively trained research, development and production teams that are so vitally necessary to national security.

So, Mr. Chairman, the issues in this fight for this relatively small appropriation go far beyond the question of merely keeping the SST alive.

We're not merely fighting for 42,000 jobs now and 150,000 in the future. We're fighting to conserve one of America's most important industries.

We're not asking for a handout. We're asking Congress to fund a program which will not only keep people off unemployment and welfare rolls but which will create billions of dollars worth of new revenues.

We're not trying to make work for workers, engineers, technicians and scientists in aerospace. We're trying to insure that America maintains its technological lead in its most sophisticated industry.

We do not view the SST as a "plaything for the international jet set" but as the top of a product line that can help to stem and reverse the nation's dollar drain.

For these reasons, the AFL–CIO believes that continued development of the SST is in the national interest. And for these reasons I urge this Subcommittee—and the Senate—to approve this appropriation.

Mr. JACKSON. Mr. President, I yield the floor.

The PRESIDING OFFICER. Who yields time?

QUORUM CALL

Mr. BYRD of West Virginia. Mr. President, I suggest the absence of a quorum, and I ask unanimous consent that the time be equally divided between both sides.

The PRESIDING OFFICER. Without objection, it is so ordered.

The clerk will call the roll.

The legislative clerk proceeded to call the roll.

Mr. PROXMIRE. Mr. President, I ask unanimous consent that the order for the quorum call be rescinded.

The PRESIDING OFFICER. Without objection, it is so ordered.

Mr. PROXMIRE. I ask the distinguished Senator from Ohio if he will yield me time.

Mr. SAXBE. I yield 25 minutes to the Senator.

PRIVILEGE OF THE FLOOR

Mr. PROXMIRE. Mr. President, first, I ask unanimous consent—and I invite the attention of the distinguished majority whip, the Senator from West Virginia (Mr. BYRD) to this—to permit Richard Wegman, who is my staff assistant and who has devoted a great deal of time to this matter, to be on the floor tomorrow, if that is permissible.

Mr. BYRD of West Virginia. Mr. President, will the Senator yield?

Mr. PROXMIRE. I yield.

Mr. BYRD of West Virginia. Does the Senator have reference to the period during the rollcall votes?

Mr. PROXMIRE. I should like that permission. If the Senator objects, I understand.

Mr. BYRD of West Virginia. The Senator is entitled to have one clerk on the floor tomorrow without unanimous consent, but he would require unanimous consent to retain that clerk on the floor during the rollcall; if that is what he wishes, I will have no objection, because he is the leading opponent to the SST.

Mr. PROXMIRE. That is what I would like. I thank the Senator.

Mr. President, since the Senate voted by a 52-to-41 margin to reject the funds for the supersonic transport last year, there have been new developments, new evidence, and new testimony before the Senate and House Appropriations Committees. I submit that the new evidence is overwhelmingly against going ahead with the supersonic transport at this time. This is true of the environmental information, and it is also true of the economic developments since that time.

I should first like to address the question that has been raised by many Senators as to why we cannot just go ahead with a prototype program. They argue that a supersonic transport will not have any serious environmental effects if it is confined to two prototypes and that the prototypes could answer some questions about the atmosphere that we need to know. This was put to rest emphatically in my view by Mr. Ruckelshaus, the Administrator of the Environmental Policy, Administration, in testimony before the House Appropriations Committee. In that testimony, he said the prototype was not necessary and would not provide significant answers so far as determining the adverse effect of supersonic transports or a fleet of supersonic transports on the atmosphere was concerned.

The reason for this is that we are concerned about the long-range, cumulative impact in the upper atmosphere and we cannot possibly determine the effect of the impact of 500 American planes and 300 foreign planes flying four flights daily with two prototypes. The plans are to fly the two prototypes only 100 hours before they go into making a decision on production. That 100 hours would be grossly inadequate to provide the technical answers. The answers can come from research, but they should come from the research we are providing by the $27 million, which all of us, I think, approve of in that program. If that program shows that the adverse effects on the environment by a fleet of SST's are not significant, then this whole environmental argument will disappear.

In this respect, several Senators have raised the question, "How can we argue that we could have 50 or 800 SST's which would not have an adverse effect on the atmosphere?" It has been stated that our military planes have flown 438,000 hours in the past 20 years. As has been said, no one has charged that this has polluted the atmosphere, or that there has been an increase in skin cancer.

The answer to that is that those planes have been flying over a 20-year period; but, in only 20 weeks, a fleet of supersonic transports that we are talking about now, would fly more hours than those military planes did in 20 years.

That is the first point.

The second point is that the new commercial SST would fly in regular air corridors at an altitude of 65,000 feet. And it is at that high level that the atmospheric pollution takes place. While some military planes have been flying at that level, they have flown at all different levels. So the comparison is not one that would make one feel that the fact we have had military supersonic planes for 20 years flying a fewer number of hours proves that, if we have supersonic planes flying many times more, that this could not have an adverse effect.

In that connection, I should like to refer to what I believe is a devastating argument on these points, which was published in this morning's New York Times, in an editorial entitled, "SST: The Prototype Fallacy."

It reads:

Under pressure of repeated defeats in the Senate last December and in the House last week, the Nixon Administration and other advocates of the supersonic transport have retreated to what they hope is a defensible position. As the Senate prepares to cast what could be the final vote on this question tomorrow, SST advocates are contending that nothing more is at stake than the building of two SST prototypes. Surely, they argue, there cannot be any harm in going ahead with a couple of test models to obtain research data on disputed issues.

This prototype argument sounds open-minded and reasonable in the best pragmatic American tradition, but in this context—as its proponents well know—it is fundamentally misleading and irrelevant.

If the supersonic transport were in regular use, it is possible—not certain but possible—that it might eventually produce a sharp increase in the incidence of skin cancer. If this came about, it would be because the engine vapor introduced into the thin air of the stratosphere reduced the protective ozone, thereby permitting more ultraviolet rays to reach the earth. This result could not occur immediately but only after several hundred SST's had been flying every day for some years. For the purpose of finding out the cumulative effect of a huge fleet of planes, a few test flights by only two planes would be clearly irrelevant. Careful atmospheric research could find out the desired answers, but academic scientific experts believe that ten years would be needed.

The Boeing Company, chief contractor for the SST, envisages selling 500 or more planes. If that many planes were in regular use, they would possibly derange the life patterns of migratory birds and have incalculable effects on marine life. Birds, like humans, can withstand the isolated shock of one sonic boom, but that is entirely different from adjusting—if adjustment is possible—to a sonic boom every half-hour or every hour. Two prototypes could not provide quick answers to these imponderables.

The severe sideline noise produced by an SST on takeoff is another major argument against the SST, as no less an air enthusiast and expert than Gen. Charles A. Lindbergh has pointed out. It is unnecessary to build two prototypes to convince the public that the sideline noise can be reduced to 108 decibels. It can be brought down to that level if Boeing is willing to sacrifice some of the plane's cruising range or otherwise reduce its cost efficiency. But 108 decibels is not a satisfactory long-term value. As a Presidential commission observed in a report on noise pollution released over the weekend, existing noise levels are dangerous to health and becoming intolerable.

Mr. President, on Friday last, the distinguished Senators from Washington (Mr. MAGNUSON and Mr. JACKSON) introduced a bill, which I was proud to cosponsor, which would prohibit flights of commercial aircraft over the United States at supersonic speeds. As I say, that was a good provision in that bill but, at the end of the bill there is a requirement that prototype must be able to be produced in such a way that the perceived noise decibels would be at most 108 in order to comply with what the subsonic jets now have.

As I pointed out at that time, the weakness of that provision is that it applies to prototypes. It does not apply and cannot apply to the production planes. Sound suppression is very expensive. At least $1 million or $2 million more will be necessary to provide the plane with sound suppressors. The operating costs would increase. The range would decrease. Passenger payload would decrease. So, for all these very serious economic reasons, it is clear to me that it is unlikely production planes will be made with sound suppressors unless they were required by law of Congress. That bill we passed does not provide that. It applies to the prototype, but not to the foreign planes and not to the planes that would be produced in production.

The editorial goes on to say:

Two prototypes are unnecessary to decide the economic argument against the SST. It is beyond dispute that it would require another $477 million to build them. That is in addition to $864 million in Government funds already spent. Unless private financing can be found, another $5 billion would be necessary to pay production costs. Reputable economists have repeatedly testified that it is highly improbable that enough planes could be sold at a price that would reimburse the taxpayer for these enormous sums.

Since an Anglo-French combine has already built prototypes of the Concorde, there is no reason to doubt that Boeing could produce a plane that would fly and be technically feasible. But feasible prototypes do not resolve market-place doubts about profitability. The president of Continental Airlines has already told a Senate committee that the Concorde is a fine plane but he would not buy it because he could not make money with it on the California-to-Hawaii run. Its seat-mile cost ratios are simply not good enough.

The prototype argument is a fallacy. Prototypes could not test out the environmental issues and are not needed to test the economic issues. More tests are not the answer. The time has come for the Senate to say—"Enough is enough. Let us lay this white elephant to rest."

Mr. President, there has been a dispute between the proponents and the opponents of this plane with respect to the termination costs. The fact is that we have spent $864 million. If we go ahead with it, we will have to spend $1.342 billion according to the testimony by the Department of Transportation. Part of that difference would be diminished if we go ahead, it is true, because termination costs are involved.

Those direct termination costs are $97 million. So, there would be an additional $71 million that might be required, although part of that $81 million would be a return to the airlines which was not a taxpayer's outlay but would be a matter of what some people might construe as a moral obligation to pay back to the airlines what they had paid in good faith when they reserved positions for the SST.

One of the most telling points made by Professor Samuelson, a Nobel economist, and others, is that the great loss the Government suffers is because they do not understand when they have made a mistake and should cut their losses. They go on and on and on. We have seen in the Senate in recent years how when bad and wasteful programs have been started, we have felt that we had put so much into the pot that we hated to get out of the game.

This is a clear example of the fatal big Government weakness. The fact is that if we stay in we are not going to lose an additional $350 million, the difference between cutting it off and going ahead, but we stand to lose what competent people have testified would be between $4 billion and $5 billion because the Government will be required to go ahead with a substantial part of the production costs.

I come to one of the most difficult and delicate parts of the argument on this issue. It is a point that has to be raised. When it is raised, those who favor the SST say that it is a scare tactic, that it is unfair and emotional. I am trying to make this as factual as I can.

We have discussed the potential effects of the SST on skin cancer. We have to point out that when we say skin cancer, we are not talking about the kind of cancer that is as deadly as internal cancer. The majority of people who have skin cancer are not killed by it. It is true that between 5 and 8 percent of the people who suffer from it die as a result. It is disfiguring and painful. However, it is not like stomach cancer or cancer of the lung. It can be prevented rather easily. There are known techniques that can protect any person who would take precautions with respect to skin cancer, primarily shielding himself from the sun.

There is not any question that whether the SST continues to fly or not, many people will continue to get skin cancer because they do not take precautions.

But recognizing all of that, Mr. President, do we not have a responsibility to inquire into whether or not a responsible scientist who has charged that a large fleet of SST's could increase skin cancer is valid. What does environmental concern mean if we do not weigh this charge before we decide on the SST? If the charge is valid it should weigh against the SST. If the charge is invalid it should not.

To determine the validity of the charge, I sent it to 40 of the outstanding meteorologists and skin cancer specialists in America. And I would like to discuss what they found.

Dr. James McDonald was asked by a panel of the American Academy of Scientists to look into the matter. Incidentally, the Academy has not taken a position on this; they do not say that his position is right or wrong, but they asked him to look into it.

Dr. McDonald testified before the House Appropriations Committee on this matter. To secure an evaluation of that testimony I sent it to competent scientists to ask their opinions. I want to summarize them.

But first let me say, Dr. James E. McDonald is a competent man. He is senior physicist, Institute of Atmospheric Physics and professor, Department of Atmospheric Sciences, University of Arizona, Tucson, Ariz. He has a B.A., an M.S., and a Ph. D. He is a member of the National Academy of Sciences on weather and climate modification. He is a respected member of the scientific community. He testified in part as follows:

Briefly, it is my present estimates that operation of SSTs at the now-estimated fleet levels predicted for 1980–85 could so increase transmission of solar ultraviolet radiation as to cause something of the order of 5–10,000 additional skin cancer cases per year in just the United States alone. I return to this point below. . . .

In my own opinion, the present evidence points rather strongly to the conclusion that operating a major SST technology of the magnitude now under consideration here and abroad would, via the ozone-ultraviolet-carcinogenesis chain, lead to increased incidence of skin cancer of the order of 10,000 new cases per year within the United States alone. The world total would be somewhat greater, of course, but not greater by a large factor, since skin cancer is above all an afflic-

tion of Caucasians (rather than Negroes), Asiatics, or other pigmented ethnic stocks, so considerations of world geography and world climatology seem to imply that the brunt of the skin cancer burden, *regardless of who builds and flies them in the Northern Hemisphere,* would necessarily be borne by the Caucasian population of this country, with Europe bearing most of the remainder of the total. . . .

Then Dr. McDonald continues:

If careful research into all of the many factors underlying the above estimates should disclose that an estimate of some 10,000 new skin cancer cases per year is a gross overestimate, then this one of the several grounds for caution in the present SST decision will disappear. My present surmise, however, is that it will probably be found to be on the low side.

This is an estimate that I sent out to competent people, recognized experts in the field. Some of the statements and reactions I got back indicated that they felt Dr. McDonald had gone too far. Some felt he might have overstated the case in some respects. But none of the people said he was wrong. Most of them, the overwhelming majority, said he was right. A large number said he was understating the case.

One man that I wrote was an associate professor of atmospheric sciences and geophysics of the University of Washington at Seattle, Wash. He is a man who comes from a part of the country that is enthusiastically in favor of the SST.

This man's name is Conway B. Leovy. He was one of the distinguished men who appeared at a press conference with me on this subject a week ago.

This is what Professor Leovy, a professor from Seattle, Wash., said:

In summary, I find no disagreement with Dr. McDonald's arguments up to the assumption of a strong relationship between ultraviolet dosage, particularly near 3000 Angstroms, and skin cancer incidence, a point which I am not qualified to evaluate. He seems to have been quite conservative, but there are several improved assumptions in the argument. In view of this, his conclusion may be stated too emphatically, but I believe that the issue he has raised deserves very serious consideration. Construction and operation of prototype SSTs will not help answer any of the scientific questions raised by his testimony.

Dr. Leovy has been consulted by both sides in this matter. He is an eminent meteorologist. He makes the same point that the others have made, that we do not need to have the prototype to discover whether this will have adverse consequences.

Another man I wrote was Gio B. Gori, a Ph. D. and associate scientific director for program, Etiology, of the National Cancer Institute.

I asked Dr. Gori to appear at a press conference last week. He first said he would. He said that only a direct refusal by his superior would prevent him from coming. He was told not to come. However, he wrote two letters. One letter indicated that Dr. McDonald's statement and testimony was too conservative and that the incidence of skin cancer would be much greater. His second letter was to the effect that while McDonald's testimony was conservative, it was not as conservative as he first stated. The second letter was less favorable to my side, but I will read parts of that letter:

In reply to your letter of March 8, we have evaluated the testimony of Dr. James E. McDonald before the House Appropriations Committee on the pending question of further funding of the U.S. SST Program. We have been assisted by several consultants who represent recognized excellence in their fields.

For atmospheric sciences they are:

Dr. William W. Kellogg, Associate Director of the National Center for Atmospheric Research, Boulder, Colorado.

Dr. Kellogg, incidentally, was asked by Mr. Magruder to serve on his panel to determine whether or not the SST would be likely to have adverse environmental effects, and Dr. Kellogg is one of the men Dr. Gori consulted.

I continue to read from Dr. Gori's letter:

Professor Julius London, Department of Geoastrophysics, University of Colorado, Boulder, Colorado.

Professor Zdeneck Sekera, Department of Meteorology, University of California, Los Angeles, Los Angeles, California.

Dr. Lester Machta, National Oceanographic and Atmospheric Administration, Washington, D.C.

For epidemiology they are:

Dr. Sidney Cutler, Head, End Results Section, National Cancern Institute, National Institutes of Health, Bethesda, Maryland.

Dr. Marvin Schneiderman, Associate Scientific Director for Demography, National Cancer Institute, National Institutes of Health, Bethesda, Maryland.

For photochemical and carcinogenic effects they are:

Dr. Harold Blum, Professor of Biological Sciences, State University of New York, Albany, New York.

Dr. Frederick Urbach, Professor and Chairman, Department of Dermatology, Temple University, Health Sciences Center, Skin and Cancer Hospital, Philadelphia, Pennsylvania.

Dr. Richard B. Setlow, Biology Division, Oak Ridge National Laboratories, Oak Ridge, Tennessee.

Dr. Philippe Shubig, Director, The Eppley Institute for Research in Cancer, University of Nebraska, Omaha, Nebraska.

Professor Melvin Calvin, Director, Laboratory of Chemical Biodynamics, Lawrence Radiation Laboratory, Berkeley, California.

Dr. Thomas P. Nigra, Clinical Associate, National Cancer Institute, National Institutes of Health, Bethesda, Maryland.

As a result of this inquiry by the National Cancer Institute experts and the men they brought in, this is what Dr. Gori found:

The upper and lower estimates of new cases that may be expected as a consequence of the operation of 800 commercial SSTs are as follows:

[In percent]

| | Low | High |
|---|---|---|
| Ozone reduction | 1 | 3 |
| UV radiation increase | 5 | 27 |
| Estimated annual increase in new skin cancer cases in the United States | 11,500 | 62,000 |

The probable increase could rest between the given figures, but I should emphasize that the upper limit may be a conservative estimate if, as it is reasonable to believe, the dose/response relation is more than one to two.

Then, another man who was consulted was Dr. Reid A. Bryson, director of the Institute for Environmental Studies, University of Wisconsin, Madison, Wis. He made a very concise response:

First, with regard to James E. McDonald, himself, I have known him for years, and spent a year at Arizona with him. He is the most meticulous, thorough scientist I know and is generally so regarded by his profession.

Second, I find his atmospheric arguments sound.

Third, Dr. Van R. Potter of the United States, one of the world's leading cancer experts, has read the testimony with regard to ultraviolet and skin cancer. He says it is an absolutely sound argument based on the best evidence available. He will write a note to this effect, which I will forward to you.

Then, Dr. Frederick Urbach, Temple University, Health Sciences Center, Philadelphia, Pa., wrote:

Since, as Dr. McDonald and many others have pointed out, it is the ozone layer in the atmosphere above the earth which is primarily responsible for determining the amount of biologically effective ultraviolet radiation reaching man, it is obvious that any reduction in total ozone content will result in an increase of the intensity and amount of ultraviolet radiation reaching the ground and eventually an increase in the incidence of skin cancer in man. . . .

The quantitative amount of change in ozone at this point is rather speculative and our best estimates suggest that a decrease of 1 percent in the ozone layer might result some years later in an increase in skin cancer of the order of 10,000 to 15,000 new cases per year in the United States. . . .

In summary: While the potential problem resulting from a reduction in atmospheric ozone is very real, knowledge of these environmental changes allow enough time lead to carry out appropriate studies which can result in a fairly complete prevention of this problem before it would ever arise.

That is the opinion of Dr. Urbach. He may be right and we hope and pray he will be. His argument is that if we use our good sense, preventive medicine, and take the precautions we should, we can prevent skin cancer. I would not be one who would be willing to say the odds are 1 to 10 that we will. We could have done it, I hope we do it, and if we do not do it it seems clear that the opinion of this man, together with others, is that the SST might increase incidents of skin cancer on the order of 10,000 to 15,000 new cases a year.

Mr. MAGNUSON. Mr. President, I wish to place in the RECORD some documents relating to the subject which the Senator from Wisconsin has raised. These are documents by very distinguished scientists. I could name them and state the degrees they have. They have reputations and educational backgrounds that would qualify them to discuss and dispute some of the conclusions raised by the Senator from Wisconsin.

At this point I want to place in the RECORD evidence of how difficult it is to get the scientists, who admit they know very little about this subject, to come to any conclusions.

I wish to ask the Senator from Wisconsin this question. Of course, all of us know that ultraviolet rays can cause skin cancer. That has been common

knowledge for a long time. People who stay in the sun too long are more susceptible to it than others, but there is no evidence that I know about that would suggest that this airplane will actually enhance those possibilities.

The different seasons of the year, the differences in the north-south latitude the differences in the weather, and even sunspots will change the amount of ultraviolet that reaches the earth in a given day and sometimes in a yearly cycle. There is more susceptibility to ultraviolet according to skin color and according to local weather conditions. In some areas it is not much of a problem, but there is nothing to suggest and particularly there has not been any valid, conclusive evidence to suggest that the SST will actually cause additional cases of skin cancer.

I know these people are concerned about it and no one is more concerned about cancer than I am.

Mr. PROXMIRE. Mr. President, will the Senator yield at that point?

Mr. MAGNUSON. I shall yield in a moment. I will speak out again later on my own time.

I think it was shocking, and I said so, that these people did not come before the Appropriations Committee. We gave everyone ample notice. The Senator from Wisconsin had a chance to bring Dr. James McDonald before the committee, if he wanted, as his witness. I would have even agreed to a longer hearing for that purpose.

But the implication is being made that people who are for the SST might be implicated also as being for cancer. I established the Cancer Institute; I was the author of it enabling legislation back in 1938. I do not know how many millions of dollars I have appropriated, as a member of Committee on Appropriations, for the Cancer Institute. I have some other personal reasons for being against cancer, too.

I do not want there to be any implication that we who are for American air superiority and for the SST are "soft on cancer." I would be the first one to oppose the SST, if I thought some of these things were actually true. I think the Senator should have brought Dr. McDonald in and he could have brought in other scientists, too; so that the committee members could have cross examined these scientists.

The Senator referred to Dr. McDonald as his expert. I do not question his sincerity. I was a little bit skeptical of Dr. McDonald when he suggested that flying saucers caused a blackout in New York and that flying saucers were manned by humanoids. I would like to put in the RECORD a statement which indicates Dr. McDonald's views on flying saucers and UFO's.

That does not mean he is insincere. Everybody is working on cancer. I suppose that to the Senator from Wisconsin, the Senator from Illinois, the Senator from California, and all of those of us on the floor, one of the happiest days of our lives will be the day we pick up a newspaper some morning with a headline, "Cure Found for Cancer." That would be the greatest headline for all mankind that we could ever read.

The Senator from Wisconsin could stand here for 20 days or 30 days, and I could get one fellow to say one thing, and another fellow would say the opposite, and we would not know any more when we got through than we know now. I suppose that is one of the reasons I want to find out the answers by building the SST.

I do not disagree with the dedication and sincerity of the persons the Senator names. We have some others who say just the opposite.

I hope the Senator will disavow any implications that those of us who are for the SST do not care whether it causes additional skin cancer cases; which I do not honestly believe it will.

Mr. PROXMIRE. Mr. President, of course I have not said that, but there is the hard fact that leading scientists, with the most competent qualifications, have the opinion that a large fleet of SST's very likely will increase the incidence of skin cancer.

Mr. MAGNUSON. Why did not the Senator bring these people before the committee?

Mr. PROXMIRE. I would have, but we did not have Dr. McDonald's testimony. He testified before the House committee. After that, we sent his testimony to the other experts. We did not get their replies back until after the Senate committee met.

Mr. MAGNUSON. I will put in the RECORD what Dr. McDonald said when he was talking about flying saucers. He talked about humanoid occupants of flying saucers and went on to say it caused the blackout on the eastern seaboard. I will put it in the RECORD. Maybe he is right. I do not think many scientists agree with him on that subject.

Mr. PROXMIRE. The scientific community overwhelmingly rejected his conclusion or his opinion about nonterrestrial life being on flying saucers.

The PRESIDING OFFICER. The time of the Senator from Wisconsin is running. Is there objection to the unanimous-consent request of the Senators from Wisconsin?

Mr. MAGNUSON. Mr. President, I will yield some of my time.

The PRESIDING OFFICER. There was a unanimous-consent request by the Senator from Wisconsin. Is there objection?

Mr. PROXMIRE. Does the Senator from Washington consent to my unanimous-consent request?

Mr. MAGNUSON. I will as soon as I am through.

The PRESIDING OFFICER. Does the Senator from Wisconsin yield?

Mr. PROXMIRE. I yield.

Mr. MAGNUSON. I shall be through in a minute.

I am a great devotee of the New York Times. I read the Sunday Times thoroughly, and I get many ideas from it; but I want to point out that 1 week before the Wright brothers took off in an airplane at Kitty Hawk the New York Times editorially advised Samuel Langley, one of the Wright brothers' chief competitors, to turn his talents to "more useful employment." At that time people believed that. They did not think people could fly. They believed that man was not created to fly. He was not born with wings; therefore, he should not fly.

It just goes to show that so many things are pure speculation.

I cannot challenge scientists. I am not a scientist. But I know they poohpoohed many things, because there were some unknowns involved.

The Panama Canal would never have been built if the editorials had been heeded and if Theodore Roosevelt had not gone ahead to have it done.

Mr. Edison was told to stay out of New York because electricity might do harmful damage to pregnant women and might even electrify them.

Two circuses were in my childhood, great competitors. There was great rivalry between Barnum & Bailey and Ringling Bros. Mr. Barnum advertised that he was going to bring his circus to New York and he was going to have, lo and behold, electric lights. His competitors said, "Do not go. You will all get electrified and there will be horrible physical results from electric lights. Go to the circus that only has lamps."

All of this is a part of our history. We could name many other such instances.

So what we are talking about in these matters are unknowns. I could get just as many people, if I wanted to, to state the opposite of what is being alleged about the impact of the SST, but it would not prove anything. We could put all the experts in this room and they would just get into an argument about these matters. This is true of the debate on almost any new technology.

Some people may suggest that progress is a relative term; it depends on how one looks at it. I have been involved in problems of environment for years. I think the Commerce Committee, of which I am chairman, has passed more bills relating to the environment than has any other committee of the Congress. Now a new joint committee is going to consider such matters.

I do not discount what the Senator from Wisconsin has said. If I thought it was true, I would join him tomorrow. I might get a chapter in "Profiles in Courage" if I did, but I would join him if I thought it was true.

Mr. President, I ask unanimous consent to place in the RECORD Dr. McDonald's statement on flying saucers.

There being no objection, the statement was ordered to be printed in the RECORD, as follows:

STATEMENT BY DR. MCDONALD

On July 29, 1968, when Mr. McDonald appeared as a panelist on a UFO symposium sponsored by Congressman J. Edward Roush, of the House Science and Astronautics Committee he distributed a prepared statement on UFO creatures. I want to quote verbatim the whole paragraph.

"An extremely unusual category of cases, those involving reports of humanoid occupants of landed UFO's. . . . I have tended to skirt such cases on tactical grounds; the reports are bizarre. . . . For the record, I should have to state that my interviewing results dispose me toward acceptance of the existence of humanoid occupants in some UFOs. . . . My efforts over the past two years being aimed at arousing a new degree of scientific interest among my colleagues in the physical sciences, have led me to play down even the little that I do know about occupant sightings. One or two early attempts to touch upon

that point within the time limits of a one-hour colloquium taught me that one loses more than he gains in speaking briefly about UFO occupants. . . . But occupants there seem to be, and contact (with them) of a limited sort may well have occurred. . . ."

Mr. MAGNUSON. I ask unanimous consent to have printed in the RECORD a letter written by Martin Van Buren, Governor of New York, to President Andrew Jackson on January 1, 1829, in which he said, among other things:

"Railroad" carriages are pulled at the enormous speed of 15 miles per hour by engines, which in addition to endangering life and limb of passengers, roar and snort their way through the countryside, setting fire to the crops, scaring livestock and frightening women and children. The Almighty never intended that people should travel at such breakneck speeds.

There being no objection, the letter was ordered to be printed in the RECORD, as follows:

DEAR MR. PRESIDENT: The canal system of this country is being threatened by the spread of a new form of transportation known as "Railroads". The Federal Government must preserve the canals for the following reasons:

1. If canal boats are supplanted by "Railroads" serious unemployment will result. Captains, cooks, drivers, hostlers, repairmen and lock tenders will be left without means of livelihood, not to mention the numerous farmers now employed in growing hay for horses.

2. Boatbuilders would suffer and tow line, whip and harness makers would be left destitute.

3. Canal boats are absolutely essential to the defense of the U.S. In event of the expected trouble with England, the Erie Canal would be the only means by which we could ever move the supplies so vital to waging modern war.

For the above mentioned reasons, the Government should create an Interstate Commerce Commission to protect the American people from the evils of "Railroads" and to preserve the canals for posterity.

As you may know, Mr. President, "Railroad" carriages are pulled at the enormous speed of 15 miles per hour by engines, which in addition to endangering life and limb of passengers, roar and snort their way through the country side, setting fire to the crops, scaring livestock and frightening women and children. The Almighty never intended that people should travel at such break-neck speeds.

MARTIN VAN BUREN.

Mr. MAGNUSON. I am sure Van Buren believed that, but if it had not been for the railroad, people would not have been able to get west of the Mississippi. I would never have made it. I would have had to wait for the ice to come to walk across.

A lot of these matters are speculative, and we have to learn about them. The success of America is due to the fact that we have said, "Let us go ahead and find out." When we did not find out, we moved on. That is the case here.

I thank the Senator from Wisconsin and the Senator from California. When the Senator from California is through, I want to put into the RECORD the number of jobs involved in California and the fact that nearly $6 billion of procurement potential exists to the State of California if the SST is produced. That certainly will create a lot of jobs for California's aircraft subcontractors.

Mr. PROXMIRE. Mr. President, before I yield to the Senator from California, let me say that the opinion of Dr. McDonald with respect to extraterrestrial life on flying saucers is well known in the scientific community. The overwhelming majority of the scientific community disagree with him. But they say this is typical of Dr. McDonald. He does not care if it affects his reputation; he speaks honestly. It is characteristic that he would have that kind of opinion even if he thought it might affect the attitude of his colleagues.

However, when we get down to the testimony of a man selected by the panel of the National Academy of Sciences to look into the possible effects of the SST's on skin cancer, and then take what he says and give it to the leading meteorologists and leading skin cancer specialists in the country and ask their opinion of Dr. McDonald's findings, and they go so overwhelmingly on the side that he has taken, what are we supposed to do? Say, "At one time he had an opinion about flying saucers with which I do not agree, and therefore he is a nut and I will not accept it"?

It seems to me it is perfectly obvious that we should take the opinion of experts in a scientific area where we are not qualified. I am not qualified, and the Senator from Washington is not qualified, as a meteorologist or a skin cancer specialist. We guess, unless we take the opinion of those who are.

Mr. MAGNUSON. I shall put the names of other experts in the RECORD.

Mr. PROXMIRE. I have gone to the National Cancer Institute, in which the Senator from Washington says he has great faith, and have asked the Associate Scientific Director, who says he has consulted the leading meteorologist, the leading skin cancer specialist, and other leading experts in the area, and they say Dr. McDonald is too conservative. They say it is not 5,000 or 10,000 cases, it is 11,000 to 66,000 cases. That is their opinion.

I have gone to a number of scientists who do not agree with Dr. McDonald, but none of them are sure. I do not know. Nobody knows. But they say the evidence is sufficiently persuasive and circumstantial to persuade us that we should not go ahead until we have much further research; that we do not need the prototypes for that kind of research; and that, furthermore, we probably are not going to get the answers for a number of years—long after we would have gone into production on the SST's if we continue this program.

That is why this is relevant, and why it makes sense. The Senator can say, "Oh, in the past, if we had listened to Martin Van Buren, we never would have built the railroads." But I say that when people come up with technology that may be polluting the environment, we should go to the scientists and get their opinion.

To say that because one of the scientists had a view which was unpopular and probably wrong about unidentified flying objects, therefore everything else he says for the rest of his life is wrong and should be derided or ridiculed, does not make much sense.

Mr. MAGNUSON. I never said he was right or wrong. I said we do not know.

Mr. PROXMIRE. Well, the Senator brought up to the fact that this man at one time talked about unidentified flying objects and that they probably had extraterrestrial life on them, which I think is probably an absurd conclusion and probably wrong, and most of the people in the scientific community come to the same conclusion; but I say that should not disqualify him in these other areas, when what he has found is submitted to the scientific community and they come up with the preponderant opinion that Dr. McDonald's estimates are probably correct, and conservative.

Mr. MAGNUSON. Mr. President, I ask unanimous consent to have printed in the RECORD following the colloquy a report made by Dr. Fitzpatrick and Dr. Pathak on the subject we have been discussing.

There being no objection, the report was ordered to be printed in the RECORD, as follows:

SOLAR RADIATION AND SKIN CANCER: A BRIEF REVIEW

SOLAR RADIATION AND SKIN CANCER: STATEMENT OF THE PROBLEM

There are more than twenty-five disease entities that are either caused by or aggravated with exposure of the skin to sunlight. These range from the degenerative and neoplastic changes to the discomforts associated with drug induced photosensitivity reactions. The enclosed table (17–4) abstracted from the chapter entitled "Normal and Abnormal Reactions of Man to Light," by M. A. Pathak and J. H. Epstein (in *Dermatology in General Medicine*, T. B. Fitzpatrick et al, eds., McGraw-Hill Book Co., New York, April 1971, in press) includes diverse diseases with varied mechanisms responsible for abnormal reactions to light in man.

The importance of the biological effects of solar radiation can hardly be overlooked. Many thousands of working hours are lost yearly to industry because of discomforts and pain associated with sunburn. Several thousand cases of disabling drug photosensitivity reactions are recognized each year in the United States. These involve adverse cutaneous reactions such as exaggerated sunburn response, edema, papules, vesicles, acute eczematous or urticarial reactions. In most cases these abnormal responses are evoked by sunlight in the presence of an exogenous agent that was applied topically or administered orally. Aging of the skin, what is commonly referred to as "actinic elastosis", is undoubtedly induced by ultraviolet radiation, particularly in fair-skinned individuals who easily sunburn. It is estimated that approximately 150,000 basal cell carcinomas and 40,000 squamous cell carcinomas occur in the continental United States each year (in National Program for Dermatology, a report prepared by the Joint Committee on Planning for Dermatology, The American Academy of Dermatology, Inc., 1969). In direct surveys of the population in Australia, Gordon and Silverstone have collected reliable data on the occurrence of keratoses and skin tumors (Med. J. Australia, p. 312, March 2, 1968; and p. 733, October 15, 1966). Their data show that of all the males in Queensland, Australia (latitude 10–30° S), 25% have, or have had one or more skin cancers at the age of 65.

We shall confine our comments to the degenerative and neoplastic conditions associated with solar radiation and include (a) basal cell carcinoma, (b) squamous cell carcinoma, (c) malignant melanoma, (d) senile keratoses, and (e) chronic actinic damage.

SOLAR RADIATION AND HUMAN SKIN PROBLEMS

It is fortunate that man lives on a planet that is not reached by wavelengths shorter than 295 nm. Wavelengths of 295 nm and shorter, whose energy content of the photons

is more than 95 k Cal/mole of quanta, can damage skin tissue severely (erythema and desquamation), they can induce mutation, denature proteins and enzymes, inhibit DNA, RNA and protein synthesis, evoke dimerization in nucleic acids and alter the enzymes essential for replication and regeneration of skin cells. The entire photobiologic spectrum (295–700 nm) contains about 75% of the sun's radiant energy; for the most part, this radiant energy is biologically either useful or innocuous in that it promotes such orderly chemical reactions such as vitamin D synthesis, pigment darkening, and melanogenesis (formation of new melanin pigment). Human skin can utilize a large part of this solar energy without appreciable injury; within this broad spectrum, however, there is a band of radiation between 295 and 320 nm, that is capable of inducing cutaneous sunburn, carcinogenesis, and phototoxic and photoallergic reactions that may evoke abnormal manifestations as urticaria, edema, and vesicular, purpuric, papular and eczematous lesions of the human skin.

CARCINOMA AND OTHER CHANGES INDUCED BY PROLONGED EXPOSURE TO SOLAR RADIATION

Epidemiologic evidence clearly implicates solar radiation as a factor in the induction of human skin cancer (Blum, H.F., *Carcinogenesis by Ultraviolet Light*, Princeton University Press, Princeton, N.J., 1959; Urbach, F., in *Advances in Biology of Skin*, Vol. VII, Carcinogenesis, W. Montagna and R. L. Dobson, eds., Pergamon Press, Oxford, 1966; Gordon, D. and Silverstone, Med. J. Australia, p. 312, March 2, 1963, and p. 733, Oct. 15, 1966; Silverstone, H., Skin Cancer in Queensland, Australia, in "Report of the Airlie House Conference on Sunlight and Skin Cancer," National Institute of Health, Bethesda, Md., 1964). The demographic evidence that sunlight may be a cause of the cancer of the skin is based on long-standing clinical impressions which may be summarized as follows:

1. Cancer of the skin occurs more frequently on those parts of the body habitually exposed to sunlight. In fair-skinned, "white" Caucasoids who easily sunburn, these cancers are limited almost exclusively to the exposed parts, especially the face, head, neck, arms and hands. Negroid skin, on the other hand, is remarkably resistant to the development of skin cancer of the exposed surfaces. A similar resistance to skin cancer of the exposed surface is seen among the pigmented Caucasoids, American Indians, and other races such as Orientals (Urbach, F., in *The Biology of Cutaneous Cancer*, Monograph No. 10; National Cancer Institute, 1963). Basal cell carcinomas are relatively uncommon in pigmented races living around the equator. Those cancers that are reported in these people (squamous cell carcinoma) are most commonly observed on lower extremities and trunk, and have different etiology and are not related to the solar exposure.

2. Cancer of the skin is more prevalent among outdoor workers (farmers, sailors, etc.). An estimate of the incidence rate of basal cell epitheliomas at the New York Skin Cancer Unit (Gellin et al, in *Advances in Biology of Skin*, Vol. VII, Carcinogenesis, W. Montagna and R. Dobson, eds., Pergamon Press, 1965) indicated that there was 25% greater incidence among men than among women. This preponderance is obviously related to more hours of outdoor exposure due to vocation or sport.

3. *Distribution of Skin Cancer by Sex in Clinic Population.* The male: female ratio in skin cancer group shows an obvious male predominance. Studies reported by Gellin et al, in New York (in *Advances in Biology of Skin*, Vol. VII, Carcinogenesis, W. Montagna and R. Dobson, Pergamon Press, Oxford, 1965; also in Arch. Dermatology *91:* 38, 1965) revealed that the male incidence rate of basal cell epitheliomas was 18.9 per 1000; for females it was 13.8 per 1000, indicating a male : female ratio of 1:37:1. Data of Silverstone (Report of the Airlie House Conference on Sunlight and Skin Cancer, National Institutes of Health, Bethesda, Md., 1964) obtained by direct examination of all inhabitants of three small towns in Queensland, Australia also indicated an obvious male predominance.

4. *Distribution of basal cell epitheliomas.* Approximately 80–90% of basal cell epitheliomas occur on the head and neck, approximately 4–8% on the trunk and 1–12% on the extremities. The lesion of the head and neck are concentrated on the nose and central portions of the cheeks. In addition basal cell epitheliomas are by far the most common cancers of the eyelids; they are also more common on the lower lid than on the upper lid, and on the medial than the lateral canthal areas. The dorsa of the hands also appear to be more frequently involved than any other site on the limbs.

5. Degenerative changes of the skin (wrinkling, telangiectasia, keratoses) are significantly more frequent in white-skinned people living in areas where the intensity of ultraviolet radiation is greater. A survey by Eleanor J. MacDonald (J. Invest. Derm. *32:* 379, 1959, in *Tumors of the Skin*, Yearbook Medical Publication, Chicago, 1964) shows that the patients from El Paso County, Texas, where there is 80% possible sunshine, the prevalence of carcinoma was eight times higher than in patients from Hartford, Connecticut, where there is 59% possible sunshine.

The term solar (actinic) degeneration implies a group of changes in the skin of the exposed areas and includes wrinkling, atrophy, hypermelanotic macules, telangiectasia, yellow papules and plaques and keratoses. The furrowed and leathery condition of the skin is seen particularly in persons who have fair skin, poor tanning ability, and who are constantly exposed to the sun such as sailors, dock workers, farmers, etc. The most conspicuous and characteristic structural change in the skin involves alteration of connective tissue (elastin as well as collagen). Biochemical studies also have demonstrated the profound irreversible changes in chronically sun-exposed skin. Sun-damaged skin has markedly increased ground substance, increased elastin, and deceased collagen. Sunburn producing spectrum (290–320 nm) is undoubtedly responsible for the elastotic changes; however, long wavelength ultraviolet and possibly visible radiation (320–420 nm) that can penetrate deeply in the dermis, are also involved in evoking elastotic changes.

6. *Ethnic Origin and the Prevalence of Skin Cancer.* Several studies carried out in the United States and elsewhere (particularly in Australia and Ireland) based on the distribution of local population have indicated that people of Celtic ancestry develop skin cancer earlier and more frequently than expected. Australia has the highest prevalence of skin cancer in the world. The population is largely descendant from British stock with about ¼ Celtic, i.e. of Irish, Scottish and Welsh extraction in whom there appears to be a disproportionately high incidence of skin cancer. It has been shown that those persons most commonly afflicted with skin cancer in Australia are those that have fair skin with freckles who do not tan on exposure to the sun but who easily burn and are largely of Celtic extraction. Similar findings have been confirmed in the United States by Dr. Urbach (Philadelphia), E. J. MacDonald (Texas) and by Dr. Lane-Brown, in Massachusetts.

The following tables abstracted from Dr. F. Urbach's publication entitled "Geographic Pathology of Skin Cancer" (in *The Biologic Effects of Ultraviolet Radiation*, F. Urbach, ed., Pergamon Press, 1969) illustrate apparently the high frequency of skin cancer in patients of Celtic antecedents.

TABLE I.—PREVALENCE OF SKIN CANCER BY ETHNIC ORIGIN [1]

| Country of origin | Percent expected | Percent found |
|---|---|---|
| Irish | 3.45 | 25.5 |
| Italian | 8.3 | 11.9 |
| German | 3.9 | 9.5 |
| Russian | 5.0 | 7.7 |
| English | 4.6 | 6.9 |

[1] Experience of the Skin and Cancer Hospital Tumor Clinic, 325 patients. Expected percentage bases on "foreign born" category of 1960 decennial census for Greater Philadelphia.

TABLE II.—PREVALENCE OF SKIN CANCER BY ETHNIC ORIGIN (DATA OF SILVERSTONE)—ANCESTRY AND INCIDENCE OF CANCERS

| Ancestry | Percentage with cancers | | | | | |
|---|---|---|---|---|---|---|
| | Julia Creek 18°S | | Tully 19°S | | Caboolture 27°S | |
| | Males | Females | Males | Females | Males | Females |
| Maternal and paternal ancestry both Scot and Irish | 32.4 | 21.9 | 10.9 | 6.3 | 9.3 | 9.8 |
| 1 Scot or Irish, the other Australian, North European | 16.4 | 10.0 | 29.5 | 16.4 | 12.7 | 6.5 |
| Both Australian, both North European, or 1 of each | 14.9 | 8.3 | 24.4 | 12.8 | 7.5 | 4.3 |
| 1 Mediterranean, South American, etc.; the other Scot, Irish, Australian, or North European—1 Scot, Irish, Australian, North European; the other Asiatic, Aboriginal or other pigmented type. Also, both Mediterranean or South American—1 Mediterranean or Asiatic; the other Asiatic or Aboriginal—both Aboriginal | 0 | 0 | 1.4 | 1.4 | 0 | 0 |

Note: Report of Airlie House Conference on Sunlight and Skin Cancer, National Institutes of Health, Bethesda, Md., 1964, analyzed and interpreted by Dr. F. Urbach (in Biologic Effects of Ultraviolet Radiation, Pergamon, Press, Oxford, 1969).

7. *Relationship between Latitude and Prevalence of Cutaneous Cancer.* The data assembled by Dr. Harold Dorn of the National Cancer Institute (Public Health Reports 59: 33–68, 65–77, 97–115, 1944) is interesting in this regard. The most northern group included cities of Chicago, Illinois; Detroit, Michigan; and Philadelphia and Pittsburgh, Pennsylvania. The southern-most group includes Atlanta, Georgia; Birmingham, Alabama; New Orleans, Louisiana; and Fort Worth and Dallas, Texas. The middle latitude group included Denver, Colorado and the San Francisco Bay area, California. Skin cancer in both men and women showed a definite relationship between latitude and the incidence; it was much higher in the South than in the North and appears to be related to the spectral character of sunlight and its variation with latitude. Similar findings have been compiled by Dr. Eleanor Mac-

Donald of Texas. It should be realized that the variation of ultraviolet light (wavelengths shorter than 3200 A) with latitude is more than the variation of total sunlight. Dr. Frederick Urbach has published recently (in *The Biologic Effects of Ultraviolet Radiation*, F. Urbach, ed, Pergamon Press, Oxford, 1969) the prevalence ratios of squamous cell carcinoma (SQCC) to basal cell carcinomas by latitude. The following table abstracted from his publication illustrates the relatively greater increase in prevalence of SQCC with decreasing latitude and increasing exposure.

| Origin of data | Latitude | Probable exposure | Ratio SQCC BCC |
|---|---|---|---|
| Stockholm | 59°N | Great | 0.21 |
| Sheffield | 53°25'N | Small | .07 |
| Bristol | 51°30'N | Moderate | .17 |
| Plymouth | 50°20'N | do | .22 |
| W. Cornwell | 50°10'N | Great | .30 |
| New York State | 44–42'N | Moderate | .21 |
| Philadelphia | 40°N | Small | .09 |
| Houston | 29°30'S | Great | .55 |
| Perth | 32°S | do | .5 |

The differences in the observed prevalence of skin must also relate primarily to the relative exposure conditions (total exposure or combination of total exposure and duration). In this regard the data of Gordon and Silverstone obtained by direct examination of all inhabitants of three small towns in Queensland, Australia, are worth noting (Med. J. Austrl., p. 312, March 2, 1963, and p. 733, Oct. 15, 1966). These investigators collected data on the occurrence of keratoses and skin tumors in persons who have lived in one of three different areas for more than 20 years. Personal characteristics such as ancestry, occupation and spare time activities have been shown to be fairly uniform for the three regions: Cloncurry (Julia Creek, located inland at 18° S); Tully (located on seacoast, latitude 19° S); and the Brisbane (Caboolture, located on seacoast, latitude 27° S). Examination of the records for the Cloncurry (Julia Creek, 18° S) and the Brisbane (Caboolture) areas, one is amazed to notice that at age 65 years more than twice the percentage of the population at Cloncurry relative to Brisbane have a history of one or more skin tumors. At age 30–45 years, Cloncurry reports a skin tumor frequency which is more than three times that near Brisbane. Thus, at any age, people of Cloncurry which is near to the equator will show at least three times as many tumors per person as Brisbane which is 27° S.

8. *Wavelength Dependence.* The wavelength limit for carcinogenesis by ultraviolet light has been established at about 3200 A. (Blum, H. F. *Ultraviolet Carcinogenesis*, Princeton University Press, Princeton, N.J. 1959). Wavelengths between 2400–3130 A radiation are generally considered to be carcinogenic. The relative effectivenes of 2537 A radiation in inducing tumors of the skin in mice is considered to be less than the wavelength range of 2650 to 3130 A. There has been no deliberate production of ultraviolet-induced carcinoma in human beings. Extensive experimental investigations have examined various aspects of ultraviolet-light induced carcinogenesis, including dermal-epidermal interaction, time-dose relationship, the influence of temperature and other physical modalities, the relative protective roles of melanin pigment and the stratum corneum, and more recently the relationship between sunlight and etiology of malignant melanoma. Correlation of these experimental findings with sun-induced human skin cancers can be only inferential; however, the evidence for a casual relationship of sunburn evoking natural ultraviolet radiation (2900–3200 A) to the prevalence of human squamous cell carcinoma and basal cell epitheliomas is overwhelming.

Special dependence of DNA by ultraviolet light in bacterial system occurs maximally in the range of 260mm (2600 A) and the action spectra for bacteria (lethality and mutation) fit rather closely to the absorption spectra for bacterial DNA, suggesting that photons absorbed by DNA (250–260 nm) are responsible for the cellular damage. The action spectra studies with mammalian cells indicate that the maximum sensitivity is in the range of 270 nm and do not give any clear indication of the sensitive target for the ultraviolet light effects; both DNA and protein are implicated. Recent investigations in our laboratory on the formation of thymine dimers by ultraviolet light in vivo on mammalian skin suggest that wavelengths between 2850–3200 A, which are less absorbed by ozone, do indeed evoke thymine dimers in DNA. Thus even if ozone concentration is reduced by one percent, or increased by one percent, there is no way we can reduce the effects of 290–320 nm radiation unless we artificially protect the skin by topical sunscreens. The wavelength dependency of carcinogenesis has also been investigated. It is not at 2800 A. Although the precise action spectra studies with monochromatic radiation are lacking, the experimental evidence does not favor 2800 A radiation for carcinogenesis; wavelengths between 2900–3200 A that evoke sunburn response are indeed carcinogenic. The question therefore resolves on: (a) whether depletion of ozone results in increased penetration of 2900–3100 A radiation, and thus leads to increased carcinogenesis; and (b) is the carcinogenesis related primarily to the alteration in DNA produced by ultraviolet radiation or inability to carry out the repair of the damage evoked in the DNA (due to either the lack of or reduced levels of excision-repair enzyme).

9. *Sunlight as a factor in the aetiology of malignant melanoma.* The available data on age, sex, complexion, latitude of residence and personal exposure to sunlight as factors in the aetiology of melanoma have been recently collected by Lee and Merrill (Med. J. Australia, Oct. 31, 1970, p. 846). A solar circulating factor was proposed by these investigators as the agent responsible for the high incidence of melanomas. The data on the incidence of malignant melanoma of skin by site per million of population per year was gathered for Denmark (latitude 54–58°N), Southwest England (50–52°N), Connecticut (41–62°N), New Zealand (35–46°S) and Queensland (12–39°S). Within the same geographic area, patients with malignant melanoma tend to have a lighter complexion and to spend more time out of doors than controls.

### THE DEPLETION OF ULTRAVIOLET RADIATION BY ATMOSPHERIC OZONE

The lowest wavelength of solar radiation recorded at sea level, even at the time of high solar elevation, is about 290 nm. Although in space at altitudes above 40 km one can find ultraviolet up to 200 nm at sea-level, however, there is practically no radiation below 295 nm. This sharp cut off between the sea level and extraterrestrial distribution in the ultraviolet spectrum is largely, if not exclusively, due to the absorption of the radiation by ozone. Thus ozone is a very strong absorber for wavelengths to which the oxygen of the atmosphere is quite transparent and is, therefore, one of the most essential ingredients of our outer atmosphere for the absence of radiation shorter than 295 nm at the surface of our earth. The significant spectral regions for ozone absorption in the ultraviolet spectrum are the adjoining Huggins bands (320–360 nm) and Hartley bands (220–320 nm). The maximum absorption band is at 255 nm (Howard, J. N. et al, *Handbook of Geophysics*, Macmillan and Co., New York, 1960). A layer of approximately 0.1 mm thick of pure ozone, at standard temperature and pressure, would reduce 255 nm radiation to one-half its intensity as it penetrates the ozone layer.

The amount and kind of solar radiation that reaches a given part of the earth at any given time are determined by great variety of factors, such as latitude, time of day, season, geographic altitude (elevation above sea level) local atmospheric conditions (cloudiness, haze, smoke, dust, fog, humidity, aerosol particles, etc.) and the thickness (quantity) of the ozone layer in the stratosphere. The intensity of sunlight is primarily a function of the height of the sun above the horizon but is also related to the differences in the distance between the sun and the earth and to changes in the atmosphere.

*Ozone Variation.* Ozone is a normal constituent of the earth's atmosphere and is formed photochemically as a result of absorption of ultraviolet energy by molecular oxygen and its subsequent dissociation. Ozone can be destroyed in the free air by photochemical dissociation mechanism or by collision with atomic oxygen. But this process of dissociation is usually operating above 25 km; below 25 km the ultraviolet radiation necessary for photodissociation of $O_3$ (the Hartley bands) and oxygen atoms are almost lacking. Thus ozone molecules have relatively long life at altitudes below 25 km. It is also important to bear in mind that the total amount of ozone in the earth's atmosphere has large seasonal and geographic variation. Ozone concentration is reported to be maximum during spring and minimum during the fall season. Furthermore, the total amount of ozone and the seasonal range increases with increasing latitude. Data of the geographic distributions and of the seasonal and latitudinal variations concerning ozone concentration have recently been discussed by London (London, J., Beitr. Phys. Atmosphäre *36:* 254, 1963; Space Research 7, 1967).

Worldwide distribution of ozone at different levels and its variation with season have been studied by Dütsch; Hering and Borden and London (Dütsch, H. U., National Center for Atmospheric Research 1–34, 1964; Hering, W. S. and Borden, T. R., Jr., Environmental Research Papers No. 162, Air Force, Cambridge Research Laboratories 19 pp. 1965; London, J., in Proceedings of the Seventh International Space-Science Symposium, COSPAR, Vienna, Space Research 7, 1967). The vertical distribution of molecular ozone density for the equator and 45° latitude, for both summer and winter, has been estimated by London. His data indicate that the region of significant ozone concentration is between 10–40 km, with a maximum in the lower stratosphere (20–25 km) where the ratio is about 10 ppm (ozone density about $6 \times 10^{12}$ molecules/cm$^3$). The vertical distribution of ozone at 10 km, 20 km, 30 km and 40 km was respectively of the order of $5 \times 10^{11}$, $5 \times 10^{12}$, $5.5 \times 10^{12}$ and $8 \times 10^{11}$ molecules/cm$^3$. His data also indicates that ozone is produced in the equatorial stratosphere and transported to higher latitudes. Thus ozone concentration in terms of space, time, season and latitude appears to be variable and is governed by complex processes which among others include photochemical formation and dissociation, atmospheric circulation, meteorological transport processes, etc.

### THE DEPTH OF PENETRATION OF SOLAR RADIATION INTO THE ATMOSPHERE DUE TO VARIATION IN OZONE

Penetration through the atmosphere of direct solar radiation of wavelengths 300–320 nm is related to the variation in total ozone. The penetration depth of solar ultraviolet radiation has been computed by London (in *The Biologic Effects of Ultraviolet Radiation*, Pergamon Press, Oxford, 1969, F. Urbach, ed). In computing the spectral variation of the depth of penetration and transmission values of solar radiation for different wavelengths,

London's observations indicate that the ozone concentration does play a major role. If ozone concentration decreases, the quality as well as the quantity of ultraviolet radiation reaching the earth's surface would certainly be altered. More erythemogenic radiation (290–320) that is implicated in carcinogenesis would be reaching the earth's surface.

Ozone is not the only factor which is responsible for the absence of radiation shorter than 295 nm at sea level. Rayleigh-scattering by the gaseous molecules of the atmosphere is significantly responsible for attenuation of ultraviolet in the atmosphere. The radiation is scattered in all directions and the scattering is inversely proportional to the fourth power of the wavelength. Therefore, short-wave end of the spectrum is scattered more than the longer wavelengths. Rayleigh scattering is effective throughout the entire 8 km of the atmosphere.

In addition, the atmosphere contains numerous fine particles (aerosols) whose size may range $10^{2}$–$10^{-3}$ microns. Attenuation of solar radiation by aerosol is generally most effective in the few kilometer close to the earth's surface.

For wavelengths shorter than 3000 A attenuation coefficients of ultraviolet radiation by Rayleigh's law and by aerosols are comparable. The relative roles of these ultraviolet attenuating factors can be stated as follows:

1. Up to about 5 km above sea level aerosols play a significant role in attenuating ultraviolet radiation. The attenuating effect of aerosols becomes small at heights over 5 km.

2. The ozone content is maximum at 20 to 30 km. Above 40 km the ozone content decreases significantly and therefore attenuation of ultraviolet light above 40 km also becomes very small. Absorption of ultraviolet is therefore very significant up to 30 km.

3. Scattering of ultraviolet radiation by Rayleigh's law is significant at altitudes between 20 and 40 km. Above 40 km most of the attenuation of ultraviolet light is due to Rayleigh scattering.

These factors are pointed out primarily with a view to indicate that attenuation of short wavelength ultraviolet radiation will continue to play its role in filtering the harmful radiation. Gases and particles emitted into the stratosphere by S.S.T.'s would additionally contribute to such an attenuation.

One has to also bear in mind that the total amount of ozone has a large seasonal and geographic variation. Ozone concentration is believed to be maximum during the spring and less during the fall. Furthermore the total amount of ozone and the seasonal range increases with increasing latitude. Data of the geographic distributions and of the seasonal and latitudinal variations concerning ozone concentration have recently been discussed by London (London, J. Beitr. Phys. Atmosphere *36*: 254, 1963; in Proceedings of the Seventh International Space Science Symposium COSPAR, Vienna, Space Research 7, 1967). Thus it appears that ozone concentration, irrespective of S.S.T. effects, is variable in terms of space, time, season, latitude, and is governed by natural complex processes which among others include photochemical processes, atmospheric circulation, meteorological transport process, etc. The effect of the pollutants on solar ultraviolet energy and its day to variation will in a limited manner contribute to the filtering effect of erythemogenic radiation. It is hard for us, therefore, to entirely agree with the views presented by Dr. James McDonald of the University of Arizona for the following additional reasons:

1. The process of cancer induction by ultraviolet light appears to be cumulative and hence the total amount of exposure becomes a very important factor rather than a single or a few severe exposures. The increase in the habit of sunbathing in our affluent society alone (creating more actual sunshine hours) would tend to shift the incidence of cancer of the skin irrespective of whether the spectral quality of solar radiation changes as a result of S.S.T. fleet operations.

2. The cancers of skin, particularly basal cell epitheliomas and squamous cell carcinomas are curable conditions. Skin cancer accounts for, at the most, two percent of all cancer deaths.

Mr. PROXMIRE. Mr. President, I have discussed the reactions of outstanding skin specialists and meteorologists and others to the statement from the scientists from the National Academy of Sciences to the effect that the SST's could have an effect on the increase of skin cancer.

This is a very fundamental issue that goes beyond the SST. On the basis of the debate here and in the House when the matter came up before the House, the question is whether we are going to listen to the scientists when they speak on scientific subjects or deride them. The question is whether we should reject scientific opposition to a particular kind of technological effort on the ground that technology is always right, that we do not care what scientists say, that we believe in technology and we should go ahead without asking people who are qualified to give an opinion on the subject.

In my opinion, that is very shortsighted. There are Senators who say they are outraged that we are bringing up this subject of skin cancer. It is beyond me how anyone could be outraged because we are bringing up an issue gone into by the National Academy of Sciences and by a preponderant portion of the experts on the subject who say that they generally agree with Dr. McDonald but that they think he is too conservative on this issue.

Senators say they are outraged. What do they want us to do? Do they want us to bury the evidence, the expert opinion and forget it because it affects human life and they say it is too emotional and too vital an issue to be discussed on the Senate floor?

That attitude makes no sense to me. However, it is an attitude that certain Senators seem to sincerely believe.

I do not know what we can do with this kind of a situation except meet it head on and talk directly about it. That is why I want to go ahead and put into the RECORD opinions of other distinguished experts in this field.

Dr. Harold F. Blum, professor of biology at the State University of New York, Albany, N.Y., said:

You now send me a copy of a statement by Dr. McDonald; but it is still not altogether clear to me on what basis his estimates were made. I can only state again that with the evidence available there is every reason to expect that an increase in ultraviolet radiation due to reduction of ozone in the stratosphere would result in an increase in the incidence of skin cancer. This would apply particularly to a susceptible portion of the white population.

Prof. John B. Heywood, associate professor of mechanical engineering at the Massachusetts Institute of Technology, Cambridge, Mass., said:

As to the usefulness of the two SST prototypes in evaluating these large-scale atmospheric effects, both Boeing and DOT scientists agreed with the meteorologists present at these discussions that the primary purpose of the prototypes is obviously to test vehicle performance and that emissions into the stratosphere during testing would be much too small to shed any light on possible large-scale changes which might occur if the projected SST fleet was in operation.

This is a critical point, because those who favor the SST say we need the prototype to determine whether the SST will be detrimental. The argument of the Boeing Co., and the Department of Transportation scientists is that they agree that the prototype will be useful in determining vehicle performance, but not in determining what effect a fleet of SST's will have on the atmosphere.

Dr. R. B. Setlow of the biological division, scientific director for biophysics and cell physiology of the Oak Ridge National Laboratories, Oak Ridge, Tenn., said:

DEAR SENATOR PROXMIRE: I am responding to your request for comments and reactions to Dr. McDonald's conclusion that a fleet of 800 SSTs could lead to a significant increase in the incidence of skin cancer in the United States. I agree with Dr. McDonald's conclusion.

Although I am not competent to judge the impact of SSTs on the ozone level in the atmosphere, I am competent to judge the effects of ozone on ultraviolet radiation and the effects of UV on biological systems since the latter has been my field of endeavor for the last twenty years.

Vincent J. Schaefer, director of the Atmospheric Sciences Research Center, State University of New York, Albany, N.Y., said:

I think that Dr. McDonald's testimony is a very honest summarizing statement of most of the effects that scientists believe do occur when a fleet of SSTs will be operated.

Some of those open questions are, as you are well aware—the stratospheric water vapor concentration and its seasonal as well as geographical variation around the globe, the ozone concentration, the aerosol concentration, the OH-radical concentration, the ultraviolet spectrum, etc. It is my belief that without true measurements we are unable, at the present time, to make any statement in which we could say, "it is beyond any shadow of a doubt that . . ."

I agree with my fellow scientists that the speculative arguments brought forth against the SST so far are more than sufficient to make a final decision on the SST dependent on the outcome of such a research program. Whether the speculative arguments are sufficient to ban the SST completely at the present time only because of its possible deteriorating environmental effect is, in my opinion, doubtful.

As far as skin cancer from enhanced ultraviolet radiation at ground level is concerned, I am unable to comment on this since I am not an epidemiologist. However, the arguments of Dr. McDonald sound convincing.

I might conclude by saying that our past neglect in exploring the stratosphere prior to any discussion of SST or HST operations, was highly disappointing to me. I believe that I was one of the scientists to raise this point years ago without success. We must do it now, and we must make any SST operation dependent on the outcome of such a research program.

The next letter was from Mr. E. A. Martell, National Center for Atmospheric Research, Laboratory of Atmospheric Sciences, Boulder, Colo. He stated:

Although our present knowledge of stratospheric chemistry and behavior is too limited to allow a reliable quantitative estimate of the decrease in ozone which will accompany a given increase in water vapor from SST exhausts, the decrease in ozone is very likely to be greater than Dr. McDonald's estimate. The residence time of water vapor and trace gases at 65,000 feet altitude may be significantly longer than 1.5 years, a value based on particle tracer studies. Such longer residence times will give rise to a larger increase in water vapor and thus presumably a larger decrease in stratospheric ozone. In addition, nitric oxide, another SST exhaust product, also reacts with ozone, decreasing its abundance. . . .

Therefore it seems to me to be very important for us to gain a much better understanding of the possible impact of SSTs on the stratospheric environment and the consequences of such changes on man before large numbers of SSTs are operable.

Then, two or three letters were exceptions. They were critical of Dr. McDonald. One such letter was from Dr. Julius London, professor, University of Colorado, Boulder, Colo. He stated:

It is my opinion that McDonald may have presented a too strong picture of the dangers attending an SST-water vapor-ozone-UV-skin cancer link, but the potential hazard is there and there is a sufficient number of scientists alerted and concerned so that given just a little time (I estimate approximately one year) a rational evaluation of this problem can be provided. . . .

I believe that water vapor variations in the stratosphere (of the type we are here concerned with) could affect variations in UV at the ground. These variations could be observed and may not at all be trivial.

Because of the need for multiple use of subjunctives in the statement above, I strongly urge support for a program of study to pin down these effects.

So although Dr. London does not agree with Dr. McDonald and thinks he overstated the matter, he thinks there should be research first.

Lester Machta, Director, Air Resources Laboratories, National Oceanic and Atmospheric Administration, Silver Spring, Md., stated:

Both the Williamstown analysis and my evaluation indicates that there may be an increase in ultraviolet radiation at the ground of the same order as Professor McDonald has suggested. But we emphasized many uncertainties in the calculations leading to the increase in ultraviolet radiation from an increase in stratospheric water vapor.

Martin Sonenberg, who is an M.D. and a Ph. D., chief, division of endocrinology, professor of biochemistry, associate professor of medicine, Cornell University, Sloan-Kettering Institute for Cancer Research, New York, N.Y., stated:

Although I do not have the extensive experience that Dr. Daniels has in this field, I essentially agree with all of his comments directed to the effects of ultraviolet radiation in skin carcinogenesis. As Dr. McDonald indicated on pages 16 to 18, the causative role of solar ultraviolet radiation in skin carcinogenesis is a well-established medical observation. The eight bits of data he gives as examples and in support of this position are similarly accurate and well accepted.

Farrington Daniels, Jr., M.D., and MPH, professor of medicine—dermatology—head, dermatology division, the New York Hospital-Cornell Medical Center, New York, N.Y., stated:

Dr. McDonald has done a fine job of summarizing the skin cancer data.

The portion of his argument on which I cannot pass judgment is that concerning his atmospheric calculations and in particular the "amplification factor." This is crucial in deciding whether there will be a biological problem or not. His concern for the long residence time is extremely important, because if harmful effects appear they might persist for years or decades after the SST planes were grounded. As he suggests, extensive monitoring arrangement must be made to detect harmful effects, and a few prototypes will not give the ecological answers which might come from heavy use.

If changes in the ozone layer permit an increase in ultraviolet radiation around 290 nanometers (290 millimicrons, or 2900 angstroms) reaching the earth's surface an increase in skin cancer among the light-skinned people is inevitable.

John S. Barlow, M.D., neurophysiologist, Neurology Service, Harvard Medical School, Massachusetts General Hospital, Boston, Mass., stated:

In response to your request for comments and reactions on Dr. McDonald's testimony, I can say that, although hardly an expert in the several areas on which Dr. McDonald touches in his testimony, at no point do I find fault with Dr. McDonald's statement.

In particular, I find no error in the closely reasoned argument concerning the question he raises of an increased instance of skin cancer, as outlined on pages 15–27 of his testimony. . . .

Based on the preceding arguments, Dr. McDonald goes on, on page 23, to estimate that there would occur some 10,000 to 30,000 new cases of skin cancer in the United States alone, as a result of the development and application of SST technology. Again I find no fault in Dr. McDonald's logic and, although not having myself been through the same detailed examination of the case, I find no reason to suppose that his estimates are seriously incorrect. Dr. McDonald has obviously dug deeply into the literature in a range of subjects related to the overall question, and although not himself a biologist, his treatment of the biological aspects I find quite impressive. Overall, he has obviously devoted considerable time, care, and effort to this problem.

Dr. Kendric C. Smith, Department of Radiology, Stanford University of Medicine, Stanford, Calif., and executive editor, photochemistry and photobiology—an international journal—published by Pergamon Press, Oxford, London, New York, Paris, stated:

Based upon the few data he presents, Dr. McDonald's conclusions appear quite reasonable to me and to other scientists that I have talked to who have seen his preliminary report. When he makes a calculation he uses the lowest estimate of the probability in order to err on the conservative side. One specialist in skin cancer has remarked to me that he has been impressed by how quickly Dr. McDonald (a physicist) has become familiar with and grasped the importance of the literature on ultraviolet induced skin cancer. I have been pleased by his insights into the molecular biology of the problem. Although Dr. McDonald's conclusions appear reasonable, the scientific community has not had a chance to see all of his data and therefore cannot put an official "stamp of approval" on his conclusions at this time.

Then, there is one other letter from a man by the name of Syukuro Manabe, Geophysical Fluid Dynamics Laboratory, Princeton, N.J., which was also critical of Dr. McDonald. He stated:

Dr. McDonald has made an important contribution in drawing attention to the possibility of an increase in the incidence of skin cancer resulting from the full-scale operation of SST's. However, the quantitative basis for his chain of argument, from increased water vapor in the stratosphere to increased ultraviolet radiation at the earth's surface, is not secure enough to be convincing. In this connection, there are some specific comments to be made on the text of his testimony. . . .

One cannot but support Dr. McDonald's general observation that the level of theoretical understanding is inadequate to provide definite assessment of hazards that may accompany technological innovation. In the present instance, one clearly needs to accelerate research in a number of areas.

Here is a man reluctant to agree with Dr. McDonald but he agrees wholeheartedly that we need more research before we go ahead. We do not get that from prototypes but from other research efforts.

Then, there is a letter from Van R. Potter, Ph. D., professor and assistant director, McArdle Laboratory for Cancer Research, Madison, Wis., who stated:

I had the statement on McDonald on skin cancer. His preferences are to papers by good people and to satisfactory studies. Blum is an expert on UV cancer and Dorn is an expert on demography of cancer.

John Hampson, Centre de Recherches sur les Atomes et les Molecules, Quebec, Canada, wrote:

With minor reservations, I believe Professor McDonald has presented a logical reasoned argument.

Thomas F. Malone, National Academy of Sciences, National Research Council, Washington, D.C., stated:

In summary then it is my feeling that the questions raised in Dr. McDonald's testimony are meaningful questions but the conclusions he reaches—even though labeled as tentative—need further examination before becoming a major factor in a decision on public policy that has many other ramifications besides those which pertain to the environment.

Samuel S. Epstein, M.D., chief, Laboratories of Environmental Toxicology Carcinogenesis, Children's Cancer Research Foundation, Boston, Mass., stated:

I fully concur with the general thesis of Dr. McDonald that questions relating to public health and welfare and environmental safety must be posed and satisfactorily answered *prior* to the introduction of technogolical innovations and the generation of irreversible or poorly reversible economic commitments.

In the absence of direct experimental evidence, Dr. McDonald's estimate of a 2–4 percent reduction in stratosphere ozone due to water vapor addition from a fleet of 800 SSTs appears reasonable.

Such a reduction in stratospheric ozone will increase human exposure to short wave ultraviolet light.

The relationship between skin cancer and exposure to short wave ultraviolet light is well recognized.

Dr. McDonald's estimates of an enhanced incidence of skin cancer in the U.S.A. and elsewhere from increased exposure to short

wave ultraviolet seems reasonable, conservative and consistent with available biological and epidemiological data.

For these and other reasons, I fully agree with the testimony of Dr. McDonald that the SST program poses potential public health hazards, including the likelihood of an increased incidence of human skin cancer both in the U.S.A and elsewhere.

Then, there is a letter from Dr. John H. Knowles, general director, Massachusetts General Hospital, Boston, Mass. He was the man nominated as the head of the health section of the Department of Health, Education, and Welfare as Assistant Secretary of Health, Education, and Welfare, and then his nomination was withdrawn. He stated:

In addition to the report, let me state most emphatically that for a whole variety of reasons I am unalterably opposed to the development of the SST and have so stated publicly, privately and in writing.

Very best wishes to you and sincerest thanks for asking me for my views.

J. G. Charney, Alfred P. Sloan Professor of Meteorology, Massachusetts Institute of Technology, Cambridge, Mass., stated:

I was telephoned today by the scientific director of the Boeing SST program and asked to lend my name to a statement in support of the government funding for SST prototype construction which he said was being circulated by the President's science advisor himself. My credentials are, therefore, impeccable. Unfortunately, he called the wrong man. I am strongly opposed to the continuation of the SST program in any form whatever.

I have studied the findings of Dr. James E. McDonald and find them altogether reasonable in the light of existing knowledge, which all admit is inadequate. I have known Dr. McDonald for many years—particularly through his outstanding service to the Panel on Weather Modification of the National Academy of Sciences—and have been impressed by his competence, his independence and his absolute honesty. He has been involved in scientific controversy precisely because he is fearless in his pursuit of scientific truth.

The argument that the scientific studies needed to properly assess the effects of SST fuel combustion on the water vapor and ozone concentration in the stratosphere can be carried out while the prototypes are being built is fallacious. There are so many difficult observations, calculations and numerical simulations of the coupling between moisture, ozone-photochemistry and stratospheric circulation that it will be at least ten years before acceptable scientific answers are forthcoming. Long before that time irresistible political and economic pressures will have led to the mass production of the SST, let the pollution and the UV radiation fall where it may.

Mr. President, I have received additional letters since the other day when I put the ones I had in the RECORD, and I ask unanimous consent to place in the RECORD a further letter from Dr. Richard B. Setlow, Scientific Director for Biophysics and Cell Physiology, Biology Division of the Oak Ridge National Laboratory; a letter from Arnold Goldberg, chief scientist, Supersonic Transport Division, Boeing Co.; and a letter from Helmut K. Weickmann, Director, Atmospheric Physics and Chemistry Laboratory, U.S. Department of Commerce, National Oceanic and Atmospheric Administration, Environmental Research Laboratories, at Boulder, Colo.

There being no objection, the letters were ordered to be printed in the RECORD, as follows:

OAK RIDGE NATIONAL LABORATORY,
*Oak Ridge, Tenn., March 15, 1971.*

Senator WILLIAM PROXMIRE,
*U.S. Senate,*
*Committee on Banking, Housing and Urban Affairs,*
*Washington, D.C.*

DEAR SENATOR PROXMIRE: I am responding to your request for comments and reactions to Doctor McDonald's conclusion that a fleet of 800 SST's could lead to a significant increase in the incidence of skin cancer in the United States. I agree with Dr. McDonald's conclusion.

Although I am not competent to judge the impact of SST's on the ozone level in the atmosphere, I am competent to judge the effects of ozone on ultraviolet radiation (UV) and the effects of UV on biological systems, since the latter has been my field of endeavor for the past 20 years.

I have analyzed the published experimental data that relate

(a) the biological effects of ultraviolet radiation to the UV in sunlight,

(b) the incidence of skin cancer as a function of latitude, and

(c) the change in UV intensity at the surface of the earth arising from changes in ozone in the atmosphere, and I conclude that a 1% decrease in the atmospheric ozone would lead to an increased incidence of skin cancer of 6000 new cases per year among the white population of the United States. (Dr. McDonald estimated 7000 per 1% decrease in ozone.)

Appendix 1 gives the logical argument on which the calculation is made;

Appendix 2 gives the numbers on which the calculation is based; and

Appendix 3 gives the calculation that leads to my conclusion. The calculation assumes that skin cancer is the result of the effects of UV on cellular DNA but does *not* use the known numerical relationship between skin cancer and latitude. Thus my calculation only depends on known biological parameters and is independent and different from that of Dr. McDonald.

Sincerely yours,

RICHARD B. SETLOW,
*Scientific Director for Biophysics and Cell Physiology, Biology Division.*

APPENDIX 1

*The logic that relates skin cancer to ozone levels:*

1. Skin cancer in the white population is associated with exposure to sunlight, and the experimental work summarized by Blum (Ref. 1) indicates that it is the short wavelength UV in sunlight that is the effective agent. Individuals with the genetic disease, Xeroderma pigmentosum, are supersensitive to light-induced cancer. Such individuals are defective in their ability to repair UV damage to their DNA. From this observation and from our extensive knowledge of UV damage in microbial systems, we infer that light-induced skin cancer arises from damage to the DNA of skin cells.

2. Light-induced skin cancer depends on many variables—most of which are poorly understood. The variables are the intensity of the light, the fraction of the shorter wavelengths in the light, the length of individual exposures, and the interval between individual exposures. (All the exposures usually encompass a number of years.) The ethnic origin of individuals is also important, because such origin determines, presumably, the degree of penetration of sunlight into the skin. For example, in several towns in Northern Australia at 18° South latitude, 20% of individuals of North European origin have or have had skin cancer, whereas only 1% of individuals of Mediterranean or mixed North European-Mediterranean origin are affected.

3. For United States whites the incidence of skin cancer increases 4-fold as the latitude decreases 10° (Ref. 2).

4. As latitude decreases there is a decrease in the thickness of the ozone layer above ground level. A decrease in ozone means less light absorption and hence an increase in the intensity of UV arriving at the earth's surface (Ref. 3).

5. Therefore any decrease in the amount of ozone as a result of a change in latitude or as a result of depletion of the ozone in the upper atmosphere will result in an increased incidence of skin cancer.

APPENDIX 2

*Experimental data used to calculate the effect of decreased ozone concentration on skin cancer incidence:*

1. The effect of UV on the biological activities of DNA decreases rapidly with increasing wavelength. Unfortunately, there are no useful data for skin cancer, and I must rely on data relating the killing of bacteria and viruses, mutation in bacteria and the formation of damaged regions in purified DNA. These data are summarized in Figure 1. They agree among themselves remarkably well.

2. The amount of UV striking the earth's surface is critically dependent on the amount of ozone, because ozone is the principal absorbing component at wavelengths below 300 nm. The sun's spectrum at the earth's surface is calculated (Ref. 3) for two different thicknesses of atmospheric ozone, and is compared to measured values (Figure 2): (The two thicknesses differ by 0.5 mm of ozone—a value that would be 20% of the 2.5 mm that holds for Washington, D.C., in winter.)

3. The outer layer of the skin is not uniformly transparent to ultraviolet radiation. The shorter the wavelength, the less light transmitted. Typical values are also shown in Figure 2. (Data in Ref. 1.)

4. The biological effect of sunlight on skin will depend upon the product of the three types of curves shown in Figures 1 and 2. The product is shown in Figure 3. The most effective UV wavelengths in sunlight are around 295 to 300 nm. (Although DNA is most sensitive at short wavelengths, there is a negligible amount of short wavelength UV in sunlight, and though there is lots of long wavelength in sunlight, biological systems are very insensitive at such wavelengths.) A 20% decrease in ozone changes the relative effect by a factor of 2. Note that it makes little difference whether we consider a real atmosphere or one only with ozone in it.

APPENDIX 3

*The increase in the average incidence rate of skin cancer for a 1% decrease in the amount of ozone:*

1. The relative biological effect of sunlight depends critically on the amount of ozone. As indicated in Figure 3, a 20% decrease in ozone increases the net biological effect by 2-fold (a 100% increase). Thus a 1% decrease results in a 5% increase in biological effect. *If skin cancer arises from the wavelengths that affect cellular DNA, then a 1% decrease in ozone concentration results in a 5% increase in the incidence of skin cancer.*

2. If the average incidence rate for skin cancer in the white population is 60 per 100,000 per year, the estimated increase of 5% for a 1% decrease in ozone would amount to 30 cases per 1,000,000 per year. The product of this number times the population of the country—200 million—gives 6,000 new cases per year.

3. It is of scientific and medical interest to relate the above calculation to the observation that a 10° decrease in latitude results

in an average decrease of ~10% in ozone (for the months of April-August in the Washington area, Ref. 3) and a 4-fold increase in the incidence of skin cancer (Ref. 2).

A 10% decrease in ozone results in a 1.5-fold change (50% increase) in biological effectiveness. The remainder of the 4-fold change, 2.7=4.0/1.5, is presumed to arise from the longer times spent in the sun at lower latitudes.

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1. H. F. Blum, "Carcinogenesis by Ultraviolet Light", Princeton University Press (1959).

2. H. Auerbach, "Geographic variations in Incidence of Skin Cancer in the United States", Public Health Reports 76, 345 (1961).

3. R. E. Barker, Jr., The Availability of Solar Radiation below 290 nm and Its Importance in Photomodification of Polymers", Photochemistry and Photobiology 7, 275 (1968).

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THE BOEING CO.,
*Seattle, Wash., March 16, 1971.*

Hon. WILLIAM PROXMIRE,
*U.S. Senate,*
*Washington, D.C.*

DEAR SENATOR PROXMIRE: Dr. H. Harrison of our Boeing Scientific Research Laboratories has called your letter of 5 March to my attention. Many of my colleagues in the scientific community with whom we have been working on stratospheric SST interactions have told me that they too were contacted.

It would be helpful to the Boeing Scientific Research Laboratories program to have the benefit of the technical information contained in the replies. I am sure we can count on your office for this help.

Thank you,

ARNOLD GOLDBERG,
*Chief Scientist,*
*Supersonic Transport Division.*

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NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION,
*Boulder, Colo., March 16, 1971.*

Hon. WILLIAM PROXMIRE,
*U.S. Senate,*
*Committee on Appropriations,*
*Washington, D.C.*

DEAR SENATOR PROXMIRE: Dr. Kuhn has asked me to reply to your letter to him regarding Dr. McDonald's statement on the skin cancer danger in connection with SST operations.

Dr. Kuhn is a member of the NOAA laboratory which is under my direction. Both of us, as well as Dr. McDonald, are atmospheric scientists and therefore appreciate the extreme complexity of the interrelationship in the system of the atmosphere, radiation, and biology. We both know Dr. McDonald personally and respect him as an atmospheric physicist.

In his statement, Dr. McDonald postulates a net decrease of one percent in total atmospheric ozone content as a result of projected SST operations. Analyses of the long-term trend of atmospheric ozone which are being carried out in my laboratory show an increase of six percent, as the average during the past decade. Clearly, this natural trend, if it continued, would completely overpower the effect of the SST's. Of course, we do not expect the natural trend to continue indefinitely; the important point I wish to make is that the effect postulated by Dr. McDonald is considerably smaller than the variations which nature produces within periods as short as one or two years.

Finally, I believe Dr. McDonald's argument does not take into proper account the full complexity of the biological effects of UV radiation and he falls a victim to "incomplete argumentation". We have to realize that there exist considerable beneficial effects of UV radiation as well; a thorough analysis of the matter would have to weigh all these effects. In biophysics at least three important effects of UV radiation are distinguished, (1) the formation of erythema following prolonged skin exposure to UV, (2) the formation of vitamin D, and (3) bactericidal effects. Skin cancer will be related to the first mentioned effect. The formation of vitamin D by UV radiation was discovered in 1919 and has been the main reason for the extended therapeutic application of UV radiation. Vitamin D forms from ergosterin through absorption of UV; the range of absorption of ergosterin begins at wavelengths of 3100 Å and has a maxima at 2800 and 2700 Å. Ergosterin is related to cholesterin, both are present in the surface layers of the epidermis; vitamin D consequently forms through activation of ergosterin if the skin is subjected to UV radiation. Vitamin D is anti-rickets and, since it is built up in the human body through the UV absorption, UV in this case has a definite beneficial effect.

The same is true for the bactericidal effects of UV radiation for all wavelengths below 3000 Å. The effect has a maximum between 2800 and 2500 Å. A great number of investigations exist of UV irradiation effects on bacteria and viruses, as well as on eggs of insects such as the fruit fly (drosophila melanogaster); 3 hours-old eggs of drosophila were killed through UV radiation in the range 3022–2894 Å. (Langendorff and Sommermeyer, Strahlentherapie 67, 110, 1940). Forty percent of a population of the bacterial Staphylococcus aureus were killed by irradiation with 2970 Å at an intensity of $1.2 \times 10^{-3}$ cal/cm², (Gates, Journ. Gen. Physiol. 14, 31, 1931), an intensity which would accumulate at the earth surface in a few minutes.

I will not attempt to relate the significance of these UV effects to Dr. McDonald's SST argument, for example by estimating how many cases of flu epidemics could be prevented due to the increased UV radiation and consequent increased kill of bacteria; I only wish to cite them as examples for the need to consider radiation effect through the operation of SST on a much broader basis than Dr. McDonald does, since there is a whole gamut of beneficial and adverse effects.

I trust the above information is helpful in appraising the SST skin cancer problem.

Sincerely,

HELMUT K. WEICKMANN,
*Director, Atmospheric Physics and Chemistry Laboratory.*

Mr. PROXMIRE. I might read briefly because I have not before given any information by Dr. Weickmann. He said:

We both know Dr. McDonald personally and respect him as an atmospheric physicist.

In his statement, Dr. McDonald postulates a net decrease of one percent in total atmospheric ozone content as a result of projected SST operations. Analyses of the long-term trend of atmospheric ozone which are being carried out in my laboratory show an increase of six percent, as the average, during the past decade. Clearly, this natural trend, if it continued, would completely overpower the effect of the SST's. Of course, we do not expect the natural trend to continue indefinitely; the important point I wish to make is that the effect postulated by Dr. McDonald is considerably smaller than the variations which nature produces within periods as short as one or two years.

So here is one of the few people who disagree with Dr. McDonald.

Mr. President, I have a letter here from Professor Michael McElroy, professor, Atmospheric Sciences, Harvard University, Cambridge, Mass. This is in addition to what he said before. He writes:

I read Dr. McDonald's testimony and thought that his arguments, in general, are sound. There is little doubt ultraviolet solar radiation plays a major role in some forms of skin cancer. The precise mechanism is uncertain, however. If the important wave lengths are longward of 3100 Å, then a change in atmospheric ozone will not markedly affect the incidence rate for skin cancer. If, however, shorter wave lengths are crucially involved, and I believe that the weight of the evidence suggests they are, then a decrease in atmospheric ozone may have serious consequences. It is entirely possible that a 1% change in ozone could result in a 6% change in the incidence of skin cancer. As McDonald points out, this percentage translates into 10,000 new cases per year within the United States.

It is difficult to arrive at any quantitative estimate for the effect of the SST on ozone. The estimates which have been made are unreliable in my opinion, although the trend is undoubtedly correct, i.e., that the SST will decrease the column density of ozone. The key chemical reactions in the water oxygen chemical scheme are uncertain and the London-Park calculations used by McDonald made reasonable guesses which could, however, lead to significant error. On the other hand, I am concerned that all of the work to date may be substantially in error due to a neglect of chemistry involving nitrogen oxides released by the SST. If my preliminary estimates are valid, I would expect that the resulting chemistry should also lead to a decrease in ozone, and the effect might be larger than that considered by McDonald.

I ask unanimous consent that his letter be printed in the RECORD.

There being no objection, the letter was ordered to be printed in the RECORD, as follows:

DEAR SENATOR PROXMIRE: Thank you for the opportunity to comment on possible consequences of a projected fleet of 800 SSTs flying at altitudes of 60 to 70,000 feet.

I read Dr. McDonald's testimony and thought that his arguments, in general, are sound. There is little doubt ultraviolet solar radiation plays a major role in some forms of skin cancer. The precise mechanism is uncertain, however. If the important wave lengths are longward of 3100 Å., then a change in atmospheric ozone will not markedly affect the incidence rate for skin cancer. If, however, shorter wave lengths are crucially involved, and I believe that the weight of the evidence suggests they are, then a decrease in atmospheric ozone may have serious consequences. It is entirely possible that a 1% change in ozone could result in a 6% change in the incidence of skin cancer. As McDonald points out, this percentage translates into 10,000 new cases per year within the United States.

It is difficult to arrive at any quantitative estimate for the effect of the SST on ozone. The estimates which have been made are unreliable in my opinion, although the trend is undoubtedly correct, i.e., that the SST will decrease the column density of ozone. The key chemical reactions in the water oxygen chemical scheme are uncertain and the London-Park calculations used by McDonald made reasonable guesses which could, however, lead to significant error. On the other hand, I am concerned that all of the work to date may be substantially in error due to a neglect of chemistry involving nitrogen oxides released by the SST. If my preliminary estimates are valid, I would expect that the resulting chemistry should also lead to a decrease in ozone, and the effect might be larger than that considered by McDonald.

I estimate that the SST could provide a source of nitrogen oxides in excess of the

natural level by as much as a factor of ten. In addition to the effects on ozone, I am concerned that there may also be consequences at higher altitudes. Nitric oxide is a minor atmospheric constituent. It plays a dominant role in the chemistry of the lower ionosphere, however, and I am concerned that a major perturbation in the oxide level of the stratosphere may also perturb the ionospheric balance. I am reluctant to speculate on possible effects on radio communication. I consider it important that this matter should also be carefully explored before this nation commits itself to a vigorous SST technology.

I am aware of the various concerns expressed regarding effects on climate. Climatology is not a well developed science. The whole earth is currently getting colder and there is evidence for long period, forty year, cycles in climate. These matters are not understood nor do we yet understand why ice ages occurred in our earlier climatological history. We cannot explicitly exclude the possibility of serious climatological effects, although I think that this matter is less serious than others mentioned in the letter.

I think that many illadvised statements have been made on both sides of the SST controversy, and I hope my letter has not further confused matters. I do feel that, at least, a prima facie case has been made for a possibly serious effect on atmospheric ozone. It is reasonable to assume that there may be consequent biomedical effects, and we should anticipate and study these matters thoroughly before we embark on a new technology. The answers to some of the immediate questions can be obtained with modest research expenditures. This research should be urgently initiated whether or not the current SST program is approved.

Sincerely,

MICHAEL MCELROY,
*Professor, Atmospheric Sciences, Harvard University, Cambridge, Mass.*

Mr. PROXMIRE. Now let me deal more briefly with some of the other arguments in this area. I have said that the principal argument in favor of the SST now is the competitive argument: If we do not build it the other countries will. If we do not build it, the other countries will win control of the production and sale of commercial aircraft, an area in which the United States has been predominant.

This is based on the assumption, No. 1, that the Concorde is a threat. In the last few weeks that threat has been completely exploded. The British Overseas Airways Corp. analysis showed that the Concorde would cost twice as much per passenger-mile to operate as subsonic jets. The whole history of aviation has been that more economical planes on a per-mile-per-passenger basis have displaced the less economical planes. It is almost inconceivable from the economic standpoint to expect that a less economical plane, which the British-French Concorde is, will effectively displace a plane that is much more economical.

The argument of Air France, which was even more devastating against the Concorde than British Overseas Airways Corp., also points to the devastating cost disadvantage of the Concorde.

Mr. Servan-Schreiber, a man who knows a great deal about technology, and wrote one of the great economic-technology books, "The Challenge of America," made a devastating statement in a recent cable to me which has been reprinted in the New York Times and the Washington Post, in which he called the supersonic air transport an "industrial Vietnam." He said costs are now four times original estimates. He argues that this plane can make a profit only if it is at full capacity on every flight, which is an impossible assumption.

The latest information appeared 2 days ago on the front page of the London Observer, on Sunday, March 21, which gave this intelligence and I read the first three paragraphs:

Britain will refuse French demands for a go-ahead on quantity production of the supersonic Concorde when the Minister of Aviation Supply, Mr. D. Corfield, meets his French opposite number, M. Jean Chamant, in London a week tomorrow.

The Ministerial meeting was to have been for a 'final review' of the Anglo-French project. But it is now clear that, so far from committing itself, the British Government is determined to keep its freedom of action.

Members of the Government, including, it is believed, both Mr. Corfield and the Secretary of State for Trade and Industry, Mr. John Davies, have been profoundly disturbed by the figures submitted by BOAC showing that Concorde can be flown only at a loss.

I ask unanimous consent that the article be printed at this point in the RECORD.

There being no objection, the article was ordered to be printed in the RECORD, as follows:

[From the Observer, London, England, Mar. 21, 1971]

TOUGHER LINE WITH FRANCE ON CONCORDE

(By Andrew Wilson)

Britain will refuse French demands for a go-ahead on quantity production of the supersonic Concorde when the Minister of Aviation Supply, Mr. D. Corfield, meets his French opposite number, M. Jean Chamant, in London a week tomorrow.

The Ministerial meeting was to have been for a 'final review' of the Anglo-French project. But it is now clear that, so far from committing itself, the British Government is determined to keep its freedom of action.

Members of the Government, including, it is believed, both Mr. Corfield and the Secretary of State for Trade and Industry, Mr. John Davies, have been profoundly disturbed by the figures submitted by BOAC showing that Concorde can be flown only at a loss.

Following the criteria laid down by the Labour Government, the Cabinet is refusing to authorise production without clear evidence that airlines are willing to buy the plane. The minimum number of orders thought necessary to give Concorde a £12 million price tag ($30 million) is about 100.

At present there are no orders—only 'options' on 74 aircraft, taken out four to six years ago and in no way binding on the airlines concerned.

Up to last week supporters of the Concorde in the Ministry of Aviation Supply apparently hoped to convince Mr. Corfield that BOAC's figures were unduly pessimistic.

While admitting that they still need time to check BOAC's sums, they advanced the argument that it was not necessary to have real live airline orders before opening the production run.

It was enough, they said, to know that competing airlines would have to order the plane if BOAC and Air France ordered, which they could be made to do with a Government subsidy if necessary.

But Mr. Corfield and the Treasury have not accepted this argument. On the contrary, for the first time since Labour's abortive attempt to cancel the Concorde in 1964, Whitehall officials are now studying the legal implications of a British withdrawal from the programme.

In 1964, the Law Officers advised that Britain could be sued for damages in the International Court with which the Anglo-French agreement had been deposited two years before. It is thought unlikely that this would be so if Britain withdrew from the *production* programme—because the agreement provides only for the *development* of the Concorde and the building of prototypes.

An immediate problem is the effect cancellation would have on the unemployment situation, especially if the RB-211 cannot be revived. Another is the relationship of Concorde to Britain's application to join the Common Market.

To cancel now would gravely endanger relations with France on the matter; but to commit Britain to continuing without any *quid pro quo* would be to throw away a valuable bargaining counter.

This has determined the Government to postpone a decision on Concorde until the summer, when Britain is expected to resume the Common Market talks frustrated by French reservations earlier this month.

The most Mr. Corfield can agree to—and even this is now in considerable doubt—is the authorisation of preliminary work on four production aircraft in addition to the six on which preliminary work was started last year.

There is no question of giving the green light to the Concorde. It also seems that in the event of any further delay on the Common Market the Cabinet intends to review the spending of £1 million a week on an aircraft that may never go into service.

Mr. PROXMIRE. The argument has been made that the Soviets are bound to put the supersonic transport into production and outsell us.

I do not think that the argument is taken very seriously by the proponents of the SST. I do not see how they could in view of the history of the Russians in selling commercial planes. They have sold very, very few commercial planes to the free world. They have made good planes, but we have not bought them. A good, solid reason why they have not been bought is that if the Russians sold the plane—and I think everybody recognizes it and realizes that this could be done for political reasons—spare parts and maintenance would be necessary, and we could not rely upon the Russians to provide them.

An article recently appeared in the Washington Post written by Anthony Astrachan, Washington Post Foreign Service writer, which announced that the Soviets appear nearer to production of the supersonic transport. In this article the following is pointed out:

No date has been publicly set for the Soviet plane to start service. In 1968, Soviet officials predicted a start in March 1970—

That is this year—

In 1969, they put the date at early 1973. A year ago they put it at 1975. Nothing has been heard since on an official basis.

Moscow observers are almost unanimous that the TU-144 will solve neither the ecological nor the economic problems that seem likely to abort the Western supersonic transport.

They feel that those factors, combined with traditional Soviet marketing disabilities, will prevent the U.S.S.R. from selling many TU-144s to Western airlines. Warnings from American aviation officials that the Soviets will sell many planes appear from here to

be part of the lobbying effort for congressional approval of the Boeing SST rather than prudent conclusions drawn from available facts.

It is true that Aviaexport, the Soviet organization for selling aircraft abroad, has been advertising the TU–144 in such publications as Aviation Week and Jane's Directory of World Aircraft.

In fact, one Senator held up this advertisement and showed it to us last December—

Moscow observers find three probable motivations for this: an intent or wishful thought of actual sales; a desire to build Soviet prestige when Western manufacturers cannot yet advertise supersonic transports, and a desire to fuel the American lobbying effort for the SST.

The last possibility reflects the fact that the Soviet aircraft industry has no guarantee of the precise dimensions of its slice of the resource pie. If the U.S. Congress appropriates more money for the SST, Soviet aircraft makers can turn to the Kremlin and say, in effect, "You have to give us the rubles to finish the TU–144 because the Americans are going ahead."

Then the article goes on to say:

One rumor now being heard says that the TU–144 will go into service on the Moscow-Khabarovsk run in October. Efforts to trace the rumor to its source have wound up in Washington and Paris more than in Soviet officialdom.

The article also says:

Moscow observers are convinced that the TU–144 in fact will have costs comparable to the Concordes—

Which I have pointed out is uneconomic and will cost twice as much per passenger as the subsonic jet—

An American study put the operating costs of the Concorde per passenger mile at 40 percent more than existing 4-engine jets—

That was before the most recent study, which indicates it is higher than that. This article says it would require at least a 25-percent surcharge on regular passenger fares.

The article says further:

However good the plane is, Soviet marketing disabilities remain a factor. The first is a penchant for secrecy that might prevent Western civil aviation authorities from learning what they want to know about how an aircraft is made as well as how it performs. The Soviets have seldom if ever permitted foreigners to make a thorough inspection of an aircraft factory.

Despite the signs of Soviet interest in Western sales, the Aviaexport advertising is rich in colors and poor in specifications. So little is known about the TU–144 that Western sources report nose-to-tail lengths varying from 188 ft. 6 in. to 196 ft. 10 in., and wing spans from 72 ft. to 88 ft. 3 in. The differences may reflect modifications in design that have also been rumored, but Soviet sources have not said which are the latest figures.

The second marketing problem is the traditional Soviet inability to provide service and spare parts on a basis acceptable to the West. Only the defense industry produces adequate service systems or spare parts here. Foreign buyers do get preference, as in the case of Volga cars sold abroad, because the Soviets usually try to live up to contracts. Users in Nigeria and Finland still have not found Soviet performance equal to the West's.

COST ESTIMATES

Third is the fact that Soviet accounting methods lead to what Westerners regard as inaccurate cost estimates, even if there is no conscious intention to cheat.

Fourth is the simple fact that Soviet international aircraft have never been as comfortable for passengers as their Western equivalents, though Tupolev rated passenger comfort a prime consideration in the design of the TU–144.

All these factors led to dissatisfaction with the performance of Soviet Hyushin aircraft sold to Ghana over 10 years ago. Romania bought British BAC–111s when it presumably could have had Soviet planes.

Mr. President, I ask unanimous consent that the entire article be printed in the RECORD at this point.

There being no objection, the article was ordered to be printed in the RECORD, as follows:

[From the Washington Post, Mar. 21, 1971]

SOVIETS APPEAR NEARER TO PRODUCTION

(By Anthony Astrachan)

Moscow, March 20.—Soviet pilots "will start mastering" the Tupolev–144 supersonic transport this year, according to the Soviet minister of civil aviation.

The TU–144 thus appears closer to production and use than either of its troubled Western competitors, the Anglo-French Concorde or the American SST.

But no date has been publicly set for the Soviet plane to start service. In 1968, Soviet officials predicted a start in March 1970. In 1969, they put the date at early 1973. A year ago they put it at 1975. Nothing has been heard since on an official basis.

Moscow observers are almost unanimous that the TU–144 will solve neither the ecological nor the economic problems that seem likely to abort the Western supersonic transports.

They feel that those factors, combined with traditional Soviet marketing disabilities, will prevent the U.S.S.R. from selling many TU–144s to Western airlines. Warnings from American aviation officials that the Soviets will sell many planes appear from here to be part of the lobbying effort for congressional approval of the Boeing SST rather than prudent conclusions drawn from available facts.

It is true that Aviaexport, the Soviet organization for selling aircraft abroad, has been advertising the TU–144 in such publications as Aviation Week and Jane's Directory of World Aircraft.

THREE MOTIVATIONS

Moscow observers find three probable motivations for this: an intent or wishful thought of actual sales; a desire to build Soviet prestige when Western manufacturers cannot yet advertise supersonic transports, and a desire to fuel the American lobbying effort for the SST.

The last possibility reflects the fact that the Soviet aircraft industry has no guarantee of the precise dimensions of its slice of the resource pie. If the U.S. Congress appropriates more money for the SST, Soviet aircraft makers can turn to the Kremlin and say, in effect, "You have to give us the rubles to finish the TU–144 because the Americans are going ahead."

Efforts of the kind made on behalf of the SST by men like Najeeb Halaby of Pan American World Airways and astronaut Neil Armstrong are known to be used by their Soviet equivalents in the Kremlin's internal lobbying.

So far as the ecological problem goes, the Soviets have made public no facts about the TU–144s sonic boom except for statements by a test pilot and test-flight passengers that they could not hear it.

POLLUTION PROBLEMS

The U.S.S.R. is much less pollution-conscious than the West. Both its pollution and its relatively feeble efforts to solve pollution problems are concentrated more on water than on air. In Soviet society, citizens are not allowed to organize pressure groups against Kremlin-approved projects like the TU–144 of the kind that encouraged the U.S. Senate to stop funds for the SST last year, and the House to cut off funds this past week.

The sonic-boom problem is smaller here than in the West because the Soviet Union is sparsely populated, compared to the United States and Western Europe. Aeroflot could conceivably route planes around urban areas and minimize the effect of booms more thoroughly than is possible in the West.

That depends on the routes chosen, Alexei A. Tupolev, designer of the TU–144, said two years ago that it would operate on routes over 1,200 miles long. Most Moscow observers think it would be uneconomical on routes under 2,000 miles.

That would still allow a TU–144 to fly eastward from Moscow, Kiev or Leningrad to Alma Ata, Novosibirsk, Irkutsk or Khabarovsk, approximately 4,000 miles from Moscow in the Soviet Far East.

One rumor now being heard says that the TU–144 will go into service on the Moscow-Khabarovsk run in October. Efforts to trace the rumor to its source have wound up in Washington and Paris more than in Soviet officialdom.

FOREIGN SERVICE

The same is true of rumors of imminent supersonic services to Karachi, New Delhi and Calcutta. Soviet officials spoke two or three years ago of TU–144 flights to Tokyo and New York. Those flights would demand at least one stop en route because Tokyo and New York are beyond the craft's 4,040-mile range from Moscow.

All these flights would involve flying, presumably at subsonic speeds, over thickly populated areas like the U.S.S.R. west of Moscow, Western Europe and northern India. Yet Tupolev said the TU–144 was designed to travel at supersonic speed "almost during the entire flight time."

On the economic side, the Soviets have said only, "Economists have estimated that the cost of a flight on the TU–144 will not exceed that on subsonic planes."

Moscow observers are convinced that the TU-144 in fact will have costs comparable to the Concorde's. An American study put the operating costs of the Concorde per passenger mile at 40 per cent more than existing four-engine jets, which in turn would require at least a 25 per cent surcharge on regular passenger fares.

If that is true of the TU-144, the Soviet statement becomes simply a promise that the government will absorb these extra costs. It already absorbs much of the cost of housing and public transport, including existing rail and plane fares, as necessary social services.

PASSENGER SEATING

Cost estimates start with the fact that the TU-144 will carry up to 120 passengers in rows of three seats on one side and two on the other, compared to 128 to 144 in pairs of seats on the Concorde. The Boeing SST, which will carry 300 passengers if it is ever built, is not strictly comparable.

Tupolev said the TU-144 seating arrangement in a plane roughly the same size as the Concorde was made possible by the fact that the main undercarriage of the TU-144 retracts into the wings in the direction of flight, while that of the Concorde retracts into the fuselage at right angles to flight, i.e. in line with the wingspan. Tupolev suggested this meant less drag on his aircraft.

The maximum rated speed of the TU-144 is 1,550 mph at 65,000 feet; the maximum it has been reported as reaching was 1,458 mph at 51,000 feet in a test last Nov. 12. The Concorde is rated at 1,450 mph at 54,000 feet.

The TU-144 will have a range of 4,040 miles compared to 3,600 for the Concorde.

The Soviet engine thrust is similar to the Concorde—35,000 to 40,000 pounds, according to Halaby, who saw the TU-144 two years ago. The TU-144's four engines are clustered together in the center of the plane under the fuselage, while the Concorde's are located in pairs under the wings. Tupolev said the Soviet design means that if one engine fails, it will be easier to prevent inadvertent turns of the aircraft.

COMPARATIVE WEIGHTS

The Concorde takeoff weight will be 385,000 pounds, compared to 330,000 for the TU-144.

Both planes have bent noses like a bird's beak—the Tupolev slightly more so. Alexei Tupolev said this was to maximize the cockpit field of vision while eliminating the traditional "canopy" to reduce drag.

The performance of the TU-144 is unknown except in the most general terms. Halaby and Armstrong praised it without seeing it in flight. Its chief test pilot, Edward Yelyan, said the plane was a great success and "much easier to control than subsonic aircraft."

Yelyan added that all flight characteristics had "proved better than the designed ones." He said the plane generated less noise than a conventional jet inside the passenger cabin.

The plane "trembled slightly" as it exceeded the speed of sound, but Yelyan said this was not likely to be noticed in the passenger compartment. Western passengers on all Soviet aircraft—prop, turbojet and jet—have noticed more vibration than on their Western equivalents. This is no reflection on their safety but it reduces passenger comfort and might conceivably reflect factors that would shorten aircraft life.

ON-BOARD COMPUTER

Up to 90 per cent of TU-144 flight operations are performed by an on-board computer "that calculates the course and the best trajectory and prepares the necessary information for landing." The plane will therefore carry no navigator and have only three people in the cockpit—pilot, copilot, and flight engineer to check the equipment.

This may be a tribute to Soviet technology. But Soviet scientists have said that their computers are 5 to 15 years behind the West's, for reasons including poor component reliability, and specialists will be watching to see how the TU-144 computer checks out in performance.

However good the plane is, Soviet marketing disabilities remain a factor. The first is a penchant for secrecy that might prevent Western civil aviation authorities from learning what they want to know about how an aircraft is made as well as how it performs. The Soviets have seldom if ever permitted foreigners to make a thorough inspection of an aircraft factory.

Despite the signs of Soviet interest in Western sales, the Aviaexport advertising is rich in colors and poor in specifications. So little is known about the TU-144 that Western sources report nose-to-tail lengths varying from 188 ft. 6 in. to 196 ft. 10 in., and wing spans from 72 ft. to 88 ft. 3 in. The differences may reflect modifications in design that have also been rumored, but Soviet sources have not said which are the latest figures

The second marketing problem is the traditional Soviet inability to provide service and spare parts on a basis acceptable to the West. Only the defense industry produces adequate service systems or spare parts here. Foreign buyers do get preference, as in the case of Volga cars sold abroad, because the Soviets usually do try to live up to contracts. Users in Nigeria and Finland still have not found Soviet performance equal to the West's.

COST ESTIMATES

Third is the fact that Soviet accounting methods lead to what Westerners regard as inaccurate cost estimates, even if there is no conscious intention to cheat.

Fourth is the simple fact that Soviet international aircraft have never been as comfortable for passengers as their Western equivalents, though Tupolev rated passenger comfort a prime consideration in the design of the TU-144.

All these factors led to dissatisfaction with the performance of Soviet Ilyushin aircraft sold to Ghana over 10 years ago. Romania bought British BAC-111s when it presumably could have had Soviet planes. Western airlines will be watching with interest the performance of YAK-40 medium-range jets recently sold to Italy, to see how these problems have been overcome.

Some observers believe that if the TU-144 is successful, competition in world markets will come less from attempts to sell the craft to Western airlines than from selling faster service to that handful of passengers that would rather cross the Atlantic in two hours instead of seven, or Siberia in three hours instead of 10.

The standard of service on Aeroflot makes Westerners think the latter choice would well be worth a surcharge. Such reactions warn against overrating Soviet competition for passenger-miles. But the Soviet airline, which now serves 60 countries, is extending its international routes. Its standards may go up as it moves into more competitive routes—although the cancellation for Scandinavian Airlines training for 40 Aeroflot hostesses is not a good omen.

Mr. PROXMIRE. Then, Mr. President, there is the argument that if we do not fund this prototype, we lose—the figures vary from 150,000 to 500,000—jobs. The fact is that if we do not fund this prototype, we do not lose 500,000, not 150,000, not 50,000, not 20,000 jobs, but 6,000 at Boeing, 3,500 at GE, and at the subcontractors a small additional number; the total is 13,000 nationwide.

Spending $290 million elsewhere could create as many or more jobs. This was the opinion of the former chairman of the Council of Economic Advisers, Arthur Okun, the distinguished economist, Dr. Paul Samuelson of MIT, and Dr. Milton Friedman—who disagrees with Samuelson on everything except the SST, as far as I can tell—and I challenge Mr. Magruder to show us that spending $290 million here would provide a single additional job, more than would be provided by spending the same amount elsewhere. Henry Wallach, another outstanding scientist, has been cited as supporting the SST, but Wallach supports it on balance-of-payments grounds rather than job grounds.

Furthermore, there is a fascinating article by a competent economist in the Wall Street Journal today which points out that if we go ahead with supersonic flight, there are good reasons to feel that it will reduce the number of jobs in the industry over the long run, not increase them.

All of us, of course, have sympathy for the people who would be discharged. Though it is easy for me to say that only 13,000 jobs would be lost, that is still a lot of jobs and a lot of men who would be out of work. We have to consider their well-being. That is why I think the proposals by the Senator from Indiana (Mr. BAYH) and the Senator from Missouri (Mr. EAGLETON) are logical and long overdue, and we ought to get to work on them promptly, to allow people in the aerospace industry to do the kind of constructive work they can do elsewhere in or economy. It should not take a great deal of intelligence or imagination to recognize that there are areas where these trained people could be much more useful than in providing a plane which would fly a little faster to Europe.

Mr. President, the argument has been made that the SST is the cleanest mode of transportation, that it emits less pollutants than other aircraft. This just is not true. The Department of Transportation itself, which is pushing the SST, supplied information with a table that showed that as to every signficant pollutant, on a passenger-mile basis between New York and Paris, the number of pounds of the pollutant for the SST would be substantially higher than for the 707 or the 747. By substantially I mean something like 2½ times higher, in the case of one pollutant, and 3 or 4 times as high in others.

Mr. GOLDWATER. Mr. President, will the Senator yield?

Mr. PROXMIRE. I am practically through, but I am happy to yield to the Senator from Arizona.

Mr. GOLDWATER. Can the Senator tell me what is the date on that report from the Department of Transportation?

Mr. PROXMIRE. That was received from the Department of Transportation last year.

Mr. GOLDWATER. For the Senator's information, General Electric has completely redesigned the engines for the SST. They are not going to use an afterburner. It will now put out 70,000 pounds of thrust, compared with the old 65,000. It will not need 100 percent of power for takeoff, and it will actually put out less pollutant than any jet we have today.

Mr. PROXMIRE. I appreciate that information. I hope the Senator will give us the figures in terms of carbon dioxide, carbon monoxide, water vapor, and nitrogen oxide. If he will do that, it will be very helpful for comparison. The number of pounds on a New York to Paris flight.

Mr. GOLDWATER. I shall be happy to do that when they finish the engine and are able to test it. The engine I am talking about has never been built and tested. Like a lot of the scientists who come here and testify, they do not know what they are talking about, and I would not say I know what I am talking about, until I see the thing run. But the engineers claim it will be the best engine yet developed, much cleaner, and of course much more powerful. I shall be happy to furnish the information when the tests are run.

Mr. PROXMIRE. I thank the distinguished Senator.

Mr. President, we ought to ask what we are getting for this $1 billion we have been investing. It has been argued that the Government will get its money back with a 4½-percent return by 1990, and that, because it is a long period, this could

amount to $1 billion additional—that is, in the amount we will get at 4½ percent, considering the amount we put in and the length of time we have to wait.

But we will only get it back if a series of very unlikely events occur. One is if we solve the noise problem. We are far from home in determining that this can be done economically, without sacrificing range—the estimate by Boeing itself is that we would sacrifice about 800 miles in range—without sacrificing passenger load—no one can tell me that you can put on 800,000 additional pounds in sound suppressors without sacrificing some of your payload—and without very substantial additional fuel consumption, which of course would make the planes more expensive to operate.

This plane will be successful only if the economy rebounds and we have the kind of orderly and unremitting prosperity that we had in the 1960's. We may have that in the future. I think we probably will. But that is a condition which, of course, we have to have if the SST is to be a success.

Airline traffic will have to quadruple, to increase fourfold over the next 20 years. This will have to happen. If it only doubles, the SST will be a failure.

The airlines will have to get an exemption from the antitrust laws. Mr. Halaby, the chairman of the board of Pan American Airways, testified that that is essential. They will have to operate with competition from only one or two foreign carriers, if they are to be successful. Of course, whether Congress is willing to repeal the application of the antitrust laws to airlines is a big question. Maybe they will. I think there is only about one chance in four of that.

We will get the return only if upper atmospheric problems are solved, if the SST does not require prohibitive surcharges, and a number of other matters which have to develop if the SST is to be a success. I think the odds are very, very small indeed, that all these contingencies, every single one has to be achieved if the SST is to get off the taxpayers' back.

Mr. President, I have one further article to call to the Senate's attention—a fascinating article entitled "Why the SST Is Not Good Business," written by Allen R. Ferguson, which appeared only today in the Wall Street Journal.

Mr. Ferguson says:

The question that the Senate will settle tomorrow afternoon is not whether there should someday be an American SST, but whether one should be developed and built before the private sector is prepared to finance it, and hence whether the taxpayers should be required to pay for its development.

The basic economic fact about the U.S. SST is that if it were expected to be economical, there would be no need to subsidize it. Its advocates argue that the investment is too large and too risky for the private sector, but it is obvious that the private capital market could raise the $1.3 billion the administration plans to put into the development. Last year the capital market provided American industry with more than $30 billion in new debt and equity money. That the large financial institutions resist financing the prototype development simply indicates that the SST is not a good business.

It is economically unsound because it poses a problem that is largely new in aviation. Until the SST, innovation has typically combined greater speed, comfort and range with reduced costs per seat-mile. Since World War II, with the introduction first of the large four-engined piston aircraft and then with the jets, the American aircraft industry has dominated the airways of the world. This dominance has been based on designing and producing technically and economically superior aircraft that could be operated at lower unit cost than their foreign rivals. The consequent secular decline in the costs of air travel and shipment has, of course, been the major force behind three decades of spectacular growth in commercial aviation.

With the SST the situation is different in a crucial way. Whereas the SST would offer many technical advances and be a monument to the sophisticated design and production capabilities of American industry, it is expected, even by its most enthusiastic supporters, to be more costly per seat-mile than the subsonic jets it is intended to replace.

COST INCREASES

The FAA has estimated that ideally the seat-mile costs of the SST would approximate those of present subsonic jets at maximum range, but they would be higher at shorter ranges and, of course, over populated areas where, according to present regulations, it would have to fly at subsonic speeds. Thus, its average cost, even by FAA estimates, would exceed those of present jets. However, in the eight to ten years before the SST was in extensive service, there will be improvements in the wide-bodied subsonic jets that will reduce their operating costs. Further, clearing up the remaining technical problems and imposing any additional restrictions on its use, such as restricting airport operations at night, would probably raise its operating costs further. The SST is expected to cost one-quarter to one-third more per seat-mile than the then-existing fleet of subsonic jets.

This would pose a serious problem of both domestic and international fare policy for the government.

What Mr. Ferguson points out very tellingly—and I think it has not been brought to the attention of the Senate before—is that the only way the SST can be economical is to do one of two things—either to provide surcharges, meaning that you would have to pay 25 percent, 30 percent, 40 percent, or 50 percent more to travel on the SST, or require the subsonic jets to charge more so that the SST would be comparable without the surcharges.

Mr. President, what Mr. Ferguson points out is that we have had this great increase in air travel in the past because the cost of air travel has been reduced. It has been either stable or has gone down in spite of inflation almost everywhere else.

It is pointed out by Mr. Ferguson that because the SST is more expensive to operate, it will be necessary, one way or the other, to charge more; and as you charge more, the amount of air travel will diminish; and as it diminishes, your whole pro SST job argument goes out the window, because it means that we will produce less planes of any type. There will be less pilots, less stewardesses, less people servicing them. The industry will be less active, less expansive, and there will be fewer people in it.

So that not only from the standpoint of the SST being a bad investment but also from the standpoint of providing more jobs in the industry, the SST is one way of going in reverse, because it means more expensive air travel one way or the other. Either you charge more for travel on the SST, as I say, or you charge more on all planes flying overseas; and if you do that, it means you will have fewer people flying.

Let me conclude, Mr. President, by simply reading the last part of Mr. Ferguson's article:

What would be appropriate policy, in the real interests of U.S. aviation? First, the aerospace industry is facing its present serious problems, not because of any developments in the civil air market but because of shifts and reductions in the nature and level of defense expenditures, particularly the secular decline in the procurement of strategic weaponry (and space equipment). No policy concerning civil aviation can solve its problem. It is clearly not appropriate to undertake half measures to try to help some aircraft companies at the expense of the taxpayers or American aviation interests in general. The problems of unemployment in the aerospace industry can only be addressed effectively through a national policy of maintaining generally high levels of employment and through suitable manpower programs.

SUBSIDIES AND UNCERTAINTIES

Second, appropriate policy on the SST for most U.S. aviation interests would involve opposing the present program to subsidizes the SST. The SST should be allowed to develop in due course as technological advances in various areas and changes in air transport markets reduce the costs and uncertainties now associated with it—or produce other developments that obviate the "need" for the SST.

Third, aviation interests should press for an early statement that American policy on fares will not permit discrimination either against foreign-built vehicles or, more particularly, against travelers using subsonic equipment—a policy in the interest of air travelers of all nationalities and in the interest of most foreign as well as U.S. airlines.

Fourth, once the U.S. SST is stopped, the U.S. should pursue an international agreement to discontinue subsidization of SST development.

In general the self-interest of U.S. airlines and most manufacturers is served by policies that play to their established economic superiority, rather than to the unstructured game of competitive governmental subsidization.

Mr. PROXMIRE. Mr. President, I ask unanimous consent to have the article by Mr. Ferguson printed in the RECORD.

There being no objection the article was ordered to be printed in the RECORD, as follows:

[From the Wall Street Journal, Mar. 23, 1971]

WHY THE SST IS NOT GOOD BUSINESS

(By Allen R. Ferguson)

The question that the Senate will settle tomorrow afternoon is not whether there should someday be an American SST, but whether one should be developed and built before the private sector is prepared to finance it, and hence whether the taxpayers should be required to pay for its development.

The basic economic fact about the U.S. SST is that if it were expected to be economical, there would be no need to subsidize it. Its advocates argue that the investment is too large and too risky for the private sector, but it is obvious that the private capital market could raise the $1.3 billion the administration plans to put into the development. Last year the capital market provided American industry with more than $30 billion in new debt and equity money. That the large financial institutions resist financing the prototype development simply indicates that the SST is not a good business.

It is economically unsound because it poses a problem that is largely new in aviation.

Until the SST, innovation has typically combined greater speed, comfort and range with reduced costs per seat-mile. Since World War II, with the introduction first of the large four-engine piston aircraft and then with the jets, the American aircraft industry has dominated the airways of the world. This dominance has been based on designing and producing technically and economically superior aircraft that could be operated at lower unit cost than their foreign rivals. The consequent secular decline in the costs of air travel and shipment has, of course, been the major force behind three decades of spectacular growth in commercial aviation.

With the SST the situation is different in a crucial way. Whereas the SST would offer many technical advances and be a monument to the sophisticated design and production capabilities of American industry, it is expected, even by its most enthusiastic supporters, to be more costly per seat-mile than the subsonic jets it is intended to replace.

COST INCREASES

The FAA has estimated that ideally the seat-mile costs of the SST would approximate those of present subsonic jets at maximum range, but they would be higher at shorter ranges and, of course, over populated areas where, according to present regulations, it would have to fly at subsonic speeds. Thus, its average cost, even by FAA estimates, would exceed those of present jets. However, in the eight to ten years before the SST was in extensive service, there will be improvements in the wide-bodied subsonic jets that will reduce their operating costs. Further, clearing up the remaining technical problems and imposing any additional restrictions on its use, such as restricting airport operations at night, would probably raise its operating costs further. The SST is expected to cost one-quarter to one-third more per seat-mile than the then-existing fleet of subsonic jets.

This would pose a serious problem of both domestic and international fare policy for the government. A policy that would be both efficient and equitable would require a fare premium reflecting the cost differential between the supersonic and the subsonic vehicles. If the fares were set 25% to 30% above the corresponding fares of the subsonics, SST passengers would have to pay for the speed advantage, and travelers at subsonic speeds would not have to subsidize SST operations through excessive fares. The advantages of each type of service would be avaliable to passengers in accordance with their willingness to pay. However, aviation experts simply do not believe that to most travelers supersonic speed will be worth what it costs. Consequently a fare policy that made broad economic sense would visit financial disaster on the whole SST venture.

If the SST is eventually produced under federal support it is likely to be impossible for the U.S. government to insist on rational pricing of its services. Once the government has subsidized its creation and in various ways induced American and foreign carriers to buy it, letting the U.S. SST become a financial failure would be, to say the least, politically difficult. Obviously, to retain the appearance that the American taxpayers were recouping their investment in the SST, the government would be under great pressure to force many of them to subsidize the SST through excessive fares.

If, as is to be expected, there were little or no fare differential, travelers would presumably prefer the time-saving and would fly on the SST. Payloads on subsonics would tend to be depressed. Their early retirement from the affected routes would be forced on the industry. A larger and larger proportion of at least the trans-ocean fleets would become supersonic, and hence, to avoid losses, the fares on those services would have to approach the seat-mile costs of the SST. Thus, such a fare policy would almost certainly force fares on virtually all types of aircraft substantially above the level at which they would otherwise rest.

Given the effect of the SST on fares, the implications of "success" of the SST program are not hard to draw. First and most obvious, there would be less air travel than otherwise.

If air travel is constricted there will be less employment in the airlines, fewer aircraft will be needed and, hence, eventually perhaps less employment even in the aircraft industry.

DECREASE IN AIR TRAVEL

How much of a decrease in air travel could be expected is impossible to predict with precision, but in 1964, when the most recent sweeping reductions in trans-Atlantic rates went into effect, an average reduction of about 15% was followed by a 40% increase in travel. A major study of the sensitivity of the volume of travel to fares in the North Atlantic indicated that for each one-percent change in fares there had tended to be a two-percent change in travel. If this sensitivity in the future is only half its estimated level in the past, a 20% increase in overall fares would cause a 20% drop in travel compared to what it would be with a more efficient, subsonic fleet.

These are the obvious direct consequences for the aviation industry of a technically successful SST program. They are at least among the reasons why many airline executives privately—and a few publicly—express reservations about the SST. There are other consequences. Since subsonics would be displaced at a faster rate than would otherwise be the case, the obsolescence of the recently acquired wide-bodied and other subsonics would be accelerated; consequently, depreciation and interest charges or equipment write-offs would be increased, reducing airline profits. The financial problems of the airlines would be aggravated. Their debt is now at historic highs; major carriers are incurring unprecedented losses, such as American Airlines' $10 million loss in the month of February. To burden present operations and financing with the prospect of billions of dollars of additional investment for a basically inefficient vehicle seems hardly prudent.

There is another serious adverse potential. The U.S. international air network is based on a traditionally liberal structure of bilateral agreements, which impose relatively few limitations on traffic and operations. Opposition to this relatively free and expensive arrangement has been increasing in recent years and has accelerated frequently in response to American innovations and to financial difficulties of foreign airlines. The introduction of the SST might induce major restrictions by foreign governments, removing one of the foundations on which American efficiency and pre-eminence in world aviation are based.

But what of the "threat" of foreign supersonics, the British-French Concorde and the Russian TU-144? Will the airlines of the world be forced to replace their American-built fleets with them—as is often alleged? Both these foreign supersonics are ahead of the U.S. SST. Both will probably prove technically operational. But neither is certain. More important, some things about both are certain. Neither will be able to fly even New York-Rome non-stop, to say nothing of Los Angeles-London or San Francisco-Tokyo. Neither will be allowed to fly across the U.S. or across Europe at supersonic speeds. Both will be extremely costly to operate: Last November the British Aircraft Corporation announced that the Concorde's expected seat-mile cost would be 36% higher than that of the 747.

There is simply no way that such equipment can penetrate a large segment of the world's aviation market. Whether it penetrates any significant fraction of the U.S.-international market at all depends largely on the policy of the American government. Unless the U.S. government permits fares in international travel (over which it can exert considerable influence) to force travelers on the American-built subsonics to subsidize the Concorde or the TU-144, they will have virtually no markets of significance—even if their remaining technical and operational problems are all solved.

This brings us to the question of American "aviation leadership." Aviation leadership consists of the leadership of our manufacturers and of our airlines.

It is clear that within the aviation community both at home and abroad the U.S. would certainly gain some "prestige" from producing a superior and ultimately dominant SST. Throughout the world there are many aviation authorities afflicted with that form of myopia which prevents their seeing beyond technological elegance to social and economic utility. But many aviation officials also do understand and would resent the economic and financial strains that would be imposed upon their own carriers by artificially premature obsolescence of their American-built subsonic jets, in the interest of U.S. prestige.

The consequences for U.S. leadership in aircraft production go much further. Now, the U.S. has an indisputable lead. The world flies American equipment. The British failed to capture any significant fraction of the market with the technically premature Comet or the luxurious but costly VC–10. The U.S. leadership is soundly based on economic reality, not technological novelty. To jeopardize it with a speculative program whose economics are so unpromising that the private sector eschews its opportunities to participate fully would be, at least, a most questionable choice.

Similarly, the U.S. airlines enjoy a highly prestigious, traditionally profitable and socially functional position in international aviation. This, too, is based more on superior economic efficiency than on any other single factor. To try to shift the basis of this leadership to some intangible and rather esoteric advantages associated with the employment of an elaborately inefficient vehicle is, at best, risky.

What would be appropriate policy, in the real interests of U.S. aviation? First, the aerospace industry is facing its present serious problems, not because of any developments in the civil air market but because of shifts and reductions in the nature and level of defense expenditures, particularly the secular decline in the procurement of strategic weaponry (and space equipment). No policy concerning civil aviation can solve its problem. It is clearly not appropriate to undertake half measures to try to help some aircraft companies at the expense of the taxpayers or American aviation interests in general. The problems of unemployment in the aerospace industry can only be addressed effectively through a national policy of maintaining generally high levels of employment and through suitable manpower programs.

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Fourth, once the U.S. SST is stopped, the U.S. should pursue an international agreement to discontinue subsidization of SST development.

In general the self-interest of U.S. airlines and most manufacturers is served by policies that play to their established economic superiority, rather than to the unstructured game of competitive governmental subsidization.

Mr. Ferguson, a consulting economist in Bethesda, Md., has specialized in transportation and government policy and was formerly coordinator for international aviation in the State Department.

Mr. TUNNEY. Mr. President, before I begin my remarks, I should like to say, that I am very sorry that, in one of my first speeches in the U.S. Senate, I should have to disagree with the Senator from Washington, a man whom I hold in the highest possible regard, and who I consider has done many good things for this country. He has done much to promote many good programs, including programs for cancer research such as he has just mentioned.

However, I feel that this is one of those issues upon which one must make a decision based on conscience, and my conscience tells me that now is the time to speak out on my opinion of the SST.

Mr. President, the SST currently is being propelled on a $300,000 propaganda campaign that it will create jobs and keep the United States ahead of other nations in the thin outer reaches of the atmosphere. Extravagant expectations have been raised about the aircraft, but most are easily deflated by the facts.

Before I had a chance fully to examine all the evidence about the SST, I thought it might offer some shortcut to recovery for our economy generally and for the ailing aerospace industry in particular. But I was wrong, and I continue to oppose the SST.

Having heard all the pros and cons, all the various arguments, and having been deluged by thousands and thousands of letters on both sides, I am convinced the SST would be wrong for our Nation, for our economy, for the aerospace industry and, specifically, for California.

For one thing, the SST seriously distorts our national priorities and makes the gleam and bigness of the giant aircraft appear a worthwhile goal in itself. I do not believe it is, any more than I believe our Nation's taxpayers should subsidize Detroit each year merely to turn out flashier and bigger cars.

For another, it raises false and dangerous hopes of easy leadership in world affairs, as if with enough SST's we will be supreme over the Soviets. What misleading nonsense. Our strength internationally is based not on some showy competition among aircraft, but rather on the spirit and solidarity of our Nation itself. It is not determined by a race through the stratosphere, but by whether we live up to the founding principles of our country for life, liberty, and the pursuit of happiness.

Our claim to world leadership is going to be validated right here at ground zero in our country—on our city streets, along the waterways and throughout the countryside. Squadrons of SST's are not going to preserve our prestige if we fritter it away through continued disorder on our streets and further pollution of our air and water.

My objections to the SST actually come down to three main points:

First. It distorts our national priorities and will take countless millions from pressing domestic needs.

Second. It offers little more than some dubious benefits to aerospace without really mobilizing that industry for broader national goals.

Third. It raises serious and, as yet, unmeasured hazards to our environment and to humankind.

Our Nation must always maintain an adequate defense and, obviously, must muster its imagination for continuing exploration beyond the present horizons of science and knowledge. But the SST will add nothing to our defense or our knowledge of stratospheric flying. New jet bombers and a variety of experimental aircraft already are cruising at 60,000 feet and higher, and are scientifically and systematically gathering data useful to our venturesome space and aerodynamic programs.

On the other hand, the SST, will withdraw effort and divert money that otherwise would be spent making our cities more liveable and our daily life more tolerable and productive. The nations most eminent economists emphatically agree that the billions spent on the SST would create more lasting and stable employment if spent on truly vital domestic programs.

Clearly, the SST distracts the aerospace industry with the prospect of vast subsidies from its far more urgent task of converting its incredible technology to the great challenges right here at home. There is enormous potential within the industry to contribute to the development of rapid transit, improve health care, and develop effective controls for water and air pollutants.

Only through such long-range diversification will the industry be able to hire back the tens of thousands of scientists and technicians who have been thrown out of work in the current recession, and, in fact, to resume its growth and assure its profits. In fact, according to the host of economists who have studied the SST—among them Richard R. Nelson of Yale, Walter Heller, and Arthur M. Okun, former Chairman of the Council of Economic Advisers, and Nobel Prize winner Paul Samuelson—the SST would create relatively few jobs. One expert prediction is that it will add only about 3,000 workers over the next several years to the 4,800 now employed on the project at Boeing and the 9,000 or so directly involved in related companies or through subcontractors.

At best, the economists figure, the SST in full production almost a decade hence would involve a total work force of 50,000—all of whom, the economists insist, would be more swiftly hired and more steadily employed if the money that would go to the SST went, instead, into the development of rapid transit and other urgent domestic technology.

A more immediate economic danger comes from the grim certainty that SST would undercut construction of McDonnell-Douglas' DC–10 and Lockheed's L–1011 airbuses. Presently, McDonnell-Douglas has some 40,000 employees working on its airbus at Long Beach, Calif., and Lockheed has some 16,000 working on its.

Lockheed, stunned by the collapse of Rolls-Royce in Great Britain, has warned it will go bankrupt if its airbus does not get off the ground, jeopardizing a total employment of 83,000—45,000 of them in my home State of California.

These statistics confirm why I believe the SST is so terribly wrong for California.

At present, the two airbus manufacturers believe, on the basis of options and orders already received, they can sell some 1,200 of the aircraft over the next two decades for a minimum total of $18 billion into our economy. The SST holds no such realistic promise. Even its proponents insist they will have to sell 300 of them for approximately $16.5 billion for the Government to break even on its investment, and there is nothing now on the order books to conclude that they will. Rather, the SST presents an inescapable either/or choice between it and the airbuses. From the financial reports of the major airlines, it is quite obvious that they, with their swelling debts, cannot afford anything like a total of $34.5 billion for the simultaneous purchase of SST's and airbuses. Most airlines currently are laying off personnel in a desperate attempt to cut costs and restore profits—totally, the 12 major lines lost an estimated $97 million in 1970—and it simply is not possible in today's distorted inflationary economy for airlines to have their airbuses and their SST's, too.

Already, some 420 airbuses are on option or order, more than one-third of the projected total over the next 20 years—a sure sign of the fiscal feasibility of the program and the sustained impact it will have on the economy of California and the Nation as a whole. Any subversion of this program by the SST would be catastrophic and could devastate the already weakened aerospace industry in California and in other parts of the country that are doing subcontract work.

Economically and environmentally, all the SST would do is take the California aerospace industry on a bad trip.

From every aspect of sound American business, the SST is risky and uncertain. It merely dumps billions into a single, monopolistic project and provides no incentives or competitive assistance for the aircraft industry as a whole. For four decades the United States has been the principal airplane builder for the world, but that preeminence is increasingly being challenged by the rising industrial strength of France, Britain, Japan, and Russia.

The goal of our Nation should not merely be the production of a particular aircraft by a single manufacturer but rather the strengthening of the commercial air transport industry in total. If there is a single point to be made in the agitated debate over the SST, it is this:

The Government, possibly through interest-free development loans, should foster competition for the development of more economic subsonic aircraft and safer and more effective air and ground equipment. Congress, sometime soon, should evaluate industrywide programs that offer promise of sustaining our commercial dominance. I do not believe that the SST does.

The Nation's major economists agree the SST will be economically disastrous in that it never remotely will pay its way. Congress, I believe, instead of placing all its eggs in the dubious basket of the SST, should consider the possibility of interest-free development loans that will be repaid on successful programs. In this way, the whole industry would be given new vigor and greater vision, and far more jobs will be created throughout all the aircraft companies than by the one-shot gamble on SST.

All in all, the SST is a make-shift and frail crutch for an industry whose revitalization depends on increased production by each of its manufacturers and whose lasting rehabilitation lies in far-reaching conversion of its space and missile capabilities. To spur this permanent renaissance in the industry, I support the National Conversion Assistance Act, which would make $500 million available over a 3-year period. Additionally, in an effort to set new directions for skilled aerospace know-how, I favor the creation of a National Environmental Laboratory with an initial appropriation of $1 billion.

Additionally, of course, I stand with long-range programs for assisting persons in the aerospace industry, who, because of the current recession or Government cutbacks or whatever, find themselves out of work. These programs include an extension of unemployment compensation, the establishment of a placement service for skilled personnel, and funds for study in related fields of engineering and technology where jobs exist.

On a rigorous and prudent dollar-and-cents basis, the SST is an economic albatross for the Nation. Not only will it cost at least $1.343 billion to construct two prototypes, of which $864 million already has been spent, but also, it will take additional billions to keep them in the air. Boeing itself has yet to offer a financing plan for its dream child and will not, it now estimates, until June of next year, 4 years after it originally promised one. But from all that is known about the SST, it seems clear it will be so expensive to fly that normal fares will not sustain it. The French already estimate that they will have to charge from 30 to 150 percent more than present trans-Atlantic fares for seats aboard their Concorde, which, by the way, has exceeded original cost estimates by an incredible 400 percent.

Presently, the Federal Government—that is, the taxpayers of this Nation—is carrying between 80 and 90 percent of the total costs for the SST—a clear indication it cannot stand on its own financially. It appears pure pipedream when some SST advocates predict some 300 will be sold overseas—in addition to 500 domestically—to help correct our Nation's balance of payments. This Nation, since 1958, has sold only 850—it is a very large number—of what has proved the most effective jet airliner in history, the Boeing 707, and there is no reason to believe that there is going to be any run on the market for a larger plane that cannot be flown at a profit.

From the economic evidence accumulating in Britain and France on the Concorde, it appears that what they hoped would be an international financial advantage is collapsing into a serious disadvantage as their economies are stretched to subsidize the costly craft.

In their pursuit of a pot of gold at the end of the vapor trail, they have found nothing but inflating costs and spiraling demands for more and more government subsidy.

Our economy, already debilitated by incredible inflation and rising unemployment, should not be further drained by the anemia of the profitless and the voraciously consumptive SST.

Furthermore, grave questions have been raised about the horrific effect of the SST on our environment and on the health and peace of mind of Americans.

Medical scientists have claimed that flights of SST's will tatter the delicate atmospheric screen that shields us from cancer-producing ultraviolet rays from outer space. The claim may be hyperbolic, and it may be false, but it certainly merits meticulous study, in my opinion, before we loft SST's to a possible hazard to the health of millions.

Additionally, there is the probability that fuel and other emissions from SST will stain the stratosphere a permanent dirty grey inasmuch as in those lofty altitudes, the air is thin and unmoving. It is predicted that the emissions would remain undisturbed for months and would chemically interact with atmospheric substances.

Then, of course, there is the factor that will most shatteringly affect each of us—the sheer noise of the plane's jets and the reverberations of its sonic booms, if it should, in fact, ever be able to fly over land areas. In this connection, I compliment the Senator from Washington for introducing a measure which passed the Senate a few days ago, which if enacted will prevent supersonic flights over our country.

When all the facts are considered, I can only conclude that the United States does not need an SST any more than it needs a pyramid to prove its bigness or to sustain its economy.

What she needs is a realistic appraisal of her self-interest and the sure faith that she is going to maintain her leadership in the world not because her airplanes are enormous, but rather because she can house, feed, educate, challenge, and sustain her citizens unlike any other society on earth.

I have confidence she can do so.

Mr. President, I thank the distinguished Senator from Wisconsin (Mr. PROXMIRE) for yielding me this time.

Mr. MAGNUSON. Mr. President, will the Senator from California yield for a few observations?

Mr. TUNNEY. I am happy to yield to the Senator from Washington.

Mr. MAGNUSON. The Senator is familiar with the fact, is he not, that the airlines have deposited $22 million for delivery positions to buy the SST, and have contributed $59 million toward development of the SST?

Mr. TUNNEY. Yes; I am aware of that.

Mr. MAGNUSON. The Senator is also familiar, is he not, with the fact that all the airplane manufacturers are busy developing a new generation of subsonic planes? The new generation, small planes, do not compete with one another. They are in a completely different competitive category. The SST will be the queen of the long-haul, overwater routes.

I also want to apprise the Senator of another fact, that the Senator from Washington did not start the SST. It started some 11 years ago. President John F. Kennedy was the one that wanted us to get into it, saying that we were behind and that we must build this type of airplane.

Of course, it is a big airplane project. It is so big that one country in Europe could not build it alone. Now they have a third country, West Germany, as a possible second-generation partner for the Concorde. Seventy-five percent of the research and development is being financed by the Government and 25 percent by private contribution. That is exactly what the percentage is—about the same as President Kennedy predicted. As a matter of fact, it is a little more private than he anticipated.

Now I am a great believer in this idea of having proper priorities. I have handled appropriations for housing, for rapid transit, and for the cancer institute. I still handle all of HEW, which is the second largest appropriation measure next to defense. I seem unable to understand why people think that if we stopped the SST tomorrow that the money would move over to some other program. It does not work that way. All projects stand on their own. As a matter of fact, if we stopped the SST tomorrow, we would not have any money to place elsewhere because the severance costs will be equal to the amount that is being asked for by the Department of Transportation.

We may make some think a gesture is being made regarding priorities. In the bill we will be considering tomorrow, there is almost $1 billion for airports and airways and other things the Senator from California and I are talking about. We doubled the amount for rapid transit. The SST is only 3 percent of the DOT bill and only one-sixth of 1 percent of the national budget. That will not shake our fiscal foundations, I do not believe.

There are many worthwhile things the distinguished Senator from California and I believe in. We are going to have these important domestic projects. We should have the SST, too.

If the amount of money to be appropriated for the SST was going to be moved over to some other program, I might believe them. But, as a member of the Appropriations Committee I know that this is simply not the case.

We doubled the amount for rapid transit in the bill last year. I think that all these things should be done. But, someone has got to go to work to make the wages to pay for the social reforms. I agree with the Senator about the subsonic airplanes but they will be along in due time and will serve a different market than will the SST.

There is one strange thing about airplanes, competitive-wise—even the 707 is now losing some of its economic competitive advantages due to the 747 and the stretch-jets. A comparison can be made with the development of automobiles.

In all of this discussion, we are talking about the situation 4 or 5 years from now. That is what we are talking about now. I am sorry there are so many misunderstandings about this situation. Psychologically, I know it has become a symbol. It has been warped out of shape regarding its relative cost. If this were the beginning of the SST, I would say, let us be very thorough; but we have been working now for 9 years and no one said much about the SST until last year. There is not much left to be done and I believe we should finish. There is also the payback we have to consider and I cannot believe we are willing to throw away nearly a billion dollars.

The Senator from California was quoting Dr. Samuelson. He is an eminent economist. But there are many other economists who disagree with him. Put a bunch of economists in a room together and if we can get a unanimous opinion out of them, I will eat that desk. They are all sincere and honest men. Dr. Samuelson said in his testimony that funding the SST would be like subsidizing the merchant marine, because it has no value to us for defense and therefore it should be done privately.

Well, I never heard an economist in my life make a statement like that, when we all know the merchant marine is the fourth arm of defense for this country, otherwise they would not be getting any subsidy. We subsidize the railroads. We also subsidize the airlines.

One further point I want to make and I hope that the Senator from California does not think that this is true—I know I do not—and I hope he does not. I know the present position of the airlines. We recently had a month of hearings before the Senate Commerce Committee, but if I were to believe that 5 years from now they would be in the same financial shape, I would agree with the Senator, but I believe that will not be the case. The economy should be greatly improved by 1977. If the airlines are in the same shape 5 years from now then they will not buy an SST's nor will they buy the DC–10, was that the plane you mentioned, Senator?

Mr. TUNNEY. The DC–10.

Mr. MAGNUSON. Yes. There just will not be any airplane market. I have to think of the growth factor in this industry. When we think that only about 4 percent of the population of the world has ever flown in an airplane, and only about 29 percent of Americans fly in airplanes regularly, we know that there will be 60 percent more citizens flying in 5 to 10 years, and we have to prepare for that situation.

I am not an airplane economist. All I know is that 16 airlines, led by Pan American, say they want to buy the SST. Many have taken an actual position costing $200,000 a piece.

I suppose if the Senator from California was told that Lockheed had got the SST contract, I would be just as strongly for it. With Boeing, the amazing thing is—and we have the exact figures—77 percent is subcontracted out, much to companies in California—Rohr and other companies—these companies are expecting to make parts and assemble them for the SST.

Of course, I know that the Senator from California feels deeply about the unemployment problem in the aerospace industry. It is very bad in California. It is also bad in my State of Washington, where there are 89,000 people walking the streets looking for work. That does not justify the SST, but it just makes me think that if the SST is voted down tomorrow, it will mean that on next Monday 11,000 to 12,000 people will be added to the 89,000 unemployed in my State. That is pretty much a concern of mine, as I am sure it is to the Senator from California.

Unemployment insurance for those people over a 50-week period will amount to almost half the appropriation we are talking about here—unemployment insurance that we are going to have to pay out to them.

We can shift them elsewhere some day, but not overnight. We do not take an engineer who may come from California, who has worked for Lockheed or Douglas, when they have a shutdown—we do not shift that person overnight to a job on Philadelphia helping them with their mass-transit problems. I wish that we could. Maybe we will some day. But it becomes a serious problem with some of us—especially with me. I do not justify the SST on that basis. I want to tell the Senator that when there are 100,000 people getting unemployment insurance over a 52-week period—or 50 weeks now—48 or 50—that is almost half this appropriation that we will have to pay out of the Federal Treasury.

So all of those things had better be considered in analyzing the economy, notwithstanding Dr. Samuelson, for whom I have great respect. He even admits he is not always right. I have a fight with economists about once a week. Half of the time I am right and half of the time they are right. But one has to respect him. He is a great man.

Has the Senator read what our economists have had to say?

Mr. TUNNEY. Yes, I have.

Mr. MAGNUSON. They do not agree. They are all speculating. The people are going to have to pay for it. The people who are responsible are the ones who count and not someone who is speculating or theorizing.

I can understand what the Senator says. I know there will be all kinds of subsonic flights. I think that airplane travel will be doubled. It has a tendency to grow at the rate of about 25 percent a year, with the exception of this past year.

The foreign airlines did not have as many problems as we had. I think there is a place for all of these things, just as there is a place for all kinds of different automobiles. They serve different purposes.

None of the economists know anymore about it, any more than they did about the first jets. We heard the same story then. The people will have to pay the bill in the long run if we do not have more productive aircrafts.

Mr. TUNNEY. Mr. President, I thank the Senator for his remarks. I think the Senator knows that I have the highest respect for him personally. I respect the way in which he fights for his region. I certainly do not want to have my statement interpreted by the Senator as regional warfare because it certainly is not.

Mr. MAGNUSON. That competition has been healthy for California and Washington. I think we have all benefited by our little warfare back and forth.

Mr. TUNNEY. My remarks today are not based on regional warfare. They are based on an evaluation of the issue as best I can evaluate it.

Mr. MAGNUSON. I understand that. I appreciate the sincerity of the Senator. He and I have known each other for a long time. I am sure that we have mutual respect for one another.

Mr. President, as the Senator from Wisconsin would say, I ask unanimous consent to have printed in the RECORD the position of some 22 eminently well-qualified economists. They take the opposite position of Dr. Samuelson. I also ask unanimous consent to have printed in the RECORD the position of an economist from one of the finest schools in the United States.

There being no objection, the material was ordered to be printed in the RECORD, as follows:

POSITION PAPER OF 22 ECONOMISTS

Economists across the nation have endorsed the U.S. Supersonic Transport (SST) program in response to charges that the SST will not be economically feasible.

A brief sampling early this week revealed that more than 30 economists from universities, colleges and private organizations strongly support the program.

All agreed that "recent technical information presented to Congress has demonstrated the high probability that the SST will operate well within environmental standards; development of the U.S. SST through the prototype stage will permit a complete analysis of the commercial economic viability of the SST," and the potential favorable impact on the United States economy is highly significant.

"The U.S. SST should increase employment by adding a substantial number of new direct jobs," and "contribute desperately needed dollars to assist this country's balance of payments problem," they said.

Following is the statement all endorsed along with a partial listing of those supporting the SST program. As this listing was printed, more calls in support of America's supersonic transport were being received.

We, the undersigned, favor continuation of the development of two U.S. SST prototypes through completion of the planned flight test program for the following reasons:

1. Recent technical information presented to Congress has demonstrated the high probability that the SST will operate well within environmental standards.

2. Development of the U.S. SST through the prototype stage will permit a complete analysis of the commercial economic viability of the SST and will generate invaluable data for use in the production program.

3. The potential favorable impact on the

U.S. economy is highly significant. The U.S. SST should increase U.S. employment by adding a substantial number of new direct jobs; contribute desperately needed dollars to assist in the U.S. balance of payments problem; and support the U.S. aerospace industry, our nation's largest industry, in worldwide civil aviation competition.

SIGNATORIES

Martin T. Ferris, Ph. D., Arizona State University.
J. C. D. Blaine, Ph. D., University of North Carolina.
Edward Smykay, Ph. D., Michigan State University.
Hugh S. Norton, Ph. D., University of South Carolina.
Stanley Brewer, Ph. D., University of Washington.
Roy J. Sampson, Ph. D., University of Oregon.
Hale Bartlett, Ph. D., University of Illinois.
Joseph L. Frye, Ph. D., University of Tennessee.
Warren Rose, Ph. D., University of Houston.
George W. James, Ph. D., Chief Economist, Air Transport Assn.
Frank L. Hendrix, Ph. D., University of Tennessee.
James E. Suelflow, Ph. D., Indiana University.
Buford Brandis, Ph. D., Industrial Economist.
Grant Davis, Ph. D., Auburn University.
Peter Lynagh, Ph. D., University of Maryland.
William P. Carlin, Industrial Economist.
J. Richard Jones, D.B.A., University of Georgia.
George Horton, Ph. D., Auburn University.
Prof. J. A. Smith, Southern Illinois University.
Lamont K. Richardson, Ph. D., Consulting Economist.
Allan Skaggs, AIA Chief Economist.
Paul Cherington, Prof. Transportation-Economics, Harvard University.

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HENRY C. WALLICH AND THE SST

Henry C. Wallich, Ph. D., nationally recognized Professor of Economics at Yale University and a former member of the President's Council of Economic Advisors, today repudiated an alleged statement of his opposition to the SST as distributed by the Coalition Against the SST last week.

Dr. Wallich asserted that "we cannot afford to give up the project at this point. I want to clarify my position on the SST. I favor construction of two prototypes and therefore urge Congress to vote for their budgetary appropriation."

The Coalition is spearheading a lobbying effort to defeat the SST and claimed Dr. Wallich's support for their position.

Asserting that his position was not correctly represented by the Coalition, Dr. Wallich maintained that "if foreign countries build, and we do not, we shall lose not only the opportunity of putting our supersonic plane into the sky instead of theirs. It is hard to believe that foreign leadership in so major a project should leave unaffected our leadership in aircraft manufacture generally."

Pointing out that his position had not been properly represented he released his full statement given to the Coalition on March 8th as follows:

"I continue to believe that the key to the right decision on the SST is the outlook for the Concorde. If we are sure that the Concorde will not fly commercially, there is much to be said for terminating the SST program. If the Concorde is viable, we stand to lose a great deal economically.

"I have heard nothing to make me believe that the Concorde has been stopped. Rumors, press reports, and even statements by airlines about our prospective purchases need to be heavily discounted. That countries of the technological capabilities of the U.K. and France should permanently write off the construction of a supersonic plane seems very unlikely to me.

"If foreign countries build, and we do not, we shall lose not only the opportunity of putting our supersonic plane into the sky instead of theirs. It is hard to believe that foreign leadership in so major a project should leave unaffected our leadership in aircraft manufacture generally.

"We are now told that we need not worry about the balance of payments, official statements about the economics of the Concorde are all wrong, the unemployment in Seattle could be dealt with by other means. One can find some basis for all these claims. Nevertheless, we cannot write off our international financial relations, we cannot ignore our position in a prime area of modern technology, we cannot ignore domestic realities. We can and probably should delay commercial production as long as feasible. We should focus as much as possible on technological improvements before we build. But we cannot afford to give up the project at this point."

He added "I want to clarify my position on the SST to avoid further misinterpretation. I favor construction of two prototype and therefore urge the Congress to vote for their budgetary appropriation."

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## RAILPAX PLAN AND MONTANA

Mr. MANSFIELD. Mr. President, when the National Railroad Passenger Corporation announced the details of the unified passenger system, I was amazed and shocked with the total lack of understanding and consideration given to the less populated, rural States in the Nation.

When Congress enacted legislation establishing this new Corporation, it was done to bring about a new vigorous approach to railroad passenger service as a replacement for the deteriorating and stagnant passenger service provided by the majority of the railroads in the country. Railroad passenger service has been reduced to such a state that something had to be done to preserve this mode of transportation. If this recent announcement is any indication, the Corporation is merely perpetuating what we had hoped to replace.

Fifteen years ago, passenger service was available on three transcontinental railroads through Montana. In recent years, this has been reduced to service on the old Northern Pacific and Great Northern Lines. Under the Railpax plan, the only passenger service would be on the Great Northern Line, across the northern edge of Montana. Two-thirds of the State will be without rail passenger service, Montana's six largest cities will not have access to rail service and it will be over 300 miles from any point in Montana to a rail depot.

In the past several years there has been a great deal of conversation about the migration of Americans from rural areas to metropolitan centers. If we are to make a sincere effort to reverse this trend, the Railpax plan is not going to help. The route selected through Montana gives every indication of what I feared might happen. It gives primary consideration to the railroad corporation, not the needs of the traveling public. This route through Montana is the shortest and the least costly to maintain. This supports my fear that the Burlington Northern views Montana as a necessary roadbed between the Twin Cities and Seattle. I fear that there will now be reductions in freight service on the Northern Pacific Lines, now that they will not be required to maintain these roads for passenger trains.

As my colleagues here in the Senate know, I have been objecting to the reduced services offered by the railroads for a number of years. I still believe they have purposely reduced their services and discouraged public use of their lines, in an effort to bring about abandonment of their responsibilties in passenger service.

The Railpax plan appears to support this philosophy and I do not see how it can provide a suitable alternative.

It is quite ironic that Congress is considering the appropriation of billions of dollars for the supersonic transport to fly people to Europe and other parts of the world in less than 4 hours, when it will be virtually impossible to get out of Montana by public surface transportation in order to take advantage of supersonic travel. The Corporation officials may feel that the remainder of Montana has adequate alternatives of public transportation. However, I wish to remind these officials that air service does not include many of the smaller cities and at some points, the airlines are attempting to reduce their schedule. Bus lines offer about 50 percent less public transportation than they did a few years ago. Under the Railpax plan, Montana does have one line which will be available to very few people, but I am certain that constituents in the States of Idaho, Wyoming, and South Dakota, find this plan even less comforting.

Originally I had felt that the National Railroad Passenger Corporation could be the answer to the deteriorating surface transportation needs of our Nation, I realize, that we can economically maintain railroad passenger service now available without a tightened up system aided by improved service for the traveling public.

In the State of Montana, we could have survived reasonably well, with alternate-day service on the Northern Pacific and Great Northern Lines, between the Twin Cities and points in Montana, even if on a reduced basis. Also, in looking at the map of the new improved passenger routes, there is not one north-south connection between Chicago and the west coast. The Corporation thoroughly ignored such existing routes from Butte to Salt Lake City.

For sometime I have been considering a plan to require the railroads to abide by their public responsibilities and today I have introduced legislation which would require railroads who benefited by land grants, to return all these lands to the Federal Government, where they have abandoned rail services. On the surface, this may appear to be a drastic measure, but these railroads were given the original land grants as an incentive to provide railroad services to the people of the United States. If they abandon this intention, I see no reason why they should benefit from the land grants. It is my distinct impression, that in many in-

stances, the railroads are more interested in investments and benefits associated with these lands, than they are with the business of running a railroad.

Mr. President, I ask unanimous consent, to have printed with this part of my remarks, the proposed amendment to the Railroad Passenger Service Act of 1970.

There being no objection, the amendment was ordered to be printed in the RECORD, as follows:

S. ——

*Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,* That title IV of the Rail Passenger Service Act of 1970 is amended by inserting at the end thereof a new section as follows:

"SEC. 406. PUBLIC CONSIDERATION IN RETURN FOR DISCONTINUANCE OF SERVICE.

"(a) Notwithstanding any provision of this or any other Act no railroad holding title of any kind to lands, other than rights of way, which were received as a grant (not including any purchase) from the Federal Government shall discontinue, after May 1, 1971, any passenger or freight service regularly provided prior to such date unless such railroad reconveys to the United States all right, title, and interest (including mineral rights) held by such railroad in an amount of such land equal to one hundred acres for each mile of service discontinued.

"(b) For the purpose of this section the term 'rights of way' means land within 300 feet on either side of a railroad track regularly used on May 1, 1971, for the provision of freight or passenger transportation service to the public."

Mr. MANSFIELD. Mr. President, before concluding my remarks today, I wish to express my opposition and views on another matter. The Interstate Commerce Commission has authorized eastern and western railroads to increase their current freight rates by about 11.8 percent, without any comments or controls over deteriorating service. Here again, we see an example of the reason why I have advocated the abolishment of this regulatory agency, or at least a comprehensive overhauling of the agency.

## MESSAGE FROM THE HOUSE

A message from the House of Representatives by Mr. Berry, one of its reading clerks, announced that the House had passed, without amendment, the joint resolution (S.J. Res. 7) proposing an amendment to the Constitution of the United States extending the right to vote to citizens 18 years of age or older.

## FURTHER CONTINUING APPROPRIATIONS, 1971

The Senate continued with the consideration of the joint resolution (H.J. Res. 468) making certain further continuing appropriations for the fiscal year 1971, and for other purposes.

Mr. GOLDWATER. Mr. President, I yield 5 minutes the distinguished Senator from Iowa (Mr. MILLER).

The PRESIDING OFFICER (Mr. WEICKER). The Senator from Iowa is recognized for 5 minutes.

### AGAINST THE SST

Mr. MILLER. Mr. President, after most careful review of both sides of the controversy over the SST, I voted against the appropriation to continue development of the two prototype models of the SST when this question was last presented to the Senate. I have continued to closely follow the evidence and arguments advanced since that time, and my position remains unchanged.

It appears that the sideline noise problem may be favorably resolved. Also, I recognize the sincerity of the proponents when they state that all they wish to do is proceed with development of two prototype models so that adequate testing and research can be carried out to determine whether there would, in fact, be harmful effects on the environment as a result of large numbers of SST aircraft; that if such testing and research indicates seriously harmful effects on the environment, that will be the end of the SST.

My concern, however, goes deeper. Even if the sideline noise problem is met, and even if the testing and research on two prototype models answers the environmental questions satisfactorily, I cannot support this appropriation. Over the past few years, we as a Nation have come to realize that our money and resources are far more limited than most of us appreciated in previous years. The necessity for establishing priorities in the commitment of money and resources has become the fact of life of the seventies. To me, the vast amount of not only Government money but the hundreds of millions of dollars of money and resources from the private sector, not to mention the large amount of professional and skilled manpower, committed to a project that will save two or three hours of flying time over the Atlantic to London and Paris is not a prudent ordering of priorities.

Possibly at a different time in our history, the problem of priorities would not be as serious as it now is. But today we face serious needs for national defense to maintain an adequate deterrent capability vis-a-vis the Soviets—not just for today, but for years into the future. After all, if we lose the security of our country, we lose everything. We face growing demands to meet the needs of education, health, welfare reform, rural development, rebuilding our cities and building new ones, public transportation, clean air and good water. Surely these needs take priority over saving 2 or 3 hours' flying time to London and Paris for a small fraction of our population.

As I have said before, there is serious doubt that there will be the consumer demand needed to make the SST a profitable venture. Projections indicate that, as finally developed, the plane would cost $50 million per copy. That is an exorbitant amount of investment for the sake of saving 2 or 3 hours' flying time over the Atlantic. Perhaps the Soviet Union will develop an SST and, with the built-in subsidy of the Soviet economic system, be able to sell a quantity of these planes. However, the Soviet Union has never been known to give away anything—for very long.

There are those who say that we must not surrender first place to any other country in supersonic commercial aviation. This, of course, assumes that there will be a profitable supersonic commercial aviation market. No one knows, because the estimates cover the time-frame 1978–90, and crystal ball gazing that far into the future is terribly difficult. Nevertheless, in arranging our own national priorities, it seems to me that we cannot expect to be first in everything. Surrendering first place in supersonic commercial aviation certainly does not have to mean surrendering first place in other and vastly more important areas of commercial aviation.

Either way one votes on this question, hardship will follow. A vote for the SST implies the hardship of commitment of vast sums of money and resources to a low-priority benefit for our society. A vote against the SST implies hardship to affected workers and their families—at least temporarily until conversion to other activities takes place. There are sincere and dedicated people on both sides of the question. However, for the reasons I have given, I shall again vote against continuation of the SST.

Mr. GOLDWATER. Mr. President, I yield myself such time as I may need.

The PRESIDING OFFICER. The Senator from Arizona is recognized.

### THE SST AND THE ENVIRONMENT

Mr. GOLDWATER. Mr. President, during the course of the lengthy and heated debate on whether or not we should construct the supersonic transport, the Members of this body must have been extremely confused many times by hearing the use of terms so technological that they were unable to understand them. In fact, the jargon of the aviator is dissimilar to the jargon of any other profession, and having spent 41 years of my life in aviation, I thought it would not be improper for me to offer an explanation during the course of this short debate on the SST of some of the terms that we will encounter.

At the same time, I hope to correct some of the false impressions which have been left on this subject. I must say, there are many. I do not think I would have time to correct such false impressions if I had a year to correct them and take out of the RECORD all the misleading statements which have been made.

We have heard a great deal made of the effect of the SST on the environment. In fact, I think I can boil it down to two points that people are concerned about. One is economic. I do not care to touch on that today other than to say that every mode of transportation we have ever gone into in this country has appeared to be uneconomical at the outset.

We can recall that when the inland canals were first suggested to transport grain, it was considered uneconomical and that the Federal Government would have to build them. When it was suggested that the railroads might go off west, it took the gift of great sections of land for the railroads to get them to go. It was said that to complete a transcontinental railroad across this country would be uneconomical. I also remember

these very same precise arguments that I hear on the floor today in an economic way having been directed toward companies who had the temerity to buy a few airplanes and say that they could ever stay in the airline business in this country.

Mr. President, I have justified air transportation as far back as the 1930's. The skeptics who filled the room said we could not make it pay. It has worked. Now we hear that the SST will be uneconomical. Let us say that it will be. I am not going to argue that it will not be. I think the fact that we are confronted with a challenge to keep America first in the aviation business far overrides the fact that the economics of the situation might be detrimental.

I might say relative to the rumor that Russia might sell the TU–144 that, as I understand it, Russia will rent the TU–144. That is a different horse than selling it. They intend to rent it with the crews to the different companies and Russia will fly the aircraft to whatever countries the different companies want.

To get back to my discussion of the effect the SST might have on the environment, we heard it repeated again today that it would have an effect. I do not speak as a scientist. I am a well-known dropout. However, I have learned a lot of things that some scientists have not had the chance to learn.

Much of this opposition has come from scientists, extremely well trained but also extremely lacking in close contact with the very problem they propose to discuss.

I know Dr. McDonald. He is one of the most eminent men in his field in the world. However, he is discussing a hypothetical situation to an extent that is impossible. I cannot believe that he would do such a thing.

I can remember when we put in the silos around Tucson. He blew up. He said that this was one of the worst things that could happen to Tucson, that they would blow up and kill everybody in Tucson. He has forgotten about that. It was some time ago.

I do not speak as a scientist, but I speak as one who has flown 83,000 feet at a speed of mach 3. I have flown faster than sound so many times that I have long since lost track of the number.

We have heard some people talk about the supersonic transport causing increased water vapor in the stratosphere that would result in all sorts of environmental problems.

I do not understand what all the fuss is about. We have been flying supersonically for over 24 years and have accumulated more than 600,000 supersonic engine hours. That is only the time that has been kept track of by the Strategic Air Command. The Army and the Navy do not keep track of it. We have been flying them in the United States for years. We have more than 6,000. There have been no identifiable weather changes as a result of these airplanes flying for the past 24 years.

Mr. PROXMIRE. Mr. President, will the Senator yield briefly on that point?

Mr. GOLDWATER. I yield.

Mr. PROXMIRE. Mr. President, the Senator makes a very interesting point. I think a lot of people are puzzled over why we make a fuss when we have had the military flights for more than 20 years and for more than 500,000 hours of military flight.

The argument made by those of us who oppose the SST is that in only 20 weeks there would be as much supersonic flight with a fleet of 500 SST's as there have been in the more than 20 years we have had the military planes.

The pollutants put out 10, 15, and 20 years ago have dissipated. However, they do stay in the upper atmosphere as long as a year and perhaps longer. The military flights have had much less effect on the atmosphere, understandably a great deal less, in the last 20 years of the military flights, than the commercial SST's would have in a few months.

Mr. GOLDWATER. Mr. President, I do not think the Senator was in the Chamber when I started. I stated that the 600,000 supersonic hours are only those recorded by the Strategic Air Command. The Tactical Air Command, I dare say, has flown two or three times that number of hours. The engines that were flown in these flights were dirty engines. The fact is that at the very start it was a dirty engine. However, it has now been fairly well cleaned up. However, nobody has complained of it yet. I have not heard of anyone in Arizona, where most of these occur, complain about an increase of skin cancer. All of the desert rats who live in the desert have skin cancer. We get these freckles all over our heads.

I live near Flagstaff. I would be subjected to far less ozone change than if we covered the earth's atmosphere with enough water to affect an ozone change. In all of the Western States skin cancer is something we live with. Yet, I have not heard any scientists or doctors say that because of the supersonic flights that have occurred we have had an increase in skin cancer or a measurable change in the weather.

Dr. S. Fred Singer, Chairman of the SST Environmental Advisory Committee, and a highly recognized geophysicist and expert, in testimony before the House Appropriations Subcommittee related that thunderstorms put water vapor in the stratosphere and they take it out in the process that has been going on since the beginning. By the same process, any small amount of water vapor put in by the SST's is infinitesimal and will be taken out by the normal process. The thunderstorms do not know the difference in water vapor.

A Library of Congress report points out that the stratosphere possesses natural mechanisms which tend to hold its conditions fairly constant. The higher strata of the atmosphere are not immune from the effects of low-altitude weather. The stratosphere is dry not because it lacks exposure to huge quantities of water but because natural mechanisms tend to unload excesses so as to stabilize its water content at a low level.

The National Academy of Science reports that a single large cumulonimbus—thunderstorm—can inject as much water vapor into the stratosphere as would a fleet of SST's making 1,600 flights on a given day.

I have to ask again why there is all the fuss about supersonic flights resulting in water vapor. I recall when I started to fly, the meteorologists told us we would never find cumulonimbus above 40,000 feet in the Western Hemisphere. I get a laugh out of it every time I am 50,000 feet up and I look up and there is the rascal getting ready to raise all kinds of cain with the atmosphere.

The scientist who tells us that we are going to encounter more skin cancer because of the flights of the SST, is operating, in my opinion, outside the realm of scientific reasoning. If we were planning to put enough SSTs together to completely cover, say, the area between the equator and the North Pole and fly them all at one time, and if the atmospheric conditions were such that they did emit a trail, then possibly we could find out if the scientist's hypothesis relative to skin cancer might be right.

I constantly hear the figure that there will be a fleet of 500. No one has ever said anything about 500. I hope that we can have 500 some day. But let us look at the practicalities of operating a fleet of 500 over any portion of the earth's surface.

We have recommendations that have come out of the supersonic flights made as a result of the experimentation with the B–70's. It has been recommended that there be an air separation of 10,000 feet.

In the course of my argument I am going to show that flight above 60,000 feet probably will not be experienced by people because of the problems. However, try to imagine a number of aircraft across the ocean that have to have a separation of 10,000 feet. Then remember that the subsonic have to have 2,000 feet separation.

I doubt 500 aircraft could be put in the air at one time all around the earth, but if there were 500 SST's wingtip to wingtip, the line would be 7 to 8 miles long. It would be like scratching a billiard ball with a needle to try to get an idea of the effect of this over the North Atlantic when we speak of 7 or 8 miles of aircraft emitting this vapor or extraneous gases.

I am demonstrating how stupid it is to talk about a fleet of 500 airplanes. I do not think at any one time, counting commercial and private flights, we would find over 150 aircraft flying over the North Atlantic. I have been trying to obtain those figures.

But to imagine that one flight of an SST flying from Paris to New York, or another flying from the opposite direction, could cause this kind of disturbance is utterly ridiculous to me.

It appalls me that men of scientific background, men like Dr. McDonald, would inject into the minds of people that the SST is going to cause skin cancer. I am surprised. He is not that kind of man. He is not given to wild statements, but he is out in the wild blue yonder on this if he thinks one, two, or 10 flights going across the North Atlantic could put enough water vapor in the air to create the condition he describes.

To begin with, we imagine that these airplanes will fly at altitudes in excess of 50,000 feet and while this is the hypoth-

esis at the present time, I wish to raise some doubt as to how much above 50,000 feet we will fly. This gets into my argument against the cluttering up of the atmosphere by vapor trails caused by water or any extraneous gases leaving the engine of the SST. Airplanes flying in excess of 75,000 feet, or in excess of 60,000 feet have encountered extreme turbulence. Let me explain the word "turbulence."

Many air travelers refer to turbulence as airpockets and I wish to remind them that there is no such an occurrence. Turbulence is nothing more or less than undulations of the air caused by high winds or by vertical winds which, in turn, are caused by heat or the lack of heat. At extreme altitudes where the temperature generally remains the same, we encounter sheers which is nothing more or less than an abrupt change of temperature causing a very severe and immediate shock or turbulence. Turbulence caused by wind is the most common experience at extremely high altitudes as we witness when we enter or leave a jetstream. Generally jetstream turbulence is found between 33,000 feet and 45,000 feet. These lower level jetstreams move from the West to the East but the pilots of the XB–70 discovered that there are stronger jetstreams coming out of the East and flowing to the West at the higher altitudes. They have also discovered that there is turbulence at these high altitudes and when the turbulence occurs it is usually more violent than that experienced at altitudes below 50,000 feet.

In fact, Captain White, who was in command of the B–70, told me turbulence would be so violent he would drop from mach 3 to mach 2. If one can imagine 150 passengers all of a sudden experiencing that and having them all pushed up in the cabin, I do not think we would find those airplanes being used until we knew more about high altitudes and developing clear radar with which we could see turbulence ahead. I wish we were making greater progress in that field but we are not.

The summary of the preliminary evaluation of the SB–70 airplane encountered with high altitude turbulence written by Eldon E. Kordes and Betty J. Love of the Flight Research Center of NASA comes up with this summary:

> Measurements of airplane response to clear air turbulence were obtained during supersonic flights of the SB–70 airplane to an altitude of seventy-four thousand feet over the Western United States. In general, the results were 75,750 miles of operation above forty thousand feet altitudes show that turbulence was encountered an average of 7.2 per cent of the miles flown between forty thousand feet and sixty-five thousand feet and an average of 3.3 per cent of the miles above sixty-five thousand feet with less than one per cent of their turbulent areas exceeding one hundred miles in length.

The reason I have gone into such detail in explaining turbulence at this point is to carry on my argument against the eminent physicists who have appeared before the various subcommittees stating that extreme damage could be done to the environment by the flight of the SST at these high altitudes.

The new engine for the SST is a completely different engine than we talked about last year and has almost eliminated all extraneous gases. There will be some water vapor emitted but not of any consequence.

To begin with, if these engines do emit any quantity of vapor, be it water or gases, and turbulence is encountered caused either by high winds or by temperature changes, these physical characteristics of the atmosphere will cleanse the atmosphere of any of these particles. The argument that these particles will remain suspended indefinitely in the atmosphere just does not hold up when we realize that turbulence does exist at those altitudes. And whether this turbulence is constant, whether it is only encountered, say, 7 to 10 percent of the time, matters very little because if it only occurred 1 percent of the time, that 1 percent could cleanse the atmosphere of anything the engines might possibly leave. To further the argument, let me offer the example we are now witnessing of jet aircraft whose engines used to emit dense, dark clouds of smoke on takeoff and approaches and are now being cleansed of this effect by the development of a kit which when built into the engine eliminates all smoke or vapor on takeoff or landing or at cruise.

To get back to the new engine, all jet aircraft engines today require about 100 percent of power for takeoff and climb. Some do not require all of that and some require more than 100 percent. But this new engine developed by General Electric is so efficient it has eliminated the need for the afterburner which caused most of the noise and the engine can be run at 93 or 94 percent for takeoff, which eliminated sideline noise. In fact, the decibel limit on takeoff will be less than any jet aircraft flying today on commercial flights; and the community envelope pattern will be less than any jet aircraft flying in the United States or around the world today.

When one sees a vapor trail at high altitudes it is generally caused by the heat created in the engines being emitted into extremely cold surroundings causing a trail.

All of us who served in World War II, in Korea, and in Vietnam, or even the civilians of this country, are well aware of the jet trails. We see them every day. We remember the heavy concentration of jet trails over Europe in World War II bombing raids. The clouds that those planes formed rapidly disappeared, just as they do at extremely high altitudes.

I can personally attest to the fact we do not always find jet trails today. I flew the SR–71, a mach 2 aircraft, and I have seen other jets, and I have never seen them leave a contrail yet. The SR–71 has one of its test flights over my home in Arizona. I can feel the sonic booms when they go over but I have not been able to see the aircraft or any trail it has been leaving, which carries out my belief that we will see fewer above 55,000 to 60,000 feet than we find below.

Of course, there are some small particles of water but these have never caused any disturbance or any problem at all in altitudes extending above 55,000 feet.

Although the time for debate will be short, I hope to be able to discuss some of the other so-called problems. I had mentioned sideline noise. We have sonic boom and other aspects of engine and aircraft noise which have been raised during this debate. I welcome the questions of any of my colleagues as to my experience in this general field. I do not pose as a scientist. But when someone tells me something is going to happen at 80,000 feet and he has not been up there but just found out about it from a test tube or from a book, I have to rely on the man who has been up there.

I have done that, and there have been many, many other pilots who have done that and would give my colleagues the same report.

In closing, I would like to repeat that we are not talking about 500 or 300 SST's. We are talking about the construction of two prototypes. I think these two prototypes can answer all the questions that have been raised on the floor and elsewhere. I think the prototypes, flying in conjunction with a continued research program carried on by the Air Force, can quickly answer these questions. But I, for one, have not been convinced, regardless of the achievement of the scientists who have made the statements, that we are going to harm the environment, that we are going to cause irreparable damage to the upper atmosphere. I do not believe this is going to happen. I hope to be around when some of the people who say it will happen will have to stand up and say they are sorry they made that mistake.

I personally think the United States would make a fatal error if it failed to complete these two so that we could continue our leadership of the world in the fields of technology whether it be applied to getting to the moon, flying at supersonic speeds or making progress here on earth on the many problems which we face. If America does not accept this challenge, I am afraid that America will begin to settle alongside of Europe as a country who has lived its time and is now going to be happy growing into a decadent state.

I do not discount for a minute the ability of the Soviets to take over the sale of SST's on the world market. I think their idea of renting the planes with their crews would make their operation far more feasible and practical than having the countries purchase them outright.

There are many things I want to touch upon in the relatively few hours left. I will stay up a little late tonight to see if I can get my thoughts together on this and some of the other matters that the American people have been misinformed on.

Frankly, I think one of the worst disservices to the American people has been headlines that talk about skin cancer, when nobody can prove it, when after 600,000 hours of flight no scientist or doctor has pointed out one single case of skin cancer caused by supersonic transports.

I was shocked that the Washington Post carried this story in October or November, I said, "How long is it going to

be before it becomes an accepted fact?" I have to say, from the letters I am getting, not only do they say it would cause skin cancer, but every other kind of cancer known to mankind, and diseases some of which I have not even heard of. I call the whole matter an unfortunate thing by men who should know better, by scientists who know one does not make positive statements unless he has done experimentation.

That is all I have to discuss on the project today. I certainly expect to vote for it as I have in the past, because I would hate to see this country make the mistake of going back.

Mr. ALLOTT. Mr. President, I want to congratulate the distinguished Senator from Arizona on his very excellent statement with respect to the issue now before the Senate. I know that there is no man in the U.S. Senate with the knowledge of this whole subject that he has, and if I had to depend on the knowledge of any one person, I would rather depend on the knowledge of BARRY GOLDWATER in this area than that of any other Member of the Senate.

## SENATOR BELLMON IN STEP WITH PEOPLE

Mr. ALLOTT. Mr. President, before I begin my remarks on the SST, I have just seen an article in the Frederick Daily Leader of March 18, 1971, relating to the junior Senator from Oklahoma (Mr. BELLMON), entitled "Senator Bellmon in Step With People."

The article points out that Senator BELLMON is not one who grabs for headlines and is always grabbing the floor for oratory, but when he speaks he usually has something to say, in that he is in step with the thoughts and feelings of the people of Oklahoma.

I ask unanimous consent that the article may be printed in the RECORD at this point.

There being no objection, the article was ordered to be printed in the RECORD, as follows:

SENATOR BELLMON IN STEP WITH PEOPLE

(By Bill Kennedy)

WASHINGTON.—At a recent reception for newly-installed Speaker Carl Albert, an Oklahoma farmer from the western part of the state was talking to a small group in a corner of the room about another member of the Oklahoma congressional delegation.

"Henry Bellmon is just a farmer like me," the speaker said. "He knows the problems of Oklahoma, and during his short time in Washington, I think he's doing a bang-up job in looking after those problems."

This kind of talk is heard often wherever Oklahomans congregate. As junior senator from that state, Henry Bellmon seems to be in step with the people who elected him.

After serving four years as Oklahoma's first Republican governor, Bellmon went against the advice of most of the state's political pros, and took on veteran Sen. Mike Monroney and defeated him.

"Henry's the kind of man who bites off more than he can chew, then goes ahead and chews it," one friend remarked.

During his first two years in the Senate, Bellmon has set a fast pace for himself, sponsored numerous pieces of legislation of special significance to Oklahoma, and has earned the respect of administration and Senate leaders.

During the 91st Congress, Bellmon compiled an 85 percent voting record, unmatched by the vast majority of senators.

NEWS ANALYSIS

Senator Bellmon is not one who grabs for headlines in oratory from the chamber floor. But when he speaks he is listened to. Said Senate Majority Leader Mike Mansfield:

"The senator from Oklahoma speaks rarely but when he does, he usually has something and interesting to say."

How to classify the Bellmon voting record?

While he has not voted the "straight GOP line," Bellmon has backed up Republican principles more often than not. On issues where President Nixon took a stand, Bellmon was in agreement 85 percent of the time.

On votes regarding fiscal responsibility and the economy, Bellmon received an 83.3 percent favorable rating in an analysis done by the National Association of Businessmen.

The American Security Council gave the senator a 100 percent rating on key national security votes during the 91st Congress. And the Americans for Constitutional Action rated Bellmon's voting record 75 percent as upholding constitutional principles, while the left-wing group, Americans for Democratic Action, gave him only a 17 percent rating.

Bellmon has had his name on 80 pieces of legislation since coming to the Senate, 10 as primary sponsor, and 70 as co-sponsor. These bills include authorization for Indians of the Five Civilized Tribes to elect their own officers, bills to benefit taxpayers, postal reform, Indian affairs, agriculture.

Even though he is present during most votes, Bellmon does get to the state often. During his first two years here, he visited Oklahoma 48 times—averaging two trips a month. He spent about 225 days in Oklahoma during the period.

Some of the Oklahoma programs Bellmon has sponsored over the past two years include his arranging of a meeting at Goodwell to discuss the salt water problem in the Panhandle; met with families of prisoners of war; sponsored a college youth seminar at Tulsa University; sponsored farmers forums, industrial meetings and other activities.

It is said that Sen. Bellmon maintains the closest working relationship with the White House of any from the Oklahoma delegation.

Already in the 92nd Congress, Bellmon has introduced 18 bills, and cosponsored several others. His own measures include legislation dealing with FHA loans, prison reform, employment, revenue-sharing, income taxes, and other matters.

Bellmon is getting his share of time sitting in the seat of the presiding officer in the Senate—Vice President Agnew.

He takes the chair about once a week. During 1970, he presided 70 hours and 20 minutes, ranking sixth among senators to occupy the chair, and ahead of all other Republicans.

## FURTHER CONTINUING APPROPRIATIONS, 1971

The Senate resumed the consideration of the joint resolution (H.J. Res. 468) making certain further continuing appropriations for the fiscal year 1971, and for other purposes.

PRIVILEGE OF THE FLOOR

Mr. ALLOTT. Mr. President, I ask unanimous consent that James Sanderson, a member of my staff, may have the privilege of the floor at this time.

The PRESIDING OFFICER. Without objection, it is so ordered.

Mr. ALLOTT. Mr. President, it is now clear that the SST has attained the status of a symbol.

Much—not all, but much—of the passion behind the anti-SST movement derives from the use of the SST as a symbol of disappointed hopes and vague fears. There is no doubt that a large number of people are currently depressed by what they take to be the abject failure of science—science in general—to deliver on the hopes they had for it. There is no doubt that many Americans feel a vague but nonetheless real fear that science and technology have become autonomous and menacing forces in the last half of the 20th century.

These disappointed hopes and vague fears have found expression in some forms of the environmental concern that has been growing during the last few years. Most environmentalists are dedicated and serious students of complex practical problems. But some persons are using the environmentalist movement as a vehicle for wide-ranging critique of America's scientifically based and technologically advanced civilization.

Mr. President, it is one of the curiosities of our time that so many people who describe themselves as progressives devote so much time to hankering after the past and denying the future. I am endlessly intrigued by persons whose idea of the pastoral is Central Park but who, from residencies in the upper West Side of Manhattan, celebrate the joys of a preindustrial age.

We are all familiar with polemics against technology which issue from Morningside Heights. What could be more paradoxical than the way American universities have attracted swarms of persons who actively broadcast their fears of the consequences of knowledge?

These are commonplace features of the times. But we should not become immune to the contradictions that abound therein.

In a March 10 column in the Christian Science Monitor, Mr. William H. Stringer addressed himself to this problem. He said the following:

Some observers of the '70's see the United States as forsaking its loyalty to science and scientific research. The scientific community is denounced for having let a lot of nonreturnable genii out of the research bottles.

The time has come, it is argued, to spend money on other urgencies: poverty rather than aerospace, pollution rather than inertial guidance. And anyway, it is said, we should return to simpler living, avoiding the dehumanizing dictates of an ever more conformist, science-spawned technology.

The trouble with this viewpoint is that it's against the American nature, indeed against the nature of civilized mankind, to forswear exploration on the frontiers of knowledge. One can argue also that it is against the interests of national security—security in its broadest, beyond-military sense, for a great nation to subside into second- or third-rate excellence.

Mr. President, I believe that only an economically strong and growing America will be able to pay the enormous cost we must and should pay in order to improve our environment. I believe that only through major emphasis on technology—which is, after all, applied science—will America find the means for making this strong economy compatible with a decent environment.

This is why I think the use of the SST as a symbol is a disservice to the real en-

vironmentalist cause. If we destroy the SST we will destroy our own SST. We will not damage the British-French SST or the Russian SST. We will decisively damage our current dominance in the world commercial aircraft market, a dominance that contributes greatly to our overall economic strength.

This is why we all should be disturbed by the fact that the anti-SST cause has tapped, harnessed, and fueled a dangerous undercurrent of general hostility to science. This hostility, which is growing, is a form of anti-intellectualism, a fear of knowledge and experiment at a time when the world is desperately in need of major breakthroughs in countless areas of vital research.

Let me be very clear about the fact that I am not suggesting that all opponents of the SST partake of this general hostility toward science. But I do think that those who are not hostile toward science, but who have made common cause with those who are hostile, are culpable for waking a demon which will not be easily laid to rest tomorrow, next week, or in the months or years to come.

You cannot turn scientific effort on and off like a water tap. You cannot wave a wand, or a Senate vote, and shift large numbers of trained people from one project to another. The world of advanced science is not that frictionless. When you eliminate support for a program which has brought together the concentrated talents of a large number of people, you lose a lot of scientific energy. That is right—you lose energy. It takes time and planning and a lot of investment in resources just to get these talented people reallocated and reorganized and redirected. It takes time and energy, and a lot of investment, to ever reassemble the talent which has been assembled for a project of this kind. And nothing could be more frivolous than the suggestion that one can effect a simple transfer of trained talent—such as that currently employed on the SST program—into some other unrelated field.

Those opposing the SST should not be allowed the comfort of soothing nonsense about simply redirecting assembled SST talent. If the SST prtotype program is destroyed, much of the talent assembled on its behalf will be lost.

Mr. President, recently I had occasion to speak on the subject of the vital need for a continuing high level of support for science and technology in the United States. This was in an address at the National Center for Atmospheric Research in Colorado. Later in my remarks I shall refer to the associate director of NCAR, Dr. Kellogg, who testified before our committee. This address came to the attention of Prof. R. H. Dicke of the department of physics at Princeton University. I ask unanimous consent to have printed in the RECORD my address at NCAR and a subsequent exchange of letters with Professor Dicke.

There being no objection, the address and the letters were ordered to be printed in the RECORD, as follows:

SPEECH DELIVERED BY HON. GORDON L. ALLOTT

It is a real pleasure to be back again at NCAR on this happy occasion. Your facilities and your reputation continue to grow, and this is as it should be.

If I may be permitted a bad pun, I think it is fair to say that NCAR and similar institutions are headed for a period of unusually fair weather. NCAR is about to enjoy its moment in the sun—and I hope it will be more than just a moment.

We are currently in the midst of a great upsurge of interest in the full spectrum of environment problems. I applaud this interest. But I must confess that I am not altogether optimistic about the long-run tone and direction of what is now being called the "environment movement."

I often wonder what men and women such as you must think about some of the instant experts and crusaders who get instant fame and publicity through their flamboyant treatment of environment questions.

Environmental matters should not be treated as political footballs for some movement or other. As people like you know—as people like you *prove*—environmental problems are the very stuff of an established disciplined science.

You are equipped by training and experience to know that in matters of real science, sincerity and good intentions are not enough. There is no substitute for training and orderly procedure.

Today there is extraordinary questioning—especially among the young—about the relationship between man and nature. This is altogether proper. The unexamined life is not worth living, for men or nations, and it is especially necessary for this changing nation to continually examine the price of progress. But today there is a fundamental doubt as to whether we have properly understood the meaning of "progress" in the past, and whether there is a satisfactory modern understanding of "progress." Further, and unhappily, this questioning sometimes involves a reaction against science itself. Some people harbor the suspicion that science is no longer responsive to human needs, and that science constitutes systematic disrespect for nature.

Now I for one think that much of this questioning is misdirected. But neither you nor I nor any other friend of advanced scientific research can afford to dismiss this questioning. The restiveness and doubt that prompt the questioning are real enough. And the anti-scientific spirit can be dangerous even if—perhaps *especially*—it is misguided.

As an active participant in public life I am in a position to see that science is being used as a whipping boy for the failures of others. Scientists and science itself is being blamed for a general social failure to use knowledge intelligently. In this regard I would remind all Americans of Einstein's famous remark. He said that the world is more apt to be destroyed by bad politics than physics. That is still true.

Here at NCAR, you are well placed to demonstrate something that has an importance beyond the substance of NCAR's particular research. You can demonstrate that science continues to be the ally of man against the threats of an untamed world. You can demonstrate the relevance of science to the most pressing problem of the day.

I can think of no more crucial demonstration. A fear of science is a fear of truth and knowledge. It is literally uncivilized.

You know where I stand. I stand committed to the continuing generous public support of basic research, and of technology assessment. I stand for the maximum of intelligence with the minimum of flamboyance in approaching the great scientific questions of this century. This question is "How can we reconcile man's achievements with his environment?" In short, I am proud to stand behind you as you make your pioneering contributions to the ultimate science—the science of making science and its applications a blessing for coming generations.

We also know that science is no longer the plaything of lonely prophets thinking in basement laboratories. Science has grown too complex—and too expensive for that. We now know that science needs and deserves public funds. It is perfectly clear that the public has a large and growing stake in science, and should pay generously for the rewards of science. And you and I know that NCAR and related institutions have an increasingly prominent role to play in the emerging science of the 1970's and 1980's.

As you know, some critics of science charge that science is only useful in producing weapons. Of course, the scientific community has enabled us to produce weapons. And it is thanks to these weapons that the United States and its allies are free today. American scientists have produced the arsenal of freedom, and free men everywhere owe them a debt of gratitude.

But in the process of producing these grim but necessary instruments, the scientific community has become the target of abuse from some shrill minorities. No one likes being abused, and it is in the interest of us all for the scientific community to be given an opportunity to re-furbish its image. I am convinced that this decade will see such a refurbishment, and that it wil come about by means of scientific contributions in the environment area.

For this I am profoundly grateful. And I know the Nation will have occasion to demonstrate its gratitude to the scientific community by means of generous support. That is why I am confident that the forecast for NCAR and related institutions is "clearing and fair weather" for the future. It could not happen to a more deserving group of dedicated men and women.

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PRINCETON UNIVERSITY,
DEPARTMENT OF PHYSICS:
JOSEPH HENRY LABORATORIES,
*Princeton, N.J., February 24, 1971.*

HON. GORDON ALLOTT,
*U.S. Senate,*
*Washington, D.C.*

DEAR SENATOR ALLOTT: I was very favorably impressed by the account that I saw of your Denver talk. It is good to see that some members of the Congress understand the relation of science to our society.

As a physicist and a member of the National Science Board I am becoming increasingly distressed by the signs of imminent serious damage to our scientific organization, hence harm to the country. While the President's Budget contains a substantial increase for the N.S.F., most of this is allocated to "problems of society" and there is relatively little extra for real basic science most of which is conducted in universities. After taking into account the serious cutbacks in NASA and the AEC and the necessity for picking up some of the best parts of the research being dropped by these agencies, and an allowance for inflation there may be little if any extra support for new basic (i.e. fundamental) science in the N.S.F. budget. In any case the bright young people are being discouraged out of science at the very time the support of education in science is being severely cut. I believe that we are headed for a severe cut-back in the production of new scientists 5 years from now.

You may be interested in my address to the American Physical Society earlier this month, copy enclosed.

Sincerely,

R. H. DICKE.

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Prof. ROBERT H. DICKE,
*Joseph Henry Laboratories, Physics Department, Princeton University, Princeton, N.J.*

DEAR PROFESSOR DICKE: Thank you very much for your letter of February 24, concern-

ing my recent remarks on the need for a continuing high level national commitment to basic research.

I agree that we cannot allow fog of rhetoric about the "problems of society" to distract us from the need to fund a full range of scientific enterprises.

In this regard, I must offer a word of criticism for the science community. When people talk loosely about "re-ordering our priorities" they often are talking about lowering the priority of basic research. The hard facts of the Federal budget are that you can only take so much from defense spending.

Further, it is inevitable that, after years of uninformed chatter about the evils of technology and the de-humanizing role of science, the basic social commitment to science will weaken.

I do not think the scientific community has been sufficiently alert to its own self-interest, or to the interest of the Nation. Members of the scientific community have allied themselves with some groups and some positions that undermine the stature of science "in general." I am thinking particularly of some environmental groups, and especially of the recent attack on the SST.

The SST is a project about which honorable men of good will can and do vigorously disagree. But I have been astonished and appalled by the collaboration of scientists with anti-SST groups which treat the SST as a symbol of all the evils that allegedly attend advanced science.

In short, regardless of the opinions of various scientists on particular issues, they should quit collaborating with their enemies. As you say in your APS address, "it is the duty of every physicist in the country to do what he can to educate the non-scientist in the nature of science and its importance for the country."

Again, thank you for writing. I hope you will share with me your concern, and your suggestions, as we pursue our mutual interest in a strong national science effort.

Best regards.

Sincerely yours,

GORDON ALLOTT,
*U.S. Senator.*

Mr. ALLOTT. In addition, Mr. President, so that all Senators can consider the origins and probable consequences of any decline of American science, I ask unanimous consent to have printed in the RECORD an article on "The Senseless War on Science" from the March 1971, Fortune, and an article headlined, "Russia Quietly Pushes Its Space Technology, Threatens U.S. Lead" from the March 10 edition of the Wall Street Journal.

There being no objection, the articles were ordered to be printed in the RECORD, as follows:

THE SENSELESS WAR ON SCIENCE

(By Lawrence Lessing)

That classic of science fiction, *A Connecticut Yankee in King Arthur's Court*, might well serve as a parable of the present-day predicament of science and technology. Everyone will recall how the hero, superintendent of a small-arms plant in East Hartford whisked back into the sixth century, saves his own life and establishes his power over the sorcerer Merlin by using as a threat the handy occurrence of a solar eclipse. He then secretly teaches the serfs some rudiments of science and mechanics, and reinvents for them such amenities as the telephone, machine tools, movable type, safety matches, soap, and sanitation—of which they are in great need. And he places his aptest pupils in a factory, where he proposes, in his late-nineteenth-century innocence, "to turn groping and grubbing automata into *men*."

One day, after having restored the waters of a holy fountain that had run dry, by a simple application of hydraulics, he returns to find the monks and pilgrims piously agog over an itinerant magician from the East, who, "mowing, and mumbling, and gesticulating, and drawing mystical figures in the air," purports to be able to tell what any man is doing anywhere on the globe at any moment. When the rationalist from East Hartford suggests that this is a fraud the assembly turns upon him in fear and distress. He manages to surmount the situation, but he is shaken. "Think of that!" he muses. "Observe how much a reputation was worth in such a country."

A GREAT ODYSSEY DISPARAGED

American scientists and technologists today are suffering a similar reversal and recession. At the precise moment when a new and more sensitive high level of science is needed, a great disenchantment has settled over the field, after a period of unparalleled accomplishments. Over the last quarter century, despite dips and lags, science and the U.S. economy together have had the longest period of sustained growth, discovery, innovation, and new industry in recent history. While none of this has brought on the millennium—indeed, science's very success has acerbated some age-old problems and created new ones—still it has measurably widened the options and potentials of human life on earth. Perhaps the pinnacle of this period was reached when man stepped on the moon, a feat that will rank in history among the few clear, large, and positive achievements of the last decade, a great human feat that once would have swelled the lyrics of a Homer. Yet nothing is currently more disparaged or discounted, often by the most determined humanists, than the odyssey of man in space.

The assaults on science and technology have developed a variety of themes and come from many directions. Technology is pictured as a powerful juggernaut, with an internal momentum of its own, relentlesly pressing on with irresponsible developments, out of control. On the other hand this juggernaut is also seen to be so weak that it is suffering all sorts of breakdowns—in power, transportation, and telephone services in our cities, for example. In one breath, science is said to be progressively more abstract and irrelevant to society; in the next, it is urged that this "irrelevant" activity is a threat that must be curbed. Almost as reflex, funds have been damagingly cut in such basic areas as the life and medical sciences, which could reduce costs and care, while a large amount of advanced but abstract technology, which could begin to solve the problems of overcrowding, energy, pollution, transportation, and waste that cloud men's sky and vision, is going neglected.

There is a new hostility to science and technology—though not closely coupled, the two cannot be separated—in many quarters that can only be loosely categorized. Many ordinary Americans, increasingly worried by science's growing complexity, cost, and accelerating change, think we might do with less science, and provide an opportunity for budget cutting. The prevalent attitude toward science, as Robert G. Loewy of the University of Rochester puts it, is, "What have you done for me lately?" This hostility has been made intellectually respectable by some thinkers of the New Left, who have embraced a glorified irrationality that is the antithesis of all science.

The attack comes even from within science itself. The last meetings of the American Association for the Advancement of Science were loudly and riotously disrupted by the now inevitable small band of young graduate-student activists, demanding, in that cabalistic catchword of the times, relevance.

CAST AS DR. STRANGELOVE

More serious and disturbing than these "revolutionaries" is a rumbling intellectual attack on science, seizing this troubled juncture to revive the old, false antagonisms between the arts and sciences. The latest, most prepossessing broadside in this ancient battle is *The Pentagon of Power* by the noted architectural and urban critic Lewis Mumford. In this treatise the whole humanistic history of science is warped to the thesis that the evils of the modern world go back to Copernicus, Galileo, and Newton, whose earth-displacing view of the solar system was the beginning of that dehumanized, mechanistic world view that today has put at the center of the power system "the latest I.B.M. computer, zealously programmed by Dr. Strangelove and his associates." Other voices, ranging from the mystic to the nihilistic, have elaborated a whole new demonology of science and technology.

The most visible embodiment of these philosophies is in the new youth culture, or counterculture, which turns away from hard science to the softer, still forming social sciences, the arts and handicrafts, the primitive and a return-to-nature á la Rousseau—and ravels out in astrology, drugs, and those Eastern mysticisms that for centuries have held whole continents impoverished. While this movement has brought a fresh, rebellious spirit into the nation, and represents a reaction to real social ills, a warm reassertion of some essential human values, it is a very mixed phenomenon. Avowedly anti-science, its culture rests squarely on those electrical sciences that power its amplifiers, electric guitars, and stereo rigs, and on the pharmacopoeia of chemical agents that give it instant visions. Its communes are never far from the supermarket, that base of modern food technology, and it does not eschew motorcycles or motorcars. It accepts, in other words, the science and technology that please it, but would destroy those that do not.

But science is indivisible, a seamless web of accumulated knowledge, and to destroy a part would rip the whole fabric. The beneficial and pleasing effects of science cannot really be separated from the potential harms. No drug to save lives can be secured, for instance, that is entirely without risks or side effects, for all drugs are by nature toxic agents and therefore subject to misuse. Every discovery or invention of man has this dual aspect. And it does no good to try to retreat to the nineteenth century or the sixth. Konrad Lorenz, the famed naturalist and animal behaviorist, has been going about warning hostile student audiences that if they tear down man's store of knowledge and start afresh, they will backslide not a few centuries but two hundred thousand years. "Watch out!" he says. "If you make a clean sweep of things, you won't go back to the Stone Age, because you're there already, but to well before the Stone Age."

This apocalyptic mood has been stirred, of course, by some very palpable social miscarriages of science and technology. The leading one is the continuing Indochina war. From the early selective saturation bombing of a peasant people to the later defoliation of a large part of their land, using vast quantities of advanced machines and chemical agents, it represents to more and more people the biggest misuse of technology in recent history. A close second, which may yet be first, is the environmental crisis. Through carelessness, the mismanagement, misuse, or neglect of industrial-urban technology in an increasingly crowded world, the deteriorating air, earth, and water suddenly raise a threat to man's continuing life on earth. Together these crises have whipped up a wholly new conservationist attack on science. At its emotional extreme, it reduces itself to the proposition that America needs less growth, less knowledge, less skill, less progress.

Scientists and engineers are increasingly cast as the villains of this emotional drama. They are blamed by implication and transference, as epitomized in the cry of the French writers, Georges Bernanos, in the last great war: "You go on supplying the killing machines!" But it should be obvious that science by its nature and structure can offer society only options. Scientists do not sit in the seats of power or decision in matters of war, government, or industrial management. Traditionally, their role, if any, is advisory, and as often as not their advice is ignored. "Scientists can no more be blamed for the misuses to which their discoveries or devices are put," says Harvard's noted chemist George B. Kistiakowsky, former science adviser to President Eisenhower, "than artists and writers can be blamed for the misuses to which their arts are put on Madison Avenue."

The height of the new folly is the rising call upon scientists and technicians to foresee all the consequences of their actions and to make a moral commitment to suppress work on any discovery that might someday be dangerous, which is to demand that they be not only scientists but certified clairvoyants and saints. Too often, all this only tends to deflect blame from where it belongs. "I would put it this way," says the noted British immunologist Sir Peter Medawar, Nobel Prize winner in medicine, "that in the management of our affairs we have too often been bad workmen, and like all bad workmen we blame our tools."

INTO THE ECONOMIC BIND

As if this sociophilosophical tanglefoot were not enough, U.S. science also finds itself, as a direct consequence of prolonged war, inflation, and a now contracted economy, contending with a severe cutback in research and development. Since 1967, total federal expenditures in this field have declined in real dollars by more than 20 percent. This has lopped off whole programs, sharply curtailed others, and disrupted the feed lines to new developments. Many scientists believe this endangers the whole structure of science. "If we continue to cut down at 10 percent a year," says Dr. Philip Abelson, editor of *Science* and new head of the Carnegie Institution, "the U.S. is going to be a second-class nation in scientific enterprise."

In the Northeast and on the West Coast, where most of this enterprise is concentrated, newspapers are full of stories of engineers vainly seeking jobs and young physicists driving taxis. The exact extent of unemployment is unknown. But for a relatively small but vital profession—there are some 500,000 U.S. scientists in research and teaching, and about twice that many engineers—a 10 percent yearly decline in funds hits hard.

Scientists attempting to shore up the "crumbling" scientific enterprise, as Philip Handler, president of the National Academy of Sciences, characterizes it, have been attacked for their efforts. One leader of the attack is Daniel S. Greenberg, recently resigned news editor of *Science*, who has made a career out of finding that scientists play politics, seek grants, build small empires, occasionally stumble, or otherwise act human. He and others maintain that there is no serious crisis in U.S. science, only a wringing out of "fat," a transitory shift in priorities. Scientists, they say, simply want more money.

It is true that this year's federal science and development budget still stands at a substantial $15 billion. But this figure hides imbalances and a steady real decline, masked by inflation. If the decline continues, it will have a delayed, disastrous effect on the economy. Says the University of Rochester's Robert Loewy, dean of the College of Engineering and Applied Science and former chief scientist of the U.S. Air Force: "Despite our nation's purported lead in science, the U.S. is only coasting on an advantage we have had since World War II."

A RATHER DISORDERLY GROWTH

Out of World War II, in what has been called the greatest mobilization of scientists and technologists in history, came a great victory over a clearly evil tyranny, and a cornucopia of great technical developments to build and keep the peace. None of these developments could be economically "afforded" in the long, lagging, depressed Thirties, but in war the men and wherewithal were quickly found to develop them, largely out of the banked-up store of European science. From these wartime projects in due time came the antibiotics, atomic power, cryogenics, computers, jet planes, rocket vehicles, radar, transistors, masers, lasers, and other products that became the new industrial face of the mid-century. More important, out of the war came the impetus to get the U.S. fully engaged in doing basic science of its own. From having won only a sparse dozen Nobel Prizes in the forty years up to 1940, U.S. scientists went on in the next thirty years to win forty-five, and take first place among the nations.

The feat was not accomplished without some typical disorder and conflict. At the end of the war there was no civilian agency to take over the support of basic science, and Congress lagged in adopting the proposal of Vannevar Bush, the Yankee M.I.T. engineer who had brilliantly headed the scientific war effort, that a National Science Foundation be set up to do the job. The Defense Department leaped in to support basic research, mainly in physics, across the board. At the same time, other departments moved in on their own fields of interest. And a spontaneous uprising of atomic scientists fought to get atomic development out of military control and into a civilian Atomic Energy Commission. When a National Science Foundation bill finally reached President Truman's desk in 1947, he vetoed it, contending that it lacked proper governmental control. Another three years passed before a compromise N.S.F. came into being with a minimum of politics in its make-up and minimal funds. It continued to be much easier to get large funds out of Congress for basic research marked for defense, much of it having little or no military relevance, than for purely civilian research.

This set the pattern through the Fifties, when, under cold-war pressures, the federal research and development budget began its exponential climb. Over three-fourths of the growing budget, however, went to the Defense Department and Atomic Energy Commission—whose charter required it to supply "free" nuclear weapons to the military. The 1957 launching of the Soviet Sputnik I into space set off another burst of growth, creating the new civilian National Aeronautics and Space Administration, formalizing the office of science adviser to the President, and generating a large effort to expand science education.

As the federal research and development budget passed $12 billion in 1963, toward a peak of over $17 billion, Congress nervously began to seek cuts. Trying to maintain defense spending, it fastened first on NASA. And NASA, in order to keep the Kennedy Administration's commitment of a manned lunar landing by 1970, was forced to cut back its scientific and forward-development programs.

With the ascendancy of Lyndon Johnson and the escalation of the Vietnam war, the U.S. federal science structure, never very well organized, took a turn for the worse. Wary of the northeastern "establishment" that had dominated Washington's scientific affairs since World War II, Johnson set in motion two populist currents, congenial to Congress, that had ultimately dubious effects. The first was designed to spread research funds more evenly over the country, particularly, to build up more midwestern university centers. The second involved a switch in emphasis to the "practical," away from the more tenuous regions of basic research, a policy that hit the National Institutes of Health with devastating effect. With money growing tighter, funds were spread thinner and thinner with fewer results.

APPOINTMENTS AT THE WHITE HOUSE

There had been some hope in scientific circles that when Richard M. Nixon took office things might change in the handling of science. He came into the White House with an earnest campaign pledge to reverse the downtrend in basic science, and with an impeccable choice as his science adviser—Dr. Lee A. DuBridge, retiring president of California Institute of Tehnology and the distinguished World War II director of M.I.T.'s great radar-developing Radiation Laboratory. And, in fact, Nixon's fiscal 1971–72 budgets show a rise in basic research funds; however, the rise is not nearly enough to cancel out the effects of inflation and prior cuts. Unfortunately, Nixon's relations with the scientific community were somewhat poisoned by the sequence of events surrounding some appointments. First, there was the matter of naming Cornell University's Dr. Franklin A. Long, to head the N.S.F.; when it was discovered that he had written an article opposing the antiballistic missile, he was precipitously dropped. Then the appointment of Caltech's Dr. George S. Hammond to be N.S.F. deputy director was scotched when it was found he had made a speech critical of the Cambodian invasion. Later there was the unceremonious dumping of Dr. John Knowles, scheduled to be Assistant Secretary of Health and Scientific Affairs, when he drew the potent political opposition of the American Medical Association.

Suddenly, late last summer, Lee DuBridge resigned to enter retirement. In DuBridge's place, President Nixon named a younger, relatively unknown industrial scientist, Dr. Edward E. David Jr., who had been director of communication-systems research at Bell Laboratories. A brilliant worker in acoustics and electronics, but an unknown quality in forming high Federal science policy, David faces two hard tasks; reassessing national science priorities and establishing better communications between the scientific community and the White House.

David's job is not made easier by a prickly Congress, which has arbitrarily cut research funds in some instances, and late in 1969 enacted legislation that has wreaked some havoc. The damage was done by the so-called Mansfield Amendment, which ordered the Defense Department to cut off all research not related to specific military operations. Even most scientists opposed to the Vietnam war protested stripping the Pentagon of all basic research. Since the times of Archimedes and Leonardo da Vinci, scientists have aided military invention to protect their societies, and in a still dangerous world the military needs a reasonable amount of basic research, reasonably applied, to keep its technology from growing sterile.

One relatively minor result of the Mansfield Amendment was to cut some $8 million in basic research out of the Defense Department's fiscal 1970 budget. But its more damaging effect was indirect: it induced other departments to cut back in like fashion, for another net loss in basic research. Moreover, the defense cuts plus continuing large cuts in the NASA program combined to cripple the U.S. aerospace industry and begin the dismantling of the great space structure, which ranges from the promotion of basic science education to the development of the most advanced technology. All of which happened without any forethought as to the human employment problems associated

with the cuts. Most of the thousands of unemployed aerospace engineers, says the National Academy of Engineering, are unlikely ever to find employment in their profession again.

WHERE THE LAGS ARE

While men and talent are thus going to waste, the things that need doing, which we are not doing or doing only insufficiently, keep piling up. All through the late Sixties the National Academy of Sciences was issuing a series of ponderous, largely ignored surveys, evaluating where we stand in the basic sciences—and finding that deficiencies were beginning to develop. Washington's repeatedly expressed view now is that we can't expect to be first in everything, which is true enough. But unless we try, we will soon be coming in second or third almost everywhere, and many in the sciences believe we are at or near that danger point.

Space does not permit a comprehensive list of the lacks and lags, but here are a few significant ones. They may suggest something about what is ultimately at stake in the war between U.S. science and those now mindlessly assailing it.

In high-energy physics, Europe in the late Sixties took the lead in developing so-called colliding-beam electron accelerators, the latest in Big Machines for investigating the sub-atomic properties of matter. From one of these machines in Italy late last year came the report of a discovery—now being excitedly tested by others in France, the Soviet Union, and Switzerland—of what may be a new phenomenon in the creation of matter from energy, which seems to go beyond present physical theory, and which may herald the tapping of the most powerful inner force in nature. The U.S. now has only one such machine near operation at Cambridge, Massachusetts, and its operating budget has been cut. Belatedly in development are two more powerful machines at Stanford University and in Weston, Illinois, expected to be started up within a year or so.

In radio astronomy, the U.S., after a strong surge to a leadership position in the late Fifties, is rapidly losing its place. For five years the radio astronomers have been unable to get funds to complete three big, advanced radio telescopes, all together estimated to cost some $115 million. Meanwhile, some older installations have lost Air Force support under the Mansfield Amendment, and are being hard pressed to function fully. Abroad, however, large advanced radio arrays have been going up in England, Germany, Holland, Russia, and even India, to pursue investigations into two of the major discoveries of radio astronomy: the mysterious, high-energy quasars, starlike galaxies that may be the most distant bodies in the universe, and the more recently found pulsars, giving off huge bursts of radio waves at precise intervals.

In plasma physics, the latest big breakthrough in the containment of thermonuclear power was made in 1968 in the Soviet Union's so-called Tokamak devices. Later there were confirming experiments in the U.S. and Britain, setting off the current optimism that the harnessing of this almost limitless, pollutionless source of energy may be nearer than was once expected. But the U.S. thermonuclear research effort is being funded at a level, cut back again this year, that could put off this development as much as twenty-five to fifty years. The Soviet authorities are spending about twice as much money and employing about three times as many people in controlled fusion research as the U.S.

*In conventional energy research*, the Soviet Union this year is also starting up the first large-scale, prototype magnetohydrodynamic or MHD electric plant, burning fossil fuels, but generating electricity directly and more efficiently than the old steam-turbine cycle, from a supersonic stream of high-temperature ionized gases (see "New Ways to More Power with Less Pollution," FORTUNE, November, 1970). No such project is yet in sight in the U.S. Since much of our electric power will continue to come for a long time from conventional fuels, particularly the still large reserves of coal, we are neglecting basic research in this area at the expense of a cleaner environment. While a small program goes on in this direction in the U.S. Bureau of Mines, half a dozen promising, advanced methods of high-pressure coal distillation and gasification are being widely developed in Europe. In combination with gas turbines or MHD, such systems could produce the clean, more economic hybrid chemical-and-power plant complex of the future.

*In space science*, our present position was tersely put by Dr. George M. Low, NASA's acting administrator since Thomas O. Paine quit six months ago to return to General Electric: "The U.S. leads today, but we are rapidly losing the capability that made us first." With two of the later, more scientifically oriented Apollo moon flights canceled, though the equipment is long bought and paid for, work on NASA's forward-looking space station, nuclear-powered rocket, and unmanned planetary exploration vehicles has been so cut back that after 1975 almost nothing will be scheduled.

*In transportation*, while U.S. road vehicles continue to increase in numbers twice as fast as the human population, the creation of new mass transportation systems to relieve our choking roads lags far behind—though not for lack of abundant new technology. Japan's sleek high-speed Tokaido train system is expanding; Europe's fast new train networks are multiplying, with the future already appearing in advanced prototype gas-turbine and air-cushion vehicles; and even Mexico City has built a new subway system that is both a great feat of engineering, smooth, noiseless, and computer-controlled, and a work of art. But in the U.S. only a token part remains of the ambitious 1965 Northeast Corridor Project to revitalize the rails (see "The 400-Mph Passenger Train," FORTUNE, April 1965).

*In the life sciences*, reports the latest survey of the National Academy, research funds are still lagging some 20 percent, or at least $250 million per year, behind research capacity. This is happening in an area which is in a tremendous stage of growth, similar to that in atomic physics in the Thirties, and which, with reasonable support, could bring forth a host of epochal developments. The range of the revolution in molecular biology is especially wide. It includes such items as insect hormones, whose isolation and synthesis in many analogue compounds promise much safer biological insecticides—which are now being developed rapidly enough to replace toxic products. The biological revolution, through its now complete decoding of the genetic code of life, also promises a way to the genetic repair of congenital defects, and to a basic attack on those little understood degenerative ills, such as cancer and heart diseases, that whittle away men's lives.

TOWARD TECHNOLOGICAL ASSESSMENT

Over much of the last decade, a plethora of studies and reports on how the tangled structure of U.S. science might be better balanced and organized has flowed out of Washington's scientific hierarchy, executive agencies and offices, and congressional committees. Proposals have ranged from one to put all science in a single huge federal department to more modest reorganizations built around the National Science Foundation. But most scientists are wary of any more centralization than we already have, and United Nations in-depth studies of national science organizations have in general found the U.S.'s pluralism and sometimes wasteful and untidy freedom its major source of strength.

The organization problem, it should be noted, is quite different in basic science from the problems in technology. Basic science, while intellectually quite orderly, is often disorderly in its operations; it is extremely difficult for researchers in basic science to set priorities or scales of relevance. In technological research, however, there is an urgent need, recognized in a dozen studies, for some means of technological assessment before development. The assessment would make possible democratic control over the excesses and misuses of rapidly advancing technologies.

Proposals for setting up technological assessment operations range from some that involve a separate agency, attached to Congress, to some others creating a kind of high court, without legal trappings, that would hear different contentions and render a balanced report of the available options. But many scientists fear that this would only add another layer of bureaucracy to the problem. Carroll Wilson, professor of management at M.I.T. and once right-hand aide to Vannevar Bush, favors a more ad hoc arrangement that would pull together multidisciplined conferences on a given problem. He organized a prototype last summer in a large international meeting that in one month developed a hardheaded report on major global pollutants.

Rational assessment programs might, then, take a variety of forms. In the last analysis, the organizational form is probably less important than the spirit in which any such undertaking is launched. On the record of recent years, it is hard to be optimistic about the spirit. We can only hope the strange and irrational assaults on U.S. science end soon.

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CLOSING THE GAP: RUSSIA QUIETLY PUSHES ITS SPACE TECHNOLOGY, THREATENS U.S. LEAD

(By Jonathan Spivak)

WASHINGTON.—Almost unnoticed in the excitement over American lunar exploits, the Soviet Union is making significant strides in space—and threatening to outdo the U.S. in years ahead.

Though the Russians' achievements are less dramatic than putting men on the moon, they're chalking up solid progress in the number and duration of space flights and in the development of sophisticated hardware.

"Unless we reverse the current trends in the U.S. space program, we must be prepared to give up our lead," acting space administrator George Low warns. "I wouldn't be surprised to see a whole string of (Russian) space firsts," adds a Defense Department official.

WHAT ARE RUSSIANS UP TO?

Russian intentions are difficult to divine, but U.S. space specialists speculate:

—Instruments may be landed on Mars to acquire information on the planet's chemical composition and on surface conditions that might help determine the possibilities of life there. The Russians, it's felt, might achieve this landing well in advance of U.S. efforts, which are planned for 1975. Soviet scientists predict that roving, remotely controlled surface exploration vehicles will be dispatched to Venus and Mars sometime in the future.

—Manned earth-orbital flights in the Soyuz spaceship may extend as long as 30 days, about twice the Apollo craft's current capabilities. The Russian voyages would be aimed at developing the technology for operating a permanent space station, which might be formed in orbit by joining together a number of spaceships.

—The Russians may achieve a manned landing on the moon within a few years, perhaps by rendezvousing lunar spacecraft components in orbit about the earth, rather than the moon as the U.S. has done. Meanwhile, Soviet exploration of the moon will be conducted by automated craft that can rove the surface and return small amounts of moon material to earth.

MILITARY VENTURES

Though Moscow's military space ventures are even more obscured from U.S. view, experts expect the Russians will continue development of an orbital bombardment system, designed to avoid U.S. radar defenses, and a spaceborne satellite-inspection system. What worries U.S. military men more is the uncertainty over what else their Soviet counterparts are up to.

The expressed concern of Washington officials, both civilian and military, about the Russian space program isn't exactly selfless. During most of the last decade the U.S.-Soviet "race" to the moon sustained a high level of public interest—and heavy congressional appropriations for the National Aeronautics and Space Administration. Now NASA's dollars are dwindling, and officials hope to reverse the decline.

The Russian progress, in any case, is real enough. In 1970, the Soviets launched no less than 88 spacecraft, manned and unmanned, against 36 for this country. (Until the mid-1960s, the U.S. enjoyed a two-to-one advantage in space launchings.) The Soyuz spaceship has made the longest manned flight, 18 days in earth orbit. Lunokhod 1, an automated roving explorer now on the moon, and Luna 16, an unmanned craft that has brought back material from the moon, are more sophisticated than any probes the U.S. has developed.

"Both countries have strong programs, roughly the same, but different in detail. At this point their program is going stronger in flight hardware," sums up Charles Sheldon Jr., the Library of Congress' space specialist who closely monitors Soviet efforts.

A $7.5 BILLION PROGRAM

"The USSR has kept pace with the U.S. in the continued development and improvement of general capabilities that made possible the U.S. moon landing," Foy D. Kohler, former ambassador to Moscow, and Dodd I. Harvey of the University of Miami recently wrote in Science magazine.

While exact figures are hard to come by, the Soviet civilian space budget is believed to be $5 billion a year, compared with current NASA outlays of $3 billion. If military space activities are added, Soviet space spending probably equals the peak U.S. outlays of $7.5 billion in 1966. Total U.S. space spending now is about $4.5 billion a year, and it will probably drop further.

Soviet progress has made possible the first meaningful cooperation in space between the two nations. Besides an exchange of lunar soil samples, an agreement was recently reached to develop compatible rendezvous and docking systems for spacecraft. Both nations use a snout-like probe on one craft to fit into a receptacle on the other, but the dimensions are different.

"The docking talks seem to have indicated a new approach . . . a reasonably fundamental change in our relationship to date," says one U.S. official. The Soviets have already provided detailed engineering and design information on some of their space hardware, disclosures that they rigorously resisted in the past. In the early 1960s, when the U.S. sought space agreements with Moscow, only a modest exchange of weather pictures and other data ensued. Some experts theorize the Russians may be more cooperative now because they are increasingly confident of their space capabilities.

AMBITIOUS JOINT EFFORTS

The docking arrangements could lead toward ambitious joint efforts, like plans for space rescue operations or exploration of the moon and planets. NASA men conceive of a U.S.-Soviet space station in orbit about the moon for months at a time; it could launch missions to rescue astronauts of any nation stranded on the moon. But such initiatives are far in the future and will depend mainly on international political considerations.

Unlike NASA's well-publicized civilian operations, the Soviet space program is conducted under military supervision, and many details remain secret. "The information coming to the free world is minimal," says one U.S. analyst. The Russians don't give advance notice of specific launches or reveal their future plans except in broad outline. They tell especially little about their rockets, all of which apparently have some military application. From the Western world, only French emissaries have been allowed to visit Soviet launch sites.

Even though the U.S. has won the race, Russia is believed still interested in putting a man on the moon. Their timetable may have been slowed by the U.S. success, however. "I think it won't be too long before they go to the moon," asserts Charles Mathews, a NASA official.

But the Russians' 14,500-pound Soyuz craft lacks complex electronic navigation and guidance systems, and it isn't adequate for manned flight to the moon. More significantly, the Soviets lack a mammoth booster rocket, like the U.S. Saturn V that launched the Apollo spaceships.

The Soviets say their manned space program now is focused on orbital flight designed to develop space stations and space launching platforms. They mention a variety of objectives, including weather observations, mapping of the earth, mineral surveys, repair of other spacecraft and study of the stars and interstellar space.

"For the present time there are no rigid timetables for man's flight to the moon; our main purpose is the construction of the orbital stations," Vitali I. Sevastyanov, a member of the Soyuz 9 crew, recently told a press conference in Houston.

Indeed, the Russians now may be farther along in space-station work than the U.S., which plans to launch a three-man station called Skylab in 1973. More than two years ago, two manned Soyuz craft were linked in earth orbit, forming, in effect, a primitive space station.

Like Apollo, the Soyuz spaceship consists of three units; the crewmen live and work in two, while the third provides propulsion and supplies. Defense Department experts suspect the Soyuz spacecraft might be used to detect intercontinental-missile launches and to perform other military duties.

Many of the Russians' unmanned Cosmos flights (there have been 399 to date) are sent aloft for military purposes. The Soviets continue periodically to test a Fractional Orbital Bombardment System designed to avoid U.S. radar defenses, which are positioned to guard against missiles coming from the north. This lethal satellite would approach from the south, discharging its warhead before a full orbit was completed and thus apparently circumventing the international ban on weapons in space. Its limitations are lack of accuracy and a smaller payload capacity than missiles that take a shorter over-the-pole route.

The Russians also appear interested in developing earth satellites to detect and destroy enemy spacecraft. Six Cosmos flights have been directly devoted to testing a space inspection system. The U.S. Air Force experimented with a similar project several years ago but canceled it for lack of money.

On the civilian side, Soviet scientists predict more sophisticated instruments, including optical telescopes, will ultimately be placed on the moon's surface, an ideal observing post free of the distortions caused by the earth's atmosphere. "Lunokhod I is the first step toward such a lunar observatory," writes a Russian academician in Soviet Life, an English-language propaganda magazine.

Though starting only in 1965, several years later than the U.S., Russian spacemen have successfully developed communications and weather satellites. The Soviets' equipment may be less reliable, but U.S. experts are impressed. "They are behind very little, if at all," insists Leonard Jaffe who heads NASA's work in these areas. Recently the Russians requested permission from the International Telecommunications Union to operate satellites over the Indian Ocean, a sign of their increasing interest in that part of the world.

Mr. ALLOTT. Mr. President, once upon a time alchemists tried to turn lead into gold. Of course they failed. Everyone knows that mankind has a sorry record of doing the reverse.

Were the United States now to abandon its investment in the SST, this act of extraordinary shortsightedness will stand out as an unhappy standard of reverse social alchemy. If at this late date the United States decides to abandon a project that is near fruition, and thereby opts out of the lucrative international commercial aircraft market which we have so thoroughly dominated in the postwar era, then the United States will turn a golden investment in a golden industry into lead.

This is not widely understood because it is not widely understood just what it is that is subject to a Senate vote. People are talking on the floor of the Senate about 500 SST's. Mr. President, we are talking about two SST's. We are talking about two prototypes—that and nothing else.

We are voting about money. That much is generally recognized by the public which has been inundated with information and misinformation on some real and many unreal features of the SST program. But there is considerable confusion in the general public concerning exactly what amount of money is involved in the vote we are approaching. It is important that we get the facts clear now.

For a variety of reasons having to do with the tangled legislative history of the Department of Transportation appropriation for fiscal year 1971—reasons familiar to those who have followed the protracted debate on the SST—we are just now voting on the balance of the fiscal year 1971 funds originally proposed for the SST. This means we are voting on the funds necessary to complete funding of the SST prototype program through the remaining 3 months of fiscal year 1971. That is all we are voting on. The amount of money involved in $134 million.

That is the basic figure to bear in mind, but that figure does not tell the full story of the possible costs of the possible actions we can take with regard to the SST.

If we vote to fund the SST through the remainder of fiscal year 1971, we will be spending the $134 million. But if we do not vote this, the Government must immediately begin to pay the various obligatory costs of closing down this program.

Consider these costs:

The Government will have to pay $85 million to Boeing and General Electric.

The Government will have to pay $10 million for terminating contract liabilities.

This brings the total of $95 million and that is not the full total.

The Government will also have to pay $2 million in administrative costs and

$22 million to the airlines as repayment for received down payments on SST's.

This comes to a grand total of $119 million just to stop this program that has come so far toward fruition. In fact, Mr. President, the $119 million total as the cost of terminating the program now is a rock-bottom minimum. It may well be unrealistically conservative. It is possible that the Government will feel and will be morally obligated to make more substantial restitution to the many parties who will be abandoned on the verge of a successful prototype development.

In making this statement, I am speaking particularly about the status of $59 million advanced by the airlines toward this whole program, which is now in a legal never-never land. Whether or not we shall have a legal obligation with respect to that I do not know.

But I do know this, because I was a part of it: The airlines put up that money in the anticipation and with the implied promise that the Federal Government, which already had gone along with this program for several years up to that time, was going to proceed with the development of an SST.

So I do not know whether we have a legal obligation with respect to that $59 million or not; but I do know that I feel we have a deep, moral obligation. If I were a stockholder in an airline, I would feel that the president or the board of directors of that airline had a definite obligation to pursue complete legal recourse against the Federal Government.

But let us work for a moment with the figure of $119 million. If we subtract the $119 million in terminating costs from the $134 million total being voted on now, we are left with the total of $15 million. That is the difference between the two amounts which our possible actions on the SST can require us to pay.

It is important to emphasize the fact that if we vote the SST funds, we will incur an expense only $15 million more than the minimum estimate of the cost of closing down the SST program.

How foolish can we be? This $15 million is enough to pay the interest on the national debt for 6½ hours. In other words, by the time the 11 o'clock television news carries a report of the vote on this question tomorrow, the real money at issue here will have been consumed as interest on the national debt in the hours since the vote.

Mr. President, I do not mean to minimize the importance of $134 million—which would pay the interest on the national debt for slightly less than 60 hours—or of $15 million or of any sum of the taxpayer's dollars. But if we are to make a sensible decision, and if the public is to understand the real stakes of this debate, it is absolutely essential that we pay attention to the economic facts. And it is especially important that we not lose sight of the most significant economic fact about the SST program. This is the fact that the program does not call for the Government to spend money in the normal sense.

The Government's role in the SST program is an investing partner with private capital sources. That is, the return provisions of the program insure that the Government will get back every penny it has invested—plus a substantial gain through royalties on sale, trade losses avoided, and favorable trade balances achieved.

This is why, Mr. President, the $15 million difference between the total we are voting on and the minimum cost of terminating the program is not the only important figure to bear in mind.

If we destroy the SST program now, we will be turning our backs on a prototype program that has been brought near to completion by previous expenditures of over a billion dollars, including $864 million of Federal support. If we figure in the $119 million in minimum termination costs, we see that destroying the program now will mean forfeiting the fruits of $983 million in Government investment.

Mr. President, if we destroy the SST program now, we will surely lose more than a billion dollars in Federal and private investment. But even these figures do not tell the whole story. If we are to understand the real stakes of the SST debate, we must also consider what the Government stands to lose by losing the option to go beyond the prototype stage in SST development.

If we opt out of SST competition, we stand to lose $31 billion.

The components of this $31 billion loss are not mysterious. We stand to suffer a $12 billion loss in balance of payments from American purchases of foreign SST's. We stand to lose $10 billion in sales of American SST's to foreign airlines. We stand to lose $6.7 billion in State and Federal tax revenues that would be generated by a competitive American SST aircraft industry. We stand to lose $1.3 billion in return on the initial Federal investment in the program. And we stand to lose another billion dollars in Government royalities from SST sales.

Against all these economic facts the SST opponents try several arguments.

They argue that U.S. airlines are too weak financially at the moment to purchase SST's. There are two points which refute the relevance of this contention.

First, although U.S. airlines are feeling economic pressures at the moment, this does not mean they will be experiencing similar pressures when the SST comes on the market, if it does. We must consider the airlines' situation through the next two decades. Does anyone doubt that we are going to have airlines flying planes through the next two decades—healthy, economically viable airlines? That is when the airlines will be joining their foreign competitors in shifting to SST's.

Second, if SST opponents think U.S. airlines have problems now, they should try to imagine the problems the airlines will have if they go into the late 1970's and early 1980's equipped only with aircraft which entered service two decades earlier, while foreign competition is equipped with a spectacular new generation of aircraft—aircraft which will not have generated one job or one penny of tax revenue for our State or Federal Governments.

Of course, SST opponents dodge consideration of these problems by asserting that SST's will not be economically viable, and therefore no one will sell enough of them to damage our competitive position in the world aircraft market. But they have trouble mustering much conviction for this hypothesis.

Throughout this long and properly thorough debate, the arguments advanced by SST opponents have been plagued by a crushing contradiction. The opponents' case boils down to this: the SST will be so uneconomical that no one will buy it, and so many will be flying that they will destroy the environment. If no one is going to buy it, how in the world is it going to destroy the environment?

Mr. President, the SST opponents cannot have it both ways. They must avoid the almost comic confusion manifested in one of the most recent New York Times editorials against the SST. In this editorial March 17, the Times divided its fury between denunciations of the SST as a bad investment, and denunciations of the SST as a menace to the environment because transatlantic SST traffic will be heavy—one flight every half hour, according to the Times.

Clearly, the anti-SST case is suffering a case of bad logic. In their lust after any grab bag of anti-SST arguments, the SST opponents have come up with an illogical tossed salad. They should back off a bit and decide which of their ferociously advocated doctrines they would like to cling to in these last hours of debate.

I respectfully suggest that they have stumbled upon the truth in their estimate that the SST will be widely used in the years ahead. Therefore, I respectfully advise them to hang their case on the superstition that the SST will cause the melting of polar ice caps, or the arrival of a new ice age, or whatever environment accusation still attracts attention. This is not much for them to rely on, but it is the best weapon they have remaining in their depleted arsenal. They are fresh out of barricades and will have to make do with cobwebs.

Mr. President, when Frederick the Great decided to seize Vienna, he was told by his advisers that public opinion would never permit such a move. Frederick the Great is said to have replied:

> My soldiers will take Vienna and my professors at Heidelberg will explain the reasons why.

Recent events in the ongoing debate about the SST have called this story to mind. Some people seem to feel that they can block the SST and count on some pliable professors to rationalize the move.

For example, consider the matter of environmental worries about the SST.

Mr. President, some of those who are most vigorous in their opposition to the SST claim that the SST will do substantial and irreparable harm to the environment. So certain are they that this is true that they do not even want to build two prototypes of the SST with which we might test some of their worries and theories.

This raises the question of what it is on which they base their confidence. One

answer is professors. And one thing is clear: Not all professors are equally convincing.

We have recently been treated to a very interesting glimpse of one of these professors. Several weeks ago a congressional committee heard testimony from a professor who insisted, with all the certainty one has come to expect from SST opponents, that a fleet of SST's would affect the atmosphere in such a way as to increase the risk of skin cancer.

This professor was serenely promulgating this tale of terror when a Congressman interrupted to ask a most embarrasing question. He asked if the professor was the man who was of the opinion that the massive New York power failure of 1965 was caused by unidentified flying objects.

The professor admitted that he was the same man.

I think this admission raises some interesting questions about the nature of one aspect of the campaign against the SST, particularly since much of the case of the anti-SST's upon the floor this afternoon has been made based on the testimony regarding skin cancer by this same man, the same man who was of the opinion that the massive New York power failure of 1965 may have been caused by unidentified flying objects. This suggests that we need to be a little more critical in evaluating the professional competence—or at least the relevance of the professional competence—of some of those academic experts who are brought before Congress to testify.

When we come to the next vote on this vital and deserving program, I hope that all Senators will pause to examine the source of all testimony that has made an impression on their thinking.

Mr. President, it is especially unfortunate that the credibility of expert witnesses should have been rendered suspect at a moment when public attention was focused on the highly charged issue of whether or not the SST might contribute to a rise in the incidence of skin cancer. But it is fortunate that we now have a balanced assessment of the testimony of the man—a Professor McDonald from the University of Arizona—who originally raised the specter of skin cancer.

Dr. Harriet Hardy, assistant medical director, Environmental Medical Service, Massachusetts Institute of Technology, recently commissioned M. A. Pathak, Ph. D., principal associate in dermatology, Harvard Medical School and Massachusetts General Hospital, and Thomas B. Fitzpatrick, M.D., professor of dermatology, Harvard Medical School and Chief of Dermatology Service, Massachusetts General Hospital, to prepare a paper dealing with solar radiation and skin cancer. The report is quite complex. I direct the Senate's attention to the report's summary of findings that relate to the SST. The summary includes this passage:

> Thus, it appears that ozone concentration, irrespective of SST effects, is variable in terms of space, time, season, latitude, and is governed by natural complex processes which among others include photochemical processes, atmospheric circulation, meteorological transport process, etc. The effect of the pollutants on solar ultraviolet energy and its day to day variation will in a limited manner contribute to the filtering effect of erythemogenic radiation. It is hard for us, therefore, to entirely agree with the views presented by Dr. James McDonald of the University of Arizona for the following additional reasons:
>
> 1. The process of cancer induction by ultraviolet light appears to be cumulative and hence the total amount of exposure becomes a very important factor rather than a single or a few severe exposures. The increase in the habit of sunbathing in our affluent society alone (creating more actual sunshine hours) would tend to shift the incidence of cancer of the skin irrespective of whether the spectral quality of solar radiation changes as a result of SST fleet operations.
>
> 2. The cancers of skin, particularly basal cell epitheliomas and sqamous cell carcinomas are curable conditions. Skin cancer accounts for, at the most, two percent of all cancer deaths.

Mr. President, I should like now to refer to the Senate hearings which I had the opportunity, as a member of the committee, to attend. I refer to page 427 and the testimony of Dr. Kellogg. I recommend his remarks to all Senators. They begin on page 422.

Mr. President, Dr. Kellogg is the associate director of the National Center for Atmospheric Research at Boulder, Colo., ar institute which is almost completely financed by the National Science Foundation—although it also receives contributions from universities. Over 500 scientists work at NCAR on atmospheric research so I believe just stating this man's position entitles him to great credibility as much as anyone else in the country.

He says in part:

> I think the atmospheric science community has done its homework a little better at this point than the medical people, who are just starting to work on this.

In his commentary highlighting his testimony, commentary made for the convenience of the committee so that it could conclude its work that night, he said, in part:

> But I think it would also, lest this idea terrify us too much, we should put this sort of thing into perspective. For example, when Senator Allott and I go home to Colorado, we go to a somewhat higher elevation, and we go through at least 2 percent of the ozone, which is what we are talking about in the case of the SST. So, in effect, we are producing an SST effect every time we go home. The person living 50 to 100 miles farther south also has this same difference in exposure to ultraviolet radiation.

Mr. President, on March 17 the New York Times carried an editorial expressing its well-known opposition to the SST. On March 18, I sent a rebuttal to the Times. On March 19, I received word that the rebuttal was "too long" for the letters to the editor column. I was also told that it was "inappropriate" for the Times "op ed" page which is given over to longer contributions on various subjects.

On the day that I learned of the "inappropriateness" of my remarks, the "op ed" page in the Times carried a column which evidently represents the Times' judgment of what is "appropriate" comment on the SST. This was a column by a British philosopher who laced his disquisition on airline economics with confident assertions concerning how many broken window panes—10,000—cases of permanent deafness—1,000—and cases of permanent insanity—100—would result from one SST flight.

Can one imagine such a statement? Yet they could not find an "appropriate" place to publish a point-by-point argument against the rather hysterical editorial they had published.

The philosopher's exercise in hysteria is what the Times considers appropriate comment on the SST.

I do not think this philosopher's commentary merits serious scrutiny. But it is still worthwhile to take issue with some of the more significant errors in the Times editorial of March 17. Therefore, I ask unanimous consent to have printed in the RECORD a copy of that editorial, and a copy of my telegram to the Times which was not printed.

There being no objection, the material was ordered to be printed in the RECORD, as follows:

CONGRESS VOTES ON SST

As a vote in both the House of Representatives and the Senate Appropriations Committee on the supersonic transport plane nears, the Administration and its business in a major propaganda drive to squash the public doubts.

Yet no new facts have been brought forward. The monstrous difficulties and dangers of the SST remain. The first difficulty is that the plane produces a sonic boom of such terrifying, excruciating loudness that it cannot be flown over land, at least not in any free country where the victims can also vote. Secondly, the plane on takeoffs is much louder than normal jets.

The pro-SST lobby has cleverly attempted to suggest in recent weeks that the noise problem has been "solved" by releasing expert opinions that certain modifications in the plane could reduce the noise level from 124 decibles to 108 decibels. There are two things wrong with this solution: the design changes increase the weight of the plane, reduce its cost efficiency and thereby further jeopardize the profit prospects which have never been better than marginal. The other thing wrong is that 108 decibels is still much too loud. Noise pollution is a worsening problem in every sizable community. Even at 108 decibles, the SST would barely reach the interim standard set by the F.A.A. in December 1969. The National Academy of Sciences has recently recommended that the limit for Kennedy Airport should be reduced to the more reasonable level of 98 decibles by 1975.

In addition to sonic booms and intolerable ground noise, the SST would pose risks to the oceans and the atmosphere. In routine operation on the New York-to-Paris run, planes flying at supersonic speed would carpet more than half the North Atlantic with sonic booms of an intensity of 2 and 4 pounds per square foot as often as every half-hour during peak summer travel. What would be the effect over ten or twenty years of repeated sonic booms, day and night, on migratory birds, on fish and other marine life, on the ocean itself? No one knows the answer. But the nation's foremost oceanographers and marine scientists have joined in a petition warning Congress against the easy assumption that supersonic flight across the oceans poses no risk.

An SST discharges vapor into the thin air of the stratosphere. The climatic and health effects are unknown at this time. Atmospheric research over a period of ten to twenty years would be required to find some of the answers. If the effect of the SST were to permit even a slight increase in the amount of ultra-violet rays reaching the

earth, the number of cases of skin cancer would increase dramatically. It is Orwellian that men are prepared to take these risks, to manipulate mankind's only livable planet and its precious envelope of air for something so trivial as cutting the travel time to Paris by three hours.

The pro-SST lobby has put heavy emphasis on the economic argument. But to invest certainly $2 billion and more likely upward of $5 billion of Government funds in this project would be wildly irresponsible when there are so many urgent human needs that could be met with the same amount of money. Almost every well-known economist is on record against the SST on economic grounds. If the objective is to create jobs for the unemployed or to improve the balance of payments, there are quicker, cheaper, more direct alternatives.

The final argument is prestige. But where is the prestige if the plane proves to be one which no airline can operate at a profit? The Anglo-French Concorde has so far exceeded cost estimates that its future is still uncertain even though prototypes have been successfully flown. No airline in Western countries has ever bought a plane from the Soviet Union because spare parts and replacements from the U.S.S.R. are subject to political control. There is no reason to believe that the airlines will change policy with regard to a Russian-built SST.

In summary, there is no public demand for an SST, no social or human need to be met. If it is approved, it will be a triumph for a small group of companies with tremendous political pull. Any member of Congress who votes for the SST will be voting against the weight of scientific opinion and of economic opinion.

A vote in favor is a vote to waste public funds and to endanger mankind's environment. The materialistic, prestige-obsessed Communist bureaucrats in the Kremlin can proceed with this dangerous, expensive toy because they can ignore their own public opinion. The representatives of a free people can be expected to act in a more responsive and responsible manner.

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MARCH 18, 1971.

EDITOR,
*The New York Times,*
*New York, N.Y.:*

The New York Times has campaigned long and hard against the SST development program, acceding to all of the opponent's fears and claims and conceding none of the proponents' arguments—arguments which have led three administrations and 24 congressional committees to support SST development as being in the public interest.

In your emotional and almost desperate editorial "Congress Votes on SST" (March 17) the Times deplores what they call a "propaganda drive" on the part of the Administration to "squash the public's doubts" on the SST. Yet the Times engages in propaganda of the worst sort: Reporting assumption as fact, half-truth as whole-truth, and addressing only one side of all complex issues.

Taking a position on any issue is a newspaper's prerogative, and an editorial page function. But when a newspaper presumes that all arguments which conflict with its passions are "propaganda," then that newspaper is abusing its editorial responsibilities.

The editorial "Congress Votes on SST" is, I submit, bald propaganda. I offer the following reasons for this assessment:

*Item 1:* The Times described the sonic boom as being of such "excruciating loudness" that the SST cannot be flown over land. I ask the Times writer: "Have you heard a sonic boom from the SST?" You do not acknowledge in your editorial that the government has pledged not to allow SST flights over land. Further, you do not tell the reader that the government is backing that pledge with an FAA regulation and the Congress is free to write this into law. I am supporting the SST and I would support such a law.

*Item 2:* You assert that the plane on takeoff will be "much louder than normal jets." This is false. It has been made abundantly clear in testimony before the Congress that the noise will be brought within acceptable limits before the SST is flown commercially or we will not allow it to fly. There are no strings attached to that pledge.

*Item 3:* Last year, in fact last month, the Times and other opponents of SST development clamored for compliance with the FAA rule setting 108 decibels as the noise allowance for new subsonic jet aircraft. Now that the 108 level is in sight for the SST, critics have suddenly reversed themselves and decided that such compliance is not good enough. The Times advocates that the "level for Kennedy Airport should be reduced to the more reasonable level of 98 decibels by 1975." This is a frivolous suggestion. If the "reasonable level" of 98 is enforced, there will be no commercial jet traffic in or out of New York City. Needless to say, without access to air transportation, more business will leave New York City, and the decline of your city, about which the Times so frequently worries, will accelerate.

*Item 4:* The Times ridicules the economy of the SST, claiming "no public demand" yet in decrying the sonic booms over the ocean, the Times writer suggests that the booms would occur "as often as every half hour during peak summer travel." A flight to or from Europe every half hour does not strike me as indicating a lack of public demand. As for the sonic boom, there is not one shred of evidence that sonic booms are harmful to marine life. Military aircraft have been flying over the oceans at supersonic speeds for 25 years, with no claims or even any evidence of detrimental effects.

*Item 5:* Of all the environmental fears concocted to retard development of the SST, the spectre of increased skin cancer is the most specious. Highly qualified scientists testified before the congress on the odds against the SST having anything to do with susceptibility to skin cancer. The odds are of such a magnitude that a man going out in the sun every day of his life could offset the theoretically increased danger of incurring skin cancer by wearing a hat *one day in his life.* If he goes out in the sun only on weekends he would have to wear his hat only once in 200 years. And that is assuming that SST flights would erode the ozone shield, which is a highly speculative and dubious assumption. But the Times accepts the charge at face value.

*Item 6:* The Times, like other irresponsible antagonists of the SST program, continually uses the figure of "upwards of $5 billion" as the implied cost to the government. There is absolutely no justification for any figure greater than $1.34 billion, a sum that is fully recoverable through the successful production program which the Times assumes in discussing heavy transatlantic traffic. The Times never acknowledges the recovery provision, although it is a unique element of the SST contract. The Times also deplores the investment in the SST "at a time when there are so many urgent needs that could be met with the same amount of money," but never suggests where the funds to carry out all of the government's "urgent needs" are going to come from in the future if the economy is not kept vibrant.

*Item 7:* The Times calls prestige "the final argument." Here the Times is boldly skewering a strawman of its own creation. Prestige never has been an argument or a motivation for the SST program. Aviation leadership *is* a reason for prototype development of the SST. We need to keep our option open on the supersonic transport market which will certainly develop in this decade. The Times would have us concede that market to the British, The French and the Russians. What would the Times suggest we foster as a replacement for loss of billions of dollars in the balance of trade that this would cause?

*Item 8:* The Times concludes that "any member of Congress who votes for the SST will be voting against the weight of scientific and economic opinion." The truth is that learned opinion is divided on the SST—as on most complex programs. There are many unproved assumptions in this debate. The environmental facts will emerge in the course of the aggressive research program now going forward. The economic argument cannot be settled without information that will come from prototype performance. The prototype program is not a commitment to commercial service, or to SST production. It is an opportunity—in fact, the only means available—for the congress and the public to replace unproved assumptions with hard data.

The real puzzle is why the Times is so anxious to kill the SST before the prototype program begins to yield hard data on the subjects about which it now speculates so freely. Is it possible that the Times is afraid that there is an inherent conflict between its current passions and the facts that will emerge from additional research on the SST?

GORDON ALLOTT,
*U.S. Senator.*

Mr. ALLOTT. Mr. President, during the debate on the SST, many people have asked why the Government must lend a hand in financing this project. They have wondered why the private capital market cannot cope with the task of providing the backing.

These are legitimate questions and they have been dealt with at a number of times and places during the many hours of hearings we have had on this subject. Today I would like to call to the attention of the Senate several concise statements on the need for Government aid in this area of general national interest.

Mr. President, I would like to call also to the attention of the Senate the fact that during the course of the years of the development of financing of the SST project there were 16 separate panels and committees which considered various and sundry ways of financing the project. And out of all of the suggested ways, the panel suggested and the committee adopted the precise method that has been used to finance them.

Mr. President, the first statement comes in a letter to the distinguished chairman of the Appropriations Committee, Senator ELLENDER. The letter is from two men of great distinction and experience in tthe field of finance, Mr. Eugene R. Black and Mr. James P. Mitchell.

Mr. Black and Mr. Mitchell are careful to focus attention on the real subject of today's debate—the development of two prototypes. They correctly assert that the purpose of the prototype program is "to prove out the general body of theory which now would indicate the probable feasibility, technologically, economically, and ecologically."

Mr. Black and Mr. Mitchell acknowledge the obvious point that private sector financing for this massive undertaking is not a certainty. But they say the following:

The grey area of uncertainty as to 100% private sector financing stems largely from the very immensity of the investment required and the related capacity of the private sector to handle this. It should be noted that the private sector is occasionally assisted in sound commercial projects that are too large for private funds to handle. The Export-Import Bank, for example, by its export loan guarantee program has generated billions of dollars of export sales quite beyond the capacity of the private sector to handle, thus contributing tremendously to the economy and, incidentally, doing quite handsomely in the process, as its Balance Sheet and Income Statement will attest! Should it be possible, therefore, that a governmental supplemental assist is necessary to meet the peak SST production financing requirements, it would not be illogical in our opinion to make possible, by such means, a program of such presumed general attraction to the U.S. . . .

It should be noted in passing that the SST funding is undertaken on a basis that it will not cost the Government a penny over the life of the investment. The point is that the Government participation in the program is an investment. It is a way for the Government to make money for a change while it is spending money.

Mr. President, so that all Senators can study the thinking of Mr. Black and Mr. Mitchell, I ask unanimous consent for their letter to be printed in the RECORD.

There being no objection, the letter was ordered to be printed in the RECORD, as follows:

MARCH 17, 1971.

Hon. ALLEN J. ELLENDER,
*Chairman, Senate Appropriations Committee, Washington, D.C.*

DEAR SENATOR ELLENDER: The issue before the house is the appropriation of additional funds to continue and complete—on a cost shared basis—the developmental and test prototype phase of the SST. The purpose is to prove out the general body of theory which now would indicate the probable feasibility, technologically, economically and ecologically. In addition, the developmental phase is intended to preserve to the United States the option of continuing in the international competition and of not being phased out of the field we have dominated for so many years to our considerable economic benefit, merely by being unprepared in the basic necessary preliminary work, and therefore finding ourselves so far behind time-wise that the race would be lost.

While it has no real bearing on the logic of completing the development work authorized by the current and the previous three Presidential Administrations, the question has been raised as to whether an SST production program can be financed in its entirety by the private sector—the related inference apparently being that it would be unwise per se if this were not the case.

The thought of the tremendous inventory investment alone, in an assembly line of planes to be priced at roughly $50 million apiece, taxes the imagination and clearly presents extremely large financing requirements. Time-wise these would occur 7-8 years from now, assuming that a production program was immediately to follow successful completion of the prototype test phase. To provide a proper basis for judgment as to these future possibilities, it would be interesting to review the past. At the time the $125,000 DC-3 or even, more recently, the original $4-5 million 707s were in production, the thought of a $20 million 747, and the financing of its assembly-line production, would also have staggered the imagination, and almost certainly have invited skepticism that the private sector could have handled this. Yet, the 747 production was undertaken and financed privately as has been the case to date also for the $15-16 million DC-10 and L1011 projects. And the aviation industry currently is certainly not in the most robust health!

The presumed very existence of an SST production program following a successful test prototype phase also presumes:

1. Indicated economic feasibility of the design,

2. Airline customer demand and contractual responsibility in a sufficient quantity of orders, and

3. Demonstrated proof of the acceptability of the plane from an ecological point of view.

Given all of these factors, there would obviously be strong motivation for private sector financing such as has been demonstrated in all previous commercial transport programs.

It might, therefore, seem at least theoretically possible that the private sector could some 7 or 8 years from now. Against the uncertainties of the future, however, and the extremely large inventory investment, required of the manufacturers, it obviously cannot be said positively that this can be done. It is clear though that the very doubts which must obtain today would at least be considerably clarified by the successful demonstration of the test prototype program. The grey area of uncertainty as to 100% private sector financing stems largely from the very immensity of the investment required and the related capacity of the private sector to handle this. It should be noted that the private sector is occasionally assisted in sound commercial projects that are too large for private funds to handle. The Export-Import Bank, for example, by its export loan guarantee program has generated billions of dollars of export sales quite beyond the capacity of the private sector to handle, thus contributing tremendously to the economy and, incidentally, doing quite handsomely in the process, as its Balance Sheet and Income Statement will attest. Should it be possible, therefore, that a governmental supplemental assist is necessary to meet the peak SST production financing requirements, it would not be illogical in our opinion to make possible, by such means, a program of such presumed general attraction to the U.S., and this could be done for example, in the form of V-type flexible-percentage, guaranteed loan financing such as was widely used during WW II. In this method the assistance provided could be varied according to the need and would only *supplement, not supplant*, the private sector contribution.

Sincerely,

EUGENE R. BLACK,
JAMES P. MITCHELL.

Mr. ALLOTT. Mr. President, a second statement of interest comes from Mr. G. Robert Truex., Jr., executive vice president of the Bank of America. It is contained in a letter to Mr. William Magruder, Director of SST Development for the Department of Transportation.

Mr. Truex acknowledges that our current position of dominance in the world commercial aircraft market resulted primarily from privately financed efforts. He points out that the various aircraft that won for us this dominance were not exclusively the result of private capital:

While it is true that those aircraft have been chiefly privately financed, the developmental capability existed because the manufacturers were at the same time developing military aircraft requiring the same advancements in the state of the art.

Mr. President, so that all Senators can study Mr. Truex's thoughtful letter, I ask unanimous consent for it to be printed in the RECORD at this point in my remarks.

There being no objection, the letter was ordered to be printed in the RECORD, as follows:

BANK OF AMERICA,
*March 3, 1971.*

Mr. W. M. MAGRUDER,
*Director, SST Development, Office of the Secretary of Transportation, Washington, D.C.*

DEAR MR. MAGRUDER: With respect to your letter of February 19, here is my personal reaction to the question of whether or not the United States' SST Development Program should be financed entirely within the private sector.

The accomplishments of our private enterprise system in the development of our commercial transports are well attested to by the aircraft flown throughout the world which are dominantly of American manufacture. While it is true that those aircraft have been chiefly privately financed, the developmental capability existed because the manufacturers were at the same time developing military aircraft requiring the same advancements in the state of the art. Thus, the public, both as tax payers and as air passengers, enjoyed the benefits of this mutual sharing of development facilities and overhead costs, and the maintenance of a continuing capability in the field.

In spite of the sharing of costs and capabilities mentioned above, the crises which confronted General Dynamics in the 880/990 program, the pressures on Douglas Aircraft in the DC-8-9 programs of a couple of years ago, and those now being experienced by Lockheed, provide testimony of the enormity of the hazards of the airframe manufacturers in the new air transport programs. Certainly today's problems in the airline and aerospace industry are of such a magnitude that neither the issuance of public securities nor the placing of debt with the financial institutions can be accomplished to finance an SST program. Today we are confronted with a partially completed program which, in some measure at least, is competing with SSTs sponsored on the one hand by the British and French governments, and on the other by the Russian government. It has been announced that in October of this year, Russia plans to introduce its SST on Aeroflot commercial flights. Three or four years later the Anglo-French Concorde is expected to go into operation.

In recent history the United States has managed to retain its balance of trade position largely because of its ability to sell its technology, although we have, in fact, lost a large part of our international position in the automobile and electronics, industries. It is difficult to believe that faster air transport, at standards which will satisfy the ecologists, will not be forthcoming in future years. To take advantage of efforts already expended in the development of a United States SST the program should be continued at a pace compatible with other requirements and priorities of our airlines. In today's environment this can be accomplished only with Government support.

At a time in the future when the aerospace and air transport industries are both viable, and the abnormal hazards involved in the development of a state of the art craft are behind us, it seems proper that private enterprise can and will support SST production and sales.

With kind regards.

Sincerely,

G. R. TRUEX.

Mr. ALLOTT. Mr. President, Mr. Truex's letter is relevant to one matter that has been especially puzzling to me during the debate on the SST. A number of persons have testified or otherwise an-

nounced that they would be in favor of developing the SST if it was primarily intended for military benefit. There are two points which should be made with considerable emphasis.

First, the Secretary of Defense, Mr. Laird, has stated that he favors development of the SST, because he believes that the technological sophistication which development will distill will have a very direct and positive impact upon U.S. defense capabilities.

Second, even if this development program did not promise to contribute to our defense capabilities, that would hardly constitute grounds for dismantling the program.

I deplore the argument that a military relevance, however, tangential, confers upon a program a priority unattainable by a program which does not have such relevance.

In fact, I am especially puzzled by the fact that the attack on the SST comes in the middle of, and often in conjunction with, an explosion of interest in "reordering our priorities." I should have thought that this development in a civilian-related industry would be especially gratifying to those who feel that military projects have been allotted an excessive share of public support in recent years.

Mr. President, on March 12, 1971, the senior Senator from Wisconsin read into the CONGRESSIONAL RECORD what he characterized as a "Point-By-Point" rebuttal on the SST debate. Senator JACKSON subsequently requested the Department of Transportation to prepare a factual statement on each of the 10 points the Senator from Wisconsin discussed.

Mr. President, I ask unanimous consent that this point-by-point factual rebutal and clarification be reprinted at the conclusion of my remarks.

The PRESIDING OFFICER. Without objection, it is so ordered.

(See exhibit 1.)

Mr. ALLOTT. Mr. President, one of the economists who has been quoted repeatedly from the floor of the Senate for the past few months with respect to the SST is Dr. Henry C. Wallich, a nationally recognized professor of economics at Yale University, and a former member of the President's Council of Economic Advisers. He has repudiated an alleged statement of his opposition to the SST, a statement distributed by the coalition against the SST last week.

Dr. Wallich asserted that—

> We cannot afford to give up the project at this point. I want to clarify my position on the SST. I favor construction of two prototypes and therefore urge Congress to vote for their budgetary appropriation.

The coalition is spearheading a lobbying effort to defeat the SST and claimed Dr. Wallich's support for their position.

Asserting that his position was misrepresented by the coalition, Dr. Wallich maintained that—

> If foreign countries build, and we do not, we shall lose not only the opportunity of putting our supersonic plane into the sky instead of theirs. It is hard to believe that foreign leadership in so major a project should leave unaffected our leadership in aircraft manufacture generally.

Pointing out that his position had been distorted, he released his full statement given to the Coalition on March 8 as follows:

> I continue to believe that the key to the right decision on the SST is the outlook for the Concorde. If we are sure that the Concorde will not fly commercially, there is much to be said for terminating the SST program. If the Concorde is viable, we stand to lose a great deal economically.
>
> I have heard nothing to make me believe that the Concorde has been stopped. Rumors, press reports, and even statements by airlines about our prospective purchases need to be heavily discounted. That countries of the technological capabilities of the U.K. and France should permanently write off the construction of a supersonic plane seems very unlikely to me.
>
> If foreign countries build, and we do not, we shall lose not only the opportunity of putting our supersonic plane into the sky instead of theirs. It is hard to believe that foreign leadership in so major a project should leave unaffected our leadership in aircraft manufacture generally.
>
> We are now told that we need not worry about the balance of payments, official statements about the economics of the Concorde are all wrong, the unemployment in Seattle could be dealt with by other means. One can find some basis for all these claims. Nevertheless, we cannot write off our international financial relations, we cannot ignore our position in a prime area of modern technology, we cannot ignore domestic realities. We can and probably should delay commercial production as long as feasible. We should focus as much as possible on technological improvements before we build. But we cannot afford to give up the project at this point.

He added:

> I want to clarify my position on the SST to avoid further misinterpretation. I favor construction of two prototype and therefore urge the Congress to vote for their budgetary appropriation.

Mr. President, this particular statement is of great interest, because his statements have been used for a long time by those who were against the SST.

Mr. President, we are nearing the end of another stage in a long, historic, and unfinished debate.

The debate about the supersonic transport is over a decade old. Nothing we do here will end the debate. Nothing we do here will prevent the production and extensive use of SST's be they Russian or European. Our power here does not extend beyond the power to do one of two things. We can fund continued work on the SST prototype program through the next 3 months. Or we can destroy the SST program—a program which has enjoyed the consistent support of three administrations, 24 congressional committees, and a solid majority of all the Members of the Senate and the House over the past decade.

The Senate today can either vote the $134 million for continued prototype development, or it can refuse further funds, thereby requiring the Government to begin spending at least $119 million in termination costs. If the Senate votes to deny funds to the SST program, then the Congress will have killed the American SST. If the Congress kills the SST program it will destroy three kinds of things. First, it will kill the prototypes which are nearing completion. Second, it will destroy the option of building SST's in the future. Third, it will destroy America's hold on 83 percent of the world commercial aircraft market.

I can think of no more foolish gesture than the destruction of this program. That would relegate hundreds of thousands of plans and drawings to some warehouse, leaving them for someone to dust off in the eternity to come.

In all this destruction the Congress also will have created three things. First, it will have created unemployment. It will have created havoc in a sophisticated organization of scientific and technological talent. Third, it will have created numerous costs, ranging from termination costs in the immediate future to balance-of-payments problems extending into the indefinite future.

Mr. President, let us not be deluded by a false sense of our own power. Let us have a clear understanding of our real options. The U.S. Government is powerless to stop the development of SST's in other nations. This powerlessness is underscored by the fact that two different foreign SST models are already flying. The most the U.S. Government can do is attack the SST with two lines of coercive action.

On the one hand, it can try to make the economic rewards of foreign SST's hazardous. On the other hand, it can endeavor to keep American citizens from flying on SST's. Obviously, the latter would accomplish the former. But it is equally obvious that any measure effective in keeping American citizens off foreign SST's will require intolerable coercions and intrusions into the sphere of free choice, an intrusion which the American people will not tolerate. This is significant, because everything we know about airline economics indicates that only such coercions and intrusions will be able to keep passengers from choosing SST service over slower service.

In addition, any attempt to undermine the economic viability of foreign SST's will invite—indeed, it will guarantee—reciprocal action. I have even heard it suggested that we simply ban foreign SST's from landing at American airports. Of course all this would do is provoke restrictions on American landing rights in the nations concerned.

Those who want to kill the American SST should not comfort themselves with the hope that their action will make the world safe from SST's. In fact should they kill the American SST, they would only have succeeded in making foreign aircraft producers safe—for the first time in history—from American competition.

Mr. President, these are unpleasant details. But it is time we came to grips with them. I know that the opponents of the SST have worked hard to get Senators to look at what SST opponents call the "big picture." I know that the vigorous coalition of lobbies opposing the SST think—correctly— that the success of their crusade depends on their ability to get Senators to vote on a variety of things which actually are not at issue in the vote that we are about to take.

Mr. President, a passion for considering the "big picture" often indicates a reluctance to come to grips with the relevant details of a situation.

Mr. President, I urge all Senators to resist the efforts of SST opponents to

artificially widen, and thereby distort the focus of this debate.

Let us clear the air, our minds, and the record. Let us focus on the very limited issue before us.

The issue is not whether we should launch a fleet of SST's with unknown and perhaps menacing features. The issue is a very limited program for building and testing two prototypes.

The issue is not whether we want to demonstrate a general willingness to rethink existing programs. The issue is whether we want to side with the three Presidents, 24 congressional committees, and the majority of all Congressmen over the last decade who have strongly favored development of SST prototypes.

The issue is not whether the Government should give away vast sums for an unknown quantity. The issue is whether or not the Government should make a limited investment in a prototype program which can lead to dramatic remuneration for the Government.

Mr. President, it is especially important that we recognize that, in spite of the tremendous effort to portray this vote as a general referendum on environmental concern, this vote is nothing of the sort. This is not a vote on whether or not to darken the skies with a fleet of lethal aircraft that would poison the air, addle wildlife, deafen humanity, smash windows, destroy the upper atmosphere, increase skin cancer, and cause a new ice age—or, alternatively, depending on which SST opponent suits your fancy, that would melt the polar ice caps, thereby flooding all the world's coastal cities.

To repeat, the vote we are approaching is not a referendum on Armageddon. It is not a vote on whether or not to formulate determined environmental policies. And just as this impending vote should not be portrayed as a referendum on whether or not to destroy the environment, neither should it be exploited as an opportunity for striking poses pleasing to the glazed eyes of the most fantastical and irresponsible environmentalists.

We must all face the fact that the anti-SST cause has attracted to its banner a significant number of moral exhibitionists for whom this crusade is nothing more than an exercise in the mortification of other people's flesh.

By all means let us do everything practical to improve the quality of life in America. But let us avoid posturing. Let us not substitute moral exhibitionism for thoughtful action. Let us not be distracted by quixotic charges at symbolic issues.

Crippling a basic and unoffending industry is a clumsy way to demonstrate good intentions about the environment. Undermining our scientific community is an imprudent first step for a war on complex environment problems which will be solved by science or not at all.

And weakening the economy and increasing unemployment is an odd way to express one's concern for the quality of life in America.

Mr. President, no charade with ineffectual resolutions and expressions of "concern" can obscure the costs—economic, scientific, and human—that will result from destruction of the SST program and that will extend at least through the next two decades. And the simple truth is that there is no solid reason for embarking on this destructive course now. There are unsettled arguments about the SST. We should finish the arguments, not the SST. And we can intelligently settle the arguments only if we avoid destroying the SST.

Learned opinion on the probable environmental effects of the SST is divided.

Learned opinion on the probable SST performance is divided.

Learned opinion on the projected economic impact of the SST is divided.

What we have here is a raging controversy about matters of keen scientific interest and high economic importance. In short, we have a situation which challenges SST skeptics to help us resolve the controversy with additional research and development of the sort involved in the prototype program.

Mr. President, where there is such division of learned opinion, there surely is a need for further evidence. We supporters of the SST welcome controversy about the program. And we welcome the opportunity to press on with the research and development program that is the only possible source of solid answers to the vexing questions which are in dispute.

We who support the SST prototype program are puzzled by the passionate desire of the SST opponents to kill the program before it can begin to help us arrive at those solid answers. The questions which every Senator must now ask himself include these:

Why are the most passionate opponents of the SST so desperately anxious to kill the prototype program, and disperse the scientific talent assembled for it, at this point?

Why are the most passionate opponents of the SST so anxious to dismantle the program now, just before the prototype program equips us with real SST's—as distinguished from the hypothetical SST's about which the SST opponents have been so freely speculating?

Mr. President, it is hard to avoid the suspicion that some SST opponents are afraid the existence of prototypes will cramp their critical style. At this point the opposition to the SST thrives on surmise, speculation and hypotheses. Further research and development of the sort involved in the prototype program will be very inhibiting and inconvenient for some people. It will enable us to replace surmise with fact, speculation with hard data, and hypotheses with conclusions.

Mr. President, I am frank to confess that I do not know with absolute certainty how all of my judgments about the SST will fare in the cold light of expanded experience with prototypes. But I am also frank to say that I would be irresponsible if I attempted to shield my judgments from the bracing challenge of prototype evidence.

Mr. President, I want to press ahead with prototype development so that we all can put our judgments to the test. I want to avoid unnecessary and costly damage to the Nation's precious scientific capabilities. I want to protect the Nation's options in the swiftly changing world aircraft market. I want to protect the Nation's economic and technological strength which we so urgently need as we tackle the costly and complex problems of improving our environment.

Mr. President, for these reasons I support continuation of research and development in the SST prototype program.

I want us to press forward so that if the time comes when foreign SSTs are landing on our shores, and some people say, "No, no, you cannot land them because they are environmentally dangerous to us," I can say answer these fears with evidence gained from our two prototypes. I want to be able to say that we have run exhaustive and expensive tests and we know what we are doing."

There will be no answer to such fears if we do not produce and test these prototypes.

In conclusion, I want to make two or three additional points. I recall very well when President Kennedy spoke at the Air Force Academy in 1962, when he first announced his resolve to produce an SST in this country.

Even before that time, in 1961, the Senator from Washington (Mr. MAGNUSON), chairman of the Independent Offices Appropriations Subcommittee, and I had been instrumental in providing money in that bill to start research for this program.

Mr. President, I have no interest in this program. I have no stock in it. As far as I have been able to ascertain, there is not one dollar's worth of business from this whole program which will inure to the benefit of my State.

Mr. President, this is a time when the leaders of this country must extend their mental horizons.

We cannot afford to lie back. We must be willing to take some chances. The risk here is not environmental. We are not going to pollute the world with two prototypes. We have got to be willing to take some chances so that we can keep our position of pre-eminence and leadership, and keep that position throughout the rest of this century.

I believe that in the 1980's and the 1990's people will be traveling in SST's. I probably will fly in them, and I am not a member of the jet set. But today we are hearing the same thing that was said about the jet liners when they came out in the late 1950's. Then it was said that just a few rich people who could afford to pay a little extra fare would be riding on them. But these planes became so efficient, such wonderful and quick means of transportation, that they quickly drove prop-driven planes out of the sky.

So I want to say here that the Senator from Colorado is trying to look into the future scientifically and technologically. I want the people to know that in this critical time the Senator from Colorado fought to preserve for this country its position of leadership in science and technology and in a great industry. In addition, people will know that the Senator from Colorado did not allow a few specious arguments to turn him against the future.

EXHIBIT 1

JOBS AND THE SST

PROXMIRE'S STATEMENT

That 150,000 jobs will be lost if the SST program fails to go ahead is simply not true in any sense.

FACT

Mr. President, Senator Proxmire is merely repeating over and over the same theme he has been broadcasting over the past year relative to the employment situation. He refuses to accept two very pertinent facts. First the areospace industry is in serious trouble right now—this segment of the American work force is vital to our economy, our defense, and our ability to hold our own in technological achievement in a highly competitive world market. It is the second largest industry in this country and as such, has a direct influence on a large segment of our population throughout the nation; because of this the investment the Government makes here can and will provide a stimulus that goes far beyond the prime industry.

Secondly, we are talking about producing a useful exportable product which will generate revenue with which to support hundreds of other programs that are vitally necessary, but consume revenue. We cannot accommodate for long these latter types if we do not provide for programs that increase the flow of dollars back to the government. This is a long term productive effort spanning over 17 years (1973 to 1990).

The Senator demands complete assurance that the investment will pay off—no one can give him that assurance with 100% confidence; however, it must be noted that the SST is not a dream. It is here now in a form which is ready to go into commercial service by the end of this year (The TU–144).

The only question is can we produce a better, quieter, safer, environmentally clean, and more productive product. History says we can; hence the probability of investment return is higher than any other similar program has ever been at this stage of development. This is fact not fiction and has been testified to by those best qualified to know.

Now relative to the gainful employment of thousands of Americans which the Senator chooses to believe is optimistic and which he tries to support with very weak theories. The economists he cites are certainly eminent in their fields.

They are not, however, and I repeat, they are not experts in aircraft production, aircraft demand, or aircraft sales. None of those cited have ever taken the time or trouble to go to either the Department of Transportation or the Contractors and get first hand the information necessary to provide a legitimate base for their statements. The Senator chooses to criticize Mr. Magruder because he has relied on economic studies, and I might add numerous studies, performed—not by individuals but by groups of people who are intimately familiar with the design, production, and operation of commercial aircraft—namely, the sellers and the buyers. The companies and the airlines have invested approximately $246 million to date as an indication of faith in the program. The Congress certainly must be more attentive to such thoroughly integrated economic analyses by highly qualified groups than it is to individual opinions based on elementary text book theory that assumes there is no unemployment. It must be pointed out that the predictions of individual economists, regardless of eminence, have not been noted for accuracy or agreement with actual performance.

The Senator says that there are less than 5% of the economists who support the SST—5% of what. Does the Senator mean to infer that he has polled every economist in the country? If this is true, I wish to congratulate Mr. Magruder—he is not being paid, nor is his very able staff, to run around the country conducting popularity polls. He is being paid to do exactly what he has done i.e., to put together the most meaningful economic analysis possible utilizing the best conglomerate of talent available. The Senator's criticism is unwarranted, misleading, and appears designed only to try to establish credibility for very weak individual opinions. I will wager Mr. Magruder could probably find as many individuals to support his arguments if he were permitted to waste the taxpayers money in this manner.

Now let's get back to the employment situation. The appropriations committees of both houses have heard testimony from Mr. George P. Meany, head of the AFL/CIO and Mr. Floyd Smith International President of the International Association of Machinists and Aerospace Workers, that the 150,000 job prediction is in fact very low. Their predictions approach 500,000. The Senator has inserted in the record a letter from the Oil Chemical and Atomic Workers International Union which he would have us believe is more meaningful. Mr. President, this Union represents less than 180,000 workers as opposed to the over 14 million represented by Mr. Meany and Mr. Smith—Senator Proxmire cannot really believe that we, the highest legislative body in the nation, are going to be so naive as to accept as representative, a letter from a relatively small disassociated union as opposed to actual testimony by the presidents of the largest unions in the country representing over 14 million American workers. As further evidence of the weakness of the Senator's argument it should be noted that almost half of the Senator's rebuttal in the employment area is devoted to this letter.

No one has ever indicated that there are no other ways that the government can stimulate a like number of jobs for a like amount of dollars. The SST program is not the answer to all the country's problems, but it does represent a significant part of the unemployment problem, now and in the future, by the nation's second largest industry. It does offer an investment opportunity which holds a high probability of returning the whole investment—plus interest as well as a profit to the taxpayer, and at the same time, produce an internationally consumable product. It is unfortunate that the Senator chooses to make this program a whipping post, yet advances no like opportunity to this body. We can build subways, dams, roads, conduct environmental research, and support welfare programs only with many programs like the SST. It's time we started to look for a few more productive revenue producing programs and stop trying to kill those we have. The alternative might well turn out to be having a large part of our population living off the efforts of a few. This won't work now any better than it has in the past.

I suggest that the Senator join the rest of us in making the SST program as successful as our technology can achieve in all areas and stop trying to make it solve the problems of our entire social and economic future.

PROXMIRE'S STATEMENT

DOT's claim of double productivity ignores the fact that the SST will cost at least twice what the 747 cost—$40 million versus $20 million.

FACT

The productivity of the SST is not affected by the cost or sales price, which is computed as part of the total operating expense and primarily affects depreciation and insurance expense. For trans-Atlantic flights, the total operating cost of the SST is approximately the same as the 747, and in the 1980's should be better than the 747. Furthermore, it should be noted that the first Boeing 707 sold for about $5,000,000, or about 2.2 times the DC–7C cost of $2,250,000, yet the 707 was many times more profitable than the DC–7C.

PROXMIRE'S STATEMENT

When jets were first introduced in the 1950's, the 707 flew twice as fast and carried twice the passenger load as the DC–7, the last of the propeller-driven planes. Accordingly, the new jets of the 1950's were four times as productive as their predecessors. Thus, even if the DOT statement about productivity were correct, (SST twice the 747) which it is not, the SST would represent only half as much of an advance as the step from the prop plane to the jets.

FACT

The FAA report entitled, "Direct Operating Costs of Transport Aircraft in 1960 Airline Service", gives the following data for the 707 and the DC–7C:

| | 707 | DC–7C | Ratio 707 to DC–7C |
|---|---|---|---|
| Passenger seats | 123.9 | 65.6 | 1.89:1 |
| Block speed, miles per hour | 473.0 | 285.1 | 1.69:1 |

Productivity of the 707 is 3.2 that of the DC–7C, based on 1.89 times 1.69. However, on the same calculation, the SST would be 19.2 times the DC–7C, and 6.2 times the 707, based on 281 seats and 1,285 miles per hour. It is more reasonable to compare the SST's productivity with the first of the subsonic jets, than with the 747, which is last of the subsonic jet generation, because of airport runway limitations for aircraft with greater weight and takeoff requirements. Moreover, there will be many improvements to SST designs, of which the 2707–300 is the first, which should make the SST even more superior to the 747.

PROXMIRE'S STATEMENT

DOT recently confirmed that fuel usage by the SST fleet would approach nearly 5 percent of the world's oil reserve.

FACT

Evidently the Senator has misread or misunderstood the study prepared by DOT on fuel usage. The entire civilian aircraft fleet, of which the SST will be only a small portion, will consume only 5 percent of the world's oil reserves.

PROXMIRE'S STATEMENT

Recent newspaper accounts report that BOAC, the British Overseas Airline, has found that the seat-mile operating costs of the Concorde will be twice the seat-mile operating cost of the 747. It (BOAC) has not denied that seat-mile operating costs would be double the costs for the subsonic jets.

FACT

There is speculation by informed observers that the BOAC story in the London Observer had no basis in fact and was written by an anti-Concorde journalist for the sole purpose of causing embarrassment to the manufacturers of the Concorde and the U.S. SST. BOAC strongly denied telling the Government it could see no way of operating the plane at a profit and therefore did not want it.

As for the statement that Concorde total operating costs per seat mile would be double 747 costs, DOT computations indicate that whereas Concorde direct operating costs would be about 65 percent higher than the 747, total operating costs per seat mile would be about 20 percent higher. At a 55 percent load factor and 15 percent fare surcharge, the Concorde should be able to make a reasonable return on investment. At a 75 percent load factor, however, and with a 15 percent

surcharge, the Concorde should be able to earn a higher annual operating profit than the 747 at a 55 percent load factor.

PROXMIRE'S STATEMENT

Yesterday we had testimony by Dr. Samuelson and Dr. Rathjens, two eminent economists. They are convinced that the productivity of the SST would be less and that the plane would be an economic disaster.

FACT

First, Dr. Rathjens is not an economist, but obtained his doctorate in chemistry and teaches political science. Both he and Dr. Samuelson made dire predictions about the economics of the SST, but neither produced any data showing the computations on which their conclusions were based. Furthermore, Dr. Samuelson stated on cross-examination that he had formed his opinions on the SST about five or six years ago. Since that time, the design has changed as well as the characteristics and performance of competitive aircraft. Dr. Samuelson testified also that going ahead on construction of two prototypes is wasteful because the SST will be uneconomic and only 50 instead of 500 can be sold. It is difficult to know how he can be so sure of his conclusions when proving the performance, economics and marketing are the primary reasons for building and testing the prototypes. It would appear, on balance, that a stronger case for constructing the two prototypes was made by Dr. Paul McCracken, Chairman of the Council of Economic Advisers, who stated his opinion to Secretary Volpe on 26 February 1971, as follows:

"It appears, on the basis of information presently available, that the SST has a reasonable probability of being commercially viable and able to repay its research and development costs to the Federal treasury. We recognize, however, that there is considerable uncertainty about many of the crucial factors related to the SST's commercial viability, in particular about its construction and operating costs and the way that these will be affected by any modifications necessitated by concern over noise levels and other environmental effects. These uncertainties can best be resolved by actual testing of prototype aircraft. Once such a testing is completed, the economic viability of the SST can be more definitively assessed, and the burden of the decision on whether to proceed to full scale development of the SST can then properly be shifted to the private sector."

PROXMIRE'S STATEMENT

Third, that there will be a market of 10 percent of the American population for the SST by 1985.

This 10 percent argument is based on the premise that 6 million passengers that flew internationally last year will grow to 25 million passengers by 1985. This reasoning has two inherent fallacies. First, percent of passengers and percent of population are far from being the same thing. Six million passengers flying overseas last year is not the same as 6 million people flying over seas.

FACT

Senator Proxmire's theory is correct, his figures are wrong. In 1970 there were over 18 million overseas trips taken between U.S. and foreign ports. Of these more than 6 million were business trips. This equates to more than 6½ million individual Americans who availed themselves of this service.

By 1985 the forecast is that there will be 59 million annual overseas trips between U.S. and foreign ports including 15 million business trips. This means that over 25 million individual American people will be making these trips.

PROXMIRE'S STATEMENT

The SST will be a premium fare airplane; estimates range as high as 30 percent above current first class fares for the SST. Because of these high fares, the 21 day economy package traveler is hardly going to opt for the SST—he will choose the cheapest way of getting there. The relevant market for the SST is the regular overseas passenger—the businessman or the wealthy tourist—to whom the time saving might make a difference.

FACT

The U.S. SST does not *require* a premium fare. The load factor required to break even (pay total costs) on a flight from New York to Paris is 35.3% with present day fares (no surcharge). This is based on an interior configuration which seats 28 first class passengers and 253 economy class passengers. Today's one way fares are $797 for first class and $467 for economy class. This means that only 98½ passengers out of the total capacity of 281 seats will pay the total costs. Last year on the North Atlantic the average load factor was 54.7%.

The only reason for a surcharge to be imposed would be to "protect" the subsonic jets. More than ten years ago the IATA airlines imposed a surcharge on the new jet transports to "protect" the piston engined transports. But the passengers—"Jet Setters" and ordinary tourists alike still opted for the jet transports because they cut the flying time in half, were more comfortable and less tiring. The same thing will happen again and for the same reasons with the introduction of the SST.

PROXMIRE'S STATEMENT

We still have nearly $500 million to go. That is the minimum, and it assumes there is no inflation, no overrun, no hitches in the plan, and most important, no trouble getting private financing for the production of the SST.

What if private financing failed to materialize? Under Secretary of Transportation Beggs has indicated that if that happened the Government is prepared to make available an additional $1 billion in loan guarantees to keep the program going.

FACT

There is no evidence to support program critics speculation that additional funds over the $478 million to go will be necessary. We are maintaining the late 1972 milestones in our contracts, and we are continuing to hold the contractors to their latest estimates which are less than our current projection.

With regard to financing the SST production phase Mr. Beggs in testimony before the Joint Economic Committee when questioned on whether he would or would not give assurance that the Government will not go ahead with financing part of the SST production stated:

"Mr. Chairman, I am on record, as I think Mr. Yates stated, in the Appropriations Committee with the statement that while I was of the opinion that private financing would be available, if it were not at that time, and if we felt that we had a successful SST program on our hands—that is, a successful transport after the prototype testing—and it required some Government-guaranteed loans, then I would think that we would so recommend."

When further asked whether "sky" was the limit of "$5 to $7 billion at any rate? He replied:

"We have not yet proceeded with the financial study as to what will be required—that is, what the net cash requirement will be to bring the airplane from the prototype to the production stage—but the indication from the studies we have made thus far is that about a billion dollars will be necessary to bring it from that point on. But these would be in the form of loans which would be liquidated as the aircraft proceeded from that phase to operations."

"However, we did consult with Mr. Eugene Black, a very experienced and distinguished member of the banking community. We have consulted with him several times on this program, and he has assured us that if we have a successful prototype program on our hands that he feels confident that the private financing would be available.

"Now, we have spoken with a number of people in the financial community. Last year Mr. Shaffer, the Administrator of the FAA, went to New York to discuss specifically this question with the Society of Air Line Analysts, who, as you know, is made up of a very experienced group of investment bankers in the New York community. And they felt very confident again that if we have a successful prototype program on our hands that the necessary funding will be available to pursue this program through the production phase."

In summary, two essentials for private financing under normal circumstances already exist:

*A Willing Buyer*—The airlines have put forward $81 million and have, in writing, expressed their enthusiasm for this program.

*A Proven Product*—By definition the prototype program will prove a commercially viable product or the project will be terminated.

Normally this would be all that would be required to attract private capital. In the present atmosphere of a depressed economy, temporarily lowered airline earnings and a manufacturing industry suffering from high debts and depressed workload from reduced military and civil programs with consequent lowered earnings, it is not practical to project 4 years ahead with the necessary accuracy. The financing plan therefore must necessarily consider the health of the industry as a whole. Discussion with labor leaders, the airline presidents, manufacturing leaders, and the regulatory authorities have been underway since April. When the time comes, the airlines and the manufacturers must have good prospects of reasonable profits in order to attract private financing even with the other two essentials accomplished.

PROXMIRE'S STATEMENT

Incidentally, the original contract between Boeing and the Government called for Boeing to submit a financing plan for production by June 30, 1968. That date was later postponed to December 31, 1969. To date, no financing plan has been submitted. It is now promised in June 1972—a 4-year slippage.

FACT

In responding to questions about the financing plan Mr. Magruder has stated that there is a financial plan due June 30, 1972. There has been some question as to why this plan has not been made available. We are building a prototype. Nothing would be more difficult or more unwise than to produce a financial plan four or five years before you get your prototype.

What is going to attract private financing is three things: A proven article to sell—that is what the prototype does. A willing buyer—that is airlines with their $82 million. The third thing that is missing—is a healthy profit-making industry. The way we are going to get a healthy profit-making industry is for the labor, the CAB, the industry, and the Government to work together with alacrity and dedication to make sure that we don't have the same thing happen to air transport that has happened to railroads in the United States.

That does not mean a subsidy. There is no subsidy on the SST. It is a payback program with a cost-share.

PROXMIRE'S STATEMENT

Other estimates forecast still higher Federal costs. Gen. Elwood Quesada, the former FAA head who now serves as a director for American Airlines, predicted that the Gov-

ernment's cost on the SST program could eventually go to $3 to $5 billion.

Dr. Richard Garwin, member of the Science Advisory Board under three administrations, agreed with this estimate.

FACT

There is no evidence to support program critics' speculation regarding cost overruns or cost "soaring" to $3 to $5 billion or similar "guesses" on SST program costs to the Government. In fact, this was brought out in testimony by program critics before the Senate Appropriations Committee. When challenged by members of the Subcommittee on Transportation the testimony shows there were no facts to support the high estimates and they were admittedly speculative.

Although there is no one who knows what the final precise cost will be for the program, this certainly is not intended to imply that an increase of this magnitude over present estimates, such as General Quesada suggests, is reasonable. The precise source of General Quesada's or Dr. Garwin's estimates are unknown and in the absence of such information it does not appear reasonable that much credence should be afforded such speculations.

PROXMIRE'S STATEMENT

Mr. President, when this program got underway in 1963, President Kennedy told Congress that "in no event will the Government's share of the SST program go above $750 million".

We are already $100 million above that ceiling and in all likelihood the end is nowhere in sight.

FACT

In 1963, when the President initiated the SST Program and indicated that the Government cost would not exceed $750 million, he further said: "The cost of such a program is large—it could be as great as one billion dollars for a development program of about six years."

When President Johnson took Office, he established the Presidents Advisory Committee on the SST. This Committee, during its deliberations changed the nature and timing of the SST Program. This had a direct bearing on the cost of the program, but more importantly on the economic viability of the American SST. In 1963 the plans had called for 6 to 12 months of competition prior to prototype development and then flying the prototype within six years in order to compete with the first generation Concorde. The aircraft was small having a payload of about 150 passengers and a gross weight of approximately 350,000 pounds. The Johnson Administration decided that the American SST should provide significantly better operating economics than the Concorde and decided not to attempt to be in-service at the time of the British and French entry. Accordingly, they extended the competitive period to 30 months to enable the American manufacturers to design a larger, more economical SST. As a result of this competition, which cost approximately $300 million, the size of the payload and gross weight doubled. This enables the American SST to have attractive airline economics—the Concorde operating costs will be about 27% higher.

The current estimate is that the SST prototype program will cost $1,342 million when concluded in 1974. By de-escalating this figure to 1962 dollars it is $1,040 million dollars.

Another major cost factor is that the cost sharing plan outlined by President Kennedy was based on 75–25 percentage split with industry. In the final agreement the government agreed to finance 90% of the prototype program. Adjusting the $1,040 million to a 75% of the total cost, instead of the current 90% and it becomes $780 million in 1962 dollars.

This figure does not include the added cost of the 30 months of competition instead of the original 6 to 12 months. The total cost of this phase of the program was almost $300 million.

Taking only ½% of this cost from the above figure and you have an adjusted $630 million in 1962 dollars.

When you look at the cost management in its complete perspective you can see that the current program costs relate very favorably with the original planned cost of $750 in 1962.

PROXMIRE'S STATEMENT

Fifth, it is said that the SST's impact on the upper atmosphere is trivial, and of little or no concern.

FACT

Senator Proxmire says that statements like: "One SST carrying 300 passengers at 1,780 miles per hour will emit no more pollutants per mile than three autos traveling at 60 miles per hour;" or, "a total of 1,000 SST flights a day would put about as much water into the stratosphere as a single large thunderstorm" are specious and misleading.

The comparisons are not specious and misleading. They tend to establish a proper perspective concerning the effects of SST's on our environment. Opponents of the program neglect to make such meaningful comparisons. They choose to use large number and to take advantage of the public's lack of understanding of technical information to generate unfounded fears to accomplish their purposes.

For example, Senator Proxmire says without ozone it would be impossible for life to exist on this planet. This statement certainly is misleading. Of course, life on our planet is dependent upon many factors such as water, sunlight, oxygen and ozone. But no scientist has said that SST's are going to remove all of the ozone. The fact is that chemical theory shows that the direct effect of water vapor injected in the stratosphere would be to reduce the ozone content by a small amount.

Opponents of the program, however, have cleverly used this information to make it appear that water vapor from SST's might produce a hazardous effect. Environmental scientists who have seriously considered the effect of water vapor on ozone find that the SST effects on ozone will be imperceptible due to the variation of ozone from natural causes. In the real world it has not yet been established that an increase in water vapor will cause a decrease in ozone. Let's look at some real world data. The Naval Research Laboratory's J. Mastenbrook has been making accurate water vapor measurements in the stratosphere since the early 1960's (a difficult measurement due to the very dry atmosphere there), and there has been an upward trend from 2 ppm to 3 ppm over Anacostia, or an increase of 50 percent. No global decrease in total ozone has been reported for this same period.

Senator Proxmire goes on to say that Dr. James McDonald is a member of the National Academy of Sciences and was named by the Academy to look into the question of ozone depletion and ultraviolet radiation. Here again, the Senator from Wisconsin has his facts twisted. Dr. McDonald is not a member of the National Academy. He served on a subgroup on weather and climatic modification for the Academies Committee on Atmospheric Sciences. The report of that Committee has not been issued yet, and according to Dr. McDonald it will not be for two or three months. Incidentally, if McDonald is right about the effects of additional ultraviolet on skin cancer then cleaning up air pollution will increase the skin cancer rate. That is something to think about.

Senator Proxmire tries, of course, to discredit the SST Environmental Advisory Committee. Its Chairman was appointed not because he favors the SST. Dr. Fred Singer is no partisan of the SST project; in fact, he had previously opposed the flight of an SST over land because of sonic boom. He was appointed because he happens to be an expert atmospheric scientist and the Chairman of the Committee on Environmental Quality of the American Geophysical Union which is the major professional organization dealing with environmental problems. He has also published a book on global effects of environmental pollution, has served as the Dean of a School of Environmental Sciences, and has a distinguished record in and out of government as an advocate for a cleaner environment.

The members of his Committee as distinguished scientists in their own right. Dr. Kellogg, for example, was Chairman of the MIT-sponsored Study of Critical Environmental Problems which carefully estimated the environmental inputs of the SST into the stratosphere. He is also the Associate Director of the National Center for Atmospheric Research. The members of the Committee were chosen without regard for their personal views about the SST, and without regard whether they belonged to the Sierra Club. They were chosen for their expertise.

Senator Proxmire evidently didn't listen to Dr. Singer's testimony and quoted him, therefore, out of context. The thrust of his testimony was that by the time a decision on an SST fleet is to be made—and that can only be after the prototype has been tested—the environmental concerns should have been resolved. The whole thrust of the DOT research program which the Advisory Committee is shaping is to narrow the environmental uncertainties so that we predict with full confidence whether harmful environmental effects exist. Yet Senator Proxmire would have us turn down the development of SST prototypes before we have even got the answers to these environmental concerns. And concerns is all they are.

There is no hard evidence whatsoever of any harmful effects on the climate. Yet these concerns have been exaggerated all out of proportion by those who oppose the SST for their own reasons, other than environmental reasons. I can do no better here than cite the remarks of Admiral Rickover: ". . . . He said half truths are like half bricks, they can be thrown further. He also warned that such statements should be confirmed or disproved before taking action to stop progress."

Senator Proxmire would have us put his own experts on the Advisory Committee. Not a single one of the names he mentioned is an expert in atmospheric science, but they have a record of opposition to the SST. Now I ask you is this the way to obtain an impartial Advisory Committee? It is interesting that Senator Proxmire doesn't ask why Dr. James McDonald is not on the Advisory Committee. He is a known opponent of the SST and an atmospheric expert at the same time. Because of his expertness, his opinions have been taken very seriously by the Advisory Committee, and Dr. Singer so expressed himself in his testimony to the House. In fact, he flew out to Tucson to consult with McDonald. I want to introduce here into the record a brief report from Dr. Singer to Mr. Magruder.

In regard to an alleged increase in skin cancer rate produced by SST operations, Dr. Singer says,

"Professor James McDonald of the University of Arizona has hypothesized that operation of a fleet of 500 SST's will lead to the production of 10,000 additional cases of skin cancer per year in the United States. A preliminary evaluation suggests that this allegation is greatly exaggerated since it depends on a number of concurrent assumptions.

Nevertheless, it should be considered seriously. I therefore advise that, pending scientific review by the National Academy of Sciences' Panel on Weather Modification, our own Advisory Committee, the CTAB Panel, and perhaps by others, we immediately move to set up an experimental program to verify some crucial assumptions in Professor McDonald's chain of reasoning.

"Stated concisely, McDonald finds that the U.S. skin cancer rate varies by a factor of 8, from about 200 per 100,000 in the South to 25 per 100,000 in the North—over a latitude range of about 15°. The average ozone content is less by about 10 percent in the South than in the North. McDonald then ascribes about half of the skin cancer variation to the variation of ozone, and further argues that if the ozone is reduced by the SST, it will lead to additional cases of skin cancer. He presents arguments to make this correlation plausible, but no hard, direct evidence whatsoever.

"Following McDonald's presentation to the House Subcommittee, I traveled to Tucson on March 7 in order to examine firsthand any evidence and talk with McDonald directly. I did not find much beyond what he presented.

First of all, let us assume with McDonald that water vapor from SST operations would indeed reduce the ozone content in the stratosphere by 1 percent. Such a decrease has not been verified, but is suggested by theoretical calculations. (Experimentally, however, we find naturally occuring ozone variations which can range to about 50 percent or even more, during different parts of the year and from place to place, that are not related to water vapor changes.) Let us also accept that skin cancer is produced in susceptible individuals by exposure to solar radiation, with ultraviolet radiation probably most important.

"I am lead to believe that McDonald has greatly overestimated the importance of ozone. (1) He himself observes that the difference in cancer rates must have something to do with outdoor exposure to sunshine, and that the exposure rate is much higher in the South where people are outdoors more often and—most important—where the clothing cover is very light. (2) He has not adequately considered the effect of sun angle; i.e., that the larger average sun angle in the North means that the solar radiation will be filtered through a greater effective thickness of ozone and therefore that less ultraviolet will reach the surface. This greatly increases the South/North difference in ultraviolet radiation. (3) Another factor inadequately considered is cloudiness. McDonald pointed out to me that mean summertime daily hours of sunshine are only slightly higher in the North than in the South, but that must surely be due to the fact that days are longer in the North than in the South in the summer. This means also that the sun angle in the North during a cloudless hour will be typically much lower, and therefore ineffective in getting ultraviolet radiation to sea level. (4) Next, the effects of various kinds of air pollution must be carefully considered since ozone is not the only absorbant for solar ultraviolet radiation. (5) Finally, many older persons who are Caucasians and particularly susceptible to skin cancer have moved to the sunny South, from Florida to Southern California. How much of the difference in skin cancer rate is due to this migration?

"In spite of all these considerations, my advice still is that we immediately commence an ultraviolet monitoring program at a number of surface locations to observe the amount of radiation reaching the surface as a function of the amount of ozone in the atmosphere. In this way we can learn in a few months to what extent ozone changes really control the average ultraviolet radiation exposure.

"I might add that the words 'skin cancer' has an emotional connotation. While it is not a pleasant disease, skin cancer is rarely fatal. We experience 120,000 new cases every year, according to McDonald, which averages to about 1 in 1,000 for the population of European ancestry which is susceptible. That number could be reduced very simply by staying out of the sun more often."

I don't think you will find any evidence of bias here either for or against the SST. The Advisory Committee is simply trying to establish the facts, and where the facts cannot be established to see that the necessary research is done to obtain them. All reputable scientisst who have an input to make are heard and, in fact, they have been contacted directly.

The Advisory Committee has acted very responsibly in reviewing all available studies and they have concluded: (1) That the injections from the SST fleet would be well within the natural variations of stratospheric composition. (2) They have noted that all present estimates are quite conservative and therefore on the safe side. When the precise measurement program is completed, we will have numbers which will be in all likelihood much smaller but surer. (3) They have noted that there are offsetting effects where one kind of pollution overcomes the effects of another kind of pollution. For example, we heard from Russell Train about the water vapor which will cool the stratosphere, but we also heard from the SCEP Study about the particles which will heat the stratosphere. The net result might well be close to zero. (4) The Committee has concluded that there are other human influences on the stratosphere which will become more and more important with or without an SST. One of the interesting effects is the production of water vapor from methane gases which comes from the Earth's surface, and partly also from Wisconsin cows. When it reaches the stratosphere, the methane turns into water vapor which looks just like the water vapor from an SST, and it would have exactly the same effect on ozone. (5) Finally, we have to look at the alternatives. If air traffic increases, as it will, and we do not fly SST's, then we must carry the traffic in subsonic jets, and they could produce serious effects on the climate.

Why do Senator Proxmire and others who oppose the SST so conveniently forget that the SST produces few if any contrails in cruise flight but that 707's and 747's do and that if enough of them fly, they could enshroud the Earth in a haze which cuts down the amount of solar radiation reaching the surface. On this matter of the climatic effects of subsonic planes we want to quote directly from Senator Proxmire's atmospheric authority, Dr. James McDonald, in the statement which Proxmire introduced into the record where McDonald says as follows:

"Fears that the extremely large volumes of water vapor emitted from SST fuel combustion will lead to contrail formation and hence to development of long-persisting hazy stratospheric veils of slow falling ice crystals do *not* appear to be well founded." (Italics by McDonald.)

He goes on to say that SST's will fly at altitudes too high to lead even to *formation* of contrails and that serious climatic disturbance from these does not appear likely. What McDonald does not spell out, however, is spelled out by Professor Reid A. Bryson, Department of Meteorology, University of Wisconsin, in an article entitled "Climatic Effects of Atmospheric Pollution" sponsored by a National Science Foundation grant and published in the volume *Global Effects of Environmental Pollution*, Springer-Verlag, New York, 1970. Bryson says as follows:

"Since 1940 the effect of the rapid rise of atmospheric turbidity appears to have exceeded the effect of rising carbon dioxide, resulting in a rapid downward trend of temperature."

Part of the contribution to worldwide turbidity comes from the effects of contrails which are produced by subsonic planes flying below the stratosphere. Professor Bryson then calculates that with 3000 jet aircraft in the air averaging 500 miles per hour we will experience a 5 to 10 percent increase in cirrus cover in the North American-Atlantic-European area. He warns: "This is not negligible!" I must conclude that there are many people who oppose the SST and that they will use any device, including environmental concerns, in order to fight it. But I believe that from all we can tell now the environmental issue is a red herring.

Senator Proxmire also says the development of the prototypes should be postponed until environmental questions are resolved. The environmental questions that concern us pertain only to large-scale operation of commercial SST's—not prototypes. Research to enable us to determine the environmental impact of a fleet of SST's will be accomplished before decisions are made for commercial production of a U.S. SST. The prototype program, rather than a threat, is a means by which environmental questions can be answered and uncertainties resolved.

If the research program to be conducted by our Government clearly identifies a significant adverse climatic effect, then we in the United States would want to influence other countries already developing the SST to prohibit fleet operation of their aircraft. Of course, this would have a major economical impact on these countries and they are also well ahead of us in their supersonic transport development efforts. We would need irrefutable proof to make our arguments convincing. The fact that we have two prototypes in operation, coupled with the data obtained from our research program involving laboratory tests and use of smaller supersonic or high altitude aircraft we would be in an excellent influential position. Without the two prototypes, our arguments would be considerably weaker as the other three countries involved in supersonic transport development would have hundreds of hours of actual SST operation while we would only have the limited data obtained from our concurrent research program. There is no doubt but that the SST prototype aircraft will be extremely useful in confirming the climatic effects answers derived from the research program. The degree of data extrapolation would, of course, be significantly reduced resulting in a major increase in the confidence we would have in our answer.

Delaying the U.S. SST program to wait for the results of environmental research programs would not remove the potential environmental impacts, since other countries are now developing SST's for commercial production and because of the existence of military supersonic aviation. It is expected that sales of these foreign-produced aircraft will occur to United States and foreign airlines whether or not there are U.S. SST's available.

Thus a delay in producing U.S. SST prototype could produce significant economic losses for the United States without any decrease in potential environmental impairments arising from large-scale SST flights. The risk to the Government would be significantly increased since later market introduction would find the U.S. SST seven years behind the Concorde and in competition with advanced versions of the Concorde. Delaying the present program would result in dispers-

ing the present SST engineers and manufacturing teams requiring their reassembly later at a significant cost. The manufacturers would probably also be unwilling to cost share in such a venture and a significant fundamental cost increase would result over and above the increase in cost from the delay. If we follow Senator Proxmire's advice, we would be flushing $1.1 billion in taxpayers' money down the drain without proof that it was a bad investment.

PROXMIRE'S STATEMENT

Sixth, that the SST produces less emissions than any other type of transportation.

FACT

It has never been the claim of the Department of Transportation that the exhaust emissions from the SST would be less than from other jet-propelled aircraft. What is true is that the gas turbine engines used in all jet-propelled aircraft, subsonic as well as the SST, produce less pollution per pound of fuel burned than do the engines for any other type of transportation.

PROXMIRE'S STATEMENT

Seventh, that the problem of sideline noise is now under control.

FACT

The effort made by the Department of Transportation and the two major contractors, Boeing and General Electric, in reducing the production SST noise level to meet FAR 36 is a clear case of the Government and its contractors being responsive to the expressed wishes of the public. This response has been made even though it requires noise levels below those agreed to in the development contracts.

The effect of meeting the noise levels of FAR 36 does not have to be the simple one of reducing range to keep the same payload or of reducing the payload (number of passengers) to keep the range. Both the range and the payload can be met with a small increase in the takeoff gross weight of the airplane, with no more than minor effects, if any, on airplane economics.

The trade-off of 50 n.mi. per PNdB quoted is an obsolete approximation and doesn't apply for large changes in noise suppression when the afterburner is removed from the engine and the newly developed noise suppression system is employed. With present-day knowledge the previous range/payload capability will be retained by a nominal increase in takeoff gross weight to less than 800,000 lbs. With further development it is anticipated a net increase in weight may not be required at the time of aircraft delivery.

PROXMIRE'S STATEMENT

Eighth, that there is going to be an SST anyway, so we have no choice but to proceed with our program.

This is not the first time we have heard this argument. Back in 1951, Senator Monroney introduced legislation to subsidize development of the first commercial jets. The Senate was told that the British and French were already underway with their programs, and would beat us out of the market if we failed to subsidize the American aircraft industry.

The Senate passed the Monroney bill, but the House wisely rejected it. It never passed.

Did we lose our leadership throughout the world? Not a bit. The private sector moved in and took over the U.S. aircraft industry, went on to become the greatest in the world—without direct Government subsidy. We now dominate commercial aviation. We supply 85 percent of all commercial jets throughout the world, because we did not have the Federal Government involved in it.

The SST represents the first time the Government is directly subsidizing development of a commercial aircraft. In my opinion, we would be far wiser to follow the precedent we set in 1951 and reject the subsidy.

FACT

Boeing built their "Dash 80" prototype in the period 1951–1954 on approximately $18 million of company funds partially offset by tax write-off. The USAF announced the purchase of the KC–135A tanker in August 1954 and the first production aircraft flew in August 1956. 200 KC–135A's were delivered by *December 1958* and eventually 820 of this military version of the B–707 were built. The first commercial B–707 received its FAA certificate on *September 23, 1958*.

Examples of improved air transportation resulting from U.S. Government support are:

*Aircraft type, year,* and *improvement*

1. Ford Tri-Motor, 1926; all-metal construction, multi-engine reliability.

2. Boeing 247, DC–2, DC–3 (Gooney Bird), 1933–36; longer range; higher speed and payload; 14ST aluminum.

3. DC–4 (C–54 Derivative), 1945; higher speed and payload; overwater operations; longer range; four-engine reliability; 24ST aluminum.

4. Constellation, DC–6 (C–69, C118A's), 1946–47; higher speed and payload; pressurization; longer range; higher cruise altitude.

5. Super Constellation, DC–7, DC–7C, 1953–56; higher speed, payload, and range; transcontinental flight time under 8 hours; 75ST aluminum.

6. Electra (Orion Patrol Bombers), 1955–59; turbine power; less vibration and noise; higher speed.

7. B–707, DC–8, (B–47, B–52, C–135, R6D, B66), 1958–59; jet power; speed; better passenger comfort; 7078S aluminum.

8. B–747 (C5A), 1970; wide-body capacity; high-bypass-ratio engines.

Each of these technological advances was preceded by a period of research and development, largely funded by the U.S. Government and in many cases accompanied by major U.S. Government procurement programs. For example, a consistent ingredient to each improvement was the development of new powerplants which were developed under U.S. Government auspices for military programs. Cabin pressurization, one of the major advances, was initially developed in the mid-1930's through Government-funded programs. Military R&D efforts for lighter, high strength, long fatigue life material have been directly applied to commercial aircraft programs.

This is only an abbreviated record of U.S. Government involvement in commercial aviation. The list goes on and on—component design, hydraulic and electrical systems, airborne and ground communications, navigation and air traffic control systems are a few of the other aspects that have been supported by U.S. Government funding.

PROXMIRE'S STATEMENT

Ninth, that the Government will recoup its money with $1 billion profit on the SST.

The return of $1 billion—which assumes the sale of 500 planes—represents a return of only 4.3 percent on the Government's money. With the Government paying 6 percent to use its money, the return of $1 billion would represent an actual loss as far as the Government is concerned.

Uncle Sam is going to lose money no matter what happens. If it does not work out and if we do not sell 500 planes, we will lose all of our investment.

FACT

The accusation has been unfairly made that even if the plane is a big success, the Government gets its money back with only 4.3 percent interest—less than the Federal Government pays for money it borrows. Keeping in mind that the Government does not compete with financial agencies on the rate of loans, the following points are made:

1. The 4.3% represents only the royalty return to the Government, considering the time value of money. In strict dollar terms, this is a $2.3 billion return for a $1.3 billion investment or nearly 50%.

2. Direct tax benefits of more than $6 billion are not included. Considering this aspect, the return is 16.7% on sales of 500 aircraft.

3. The related benefits of 150,000 jobs, over $22 billion swing in positive balance of trade, of technological fallout, of reduced adverse environmental effects as opposed to all SSTs built by foreign nations, of the international marketing advantage of demonstrated aviation leadership, are not included.

PROXMIRE'S STATEMENT

Walgreen uses other assumptions and arrives at 225 planes sold and 443 planes sold, respectively. If 225 are sold, the Government will lose $552 million, while manufacturers will come out ahead $1,689 billion.

Finally, if 443 planes are sold, the Government comes out $1.05 billion ahead; that is where the FAA gets its estimate. But while the Government is struggling to make its $1 billion, the manufacturers are raking in a cool $6,495 billion. Some sharing. This is a heads I win, tails you lose proposition, with the taxpayer getting the short end of the stick.

FACT

The above profit figures are obviously absurd, since they indicate either $10.8 million or $14.4 million profit per airplane, depending on what figures are used. However, no aircraft manufacturer in the past has been able to breakdown on less than 200 or 250 airplanes.

Boeing's profit for a 500-SST Program is estimated at a maximum of $4 million per airplane *before taxes*, after allowing for interest and commercal expenses. This is reduced to $2 million after taxes, or about a 5% margin, which is less than most manufacturing industries would be willing or able to make and stay in business. The profit level is only applicable to 500 units because the nonreoccurring cost is allocated over those units. For fewer units the profit per unit would be even less.

The Senator's statement seems to imply that it would be wrong for Boeing to realize a profit, after investing its own funds, facilities and key personnel for over 15 years without getting back one penny in return. If profits were not available, the various levels of government would have no tax funds to support the many health and education programs in existence today and into the future. Placing the aircraft industry in a second-rate position will only reduce the source of tax revenues in the future.

PROXMIRE'S STATEMENT

Tenth, that the SST prototypes should be built so that we can get the answers to the environmental questions.

FACT

The prototype aircraft will be useful in assessing the noise characteristics of the production aircraft from a total system viewpoint. Operational characteristics of the aircraft, of course, influence the noise pattern. The need for extrapolation of data obtained from an engine on a ground test stand to that predicted for four-engines mounted on an aircraft with the associated inlet, cowling, and nozzle hardware would be eliminated.

More accurate confirmation of the sonic boom characteristics of the aircraft can be achieved.

If the research program to be conducted by our Government clearly identifies a significant adverse climatic effect, then we in the United States would want to influence other countries already developing the SST to prohibit fleet operation of their aircraft. Of course, this would have a major economical impact on these countries and they are also well ahead of us in their supersonic transport development efforts. We would need irrefutable proof to make our arguments convincing. The fact that we have two prototypes in operation, coupled with the data obtained from our research program involving laboratory tests and use of smaller supersonic or high altitude aircraft we would be in an excellent influential position. Without the two prototypes, our arguments would be considerably weaker as the other three countries involved in supersonic transport development would have hundreds of hours of actual SST operation while we would only have the limited data obtained from our concurrent research program.

There is no doubt but that the SST prototype aircraft will be extremely useful in confirming the climatic effects answers derived from the research program. The degree of data extrapolation would, of course, be significantly reduced resulting in a major increase in the confidence we would have in our answers.

Mr. BIBLE. I simply want to take this opportunity to compliment the senior Senator from Colorado for one of the most powerful, and far-reaching speeches on the subject that I have heard since I have been in the Senate. I know he has worked in this field since 1961, and perhaps earlier than that, but at least since that time, as a member of the Independent Offices Appropriations Subcommittee, where this item came for review and justification.

I think his well-reasoned speech is the best argument for the continuation of the two prototypes and for the continuance of the prototype program that I have ever heard. I want to congratulate him on it and I hope he calls it to the attention of as many of our wavering colleagues as he can find. If they will read it and read it carefully, I cannot help but feel they will be persuaded by the logic and power of his argument.

Mr. ALLOTT. I thank the distinguished Senator for his kind remarks.

Mr. SAXBE. Mr. President, I have supported and will continue to support funding for two prototypes of the supersonic transport. The two prototype aircraft in themselves will have no significant adverse impact on the environment. Only the testing of prototype planes can prove, one way or another, the arguments about the effects of the SST. Should the development of prototype models, combined with ongoing environmental research, show serious ecological threats from commercial SST flights, I would be the first to call a halt. However, I feel that the SST will prove itself. Although the opponents of the SST are well-intended, they are often misinformed.

One of the hottest controversies concerns the effect of the SST on the stratosphere. Cruising at 60,000 feet, it would deposit water, carbon dioxide, and other gasses into the stratosphere. Opponents fear that the SST would destroy some of the ozone in the upper atmosphere reducing its capacity to shield us from the ultraviolet rays of the sun causing the earth's surface temperatures to rise, or taking the opposite view, it could form a cloud blocking the sun's rays, thus threatening to dangerously lower surface temperatures. Proponents of the SST deny both contentions. Military supersonic aircraft such as the UF–12 and the RS–71 have logged over one-third of a million hours in supersonic flight in the stratosphere. Careful investigation has demonstrated no ill effects from these flights, which have crossed the United States thousands of times. There has been no increased moisture in the stratosphere, no burning of ozone, and no increased radiation or other damage to the upper atmosphere. The quantities of particulate matter exhausted by the SST are not significant when compared to the stratospheric dust resulting from natural causes. Volcanic action puts hundreds of times more dust into the stratosphere than is potentially possible from an entire world fleet of SST's. Three volcanic eruptions alone have injected more particulate matter into the atmosphere than all of man's activities. Contribution of water to the stratosphere would be insignificant. A total of 1,600 transoceanic SST flights a day would put about as much water into the stratosphere as a single large thunderstorm, and there are 3,000 to 6,000 such storms around the world every day.

Opponents of the SST claim that noise created in the vicinity of airports and the sonic boom will be intolerable. The SST is not built to fly supersonically at low altitudes. It is designed to perform around airports just like subsonic jets, and normally will not achieve supersonic speed until 100 miles after takeoff. Because its boom, although not destructive to property, might annoy people on the ground, the SST will fly over land at the speed of about 700 m.p.h. This is too slow to create a boom effect. Over oceans, the boom will be mild. Flying supersonically over the oceans at 60,000 feet, the SST will create a boom with an overpressure of 2.5 pounds per square foot. This is equivalent to the pressure of a half-inch ripple on the surface and would not be noticed by most passengers on a ship and would not be harmful to aquatic life. The SST will be quieter than today's aircraft during takeoff and landing. The major effort now underway is directed at reducing sideline noise. William Magruder, SST project director, has announced that $30 million already has been spent to make the SST engines quieter than the 747's and that new noise suppressors will accomplish this.

Opponents have also charged that passengers will suffer from exposure to ultraviolet radiation in the stratosphere. Cosmic radiation is not an SST environmental program. For more than 2 years specially instrumented aircraft have been flying at supersonic cruise altitudes to collect radiation data. The findings indicate radiation levels for crews and passengers on the SST will be the same or less than that now experienced on subsonic aircraft.

Environmental fallacies have not been the only misconceptions about the SST. It has been charged that there is no real need for commercial air travel at supersonic speed. The SST will have a high earning power. Productivity in air travel is measured by multiplying the number of available seats per airplane by the speed. On this basis, the U.S. SST will be three times as productive as the British-French Concorde, twice as productive as the large jumbo jet and four times as productive as the basic jet in the subsonic fleet. The SST is designed to handle the tremendous growth in air travel which is forecast for the 1980's and the 1990's and to keep the cost of air travel within the means of the average American. There were 4,500 transports in the world's airline fleets in 1958. Today, with five times as much traffic as in 1958, 3,500 subsonic jet transports with their increased productivity over piston-powered transports are accomplishing the job. Had the industry not pressed ahead with the jet age, in spite of all the outcry of the critics of progress of the early fifties, we would today be choking the airways and airports with piston aircraft and would be causing significant environmental degradation. It is estimated that air travel will increase 200 percent by 1980 and 400 percent by 1990. It is projected that almost 75 percent of all intercontinental flights will be SST's by 1985. This would require about 720 additional 747's or about 1,200 Concordes to do the job of 423 SST's. The SST productivity will be necessary to relieve air traffic congestion.

Opponents have argued that we should be spending money to fight poverty and to advance other social and human resource programs. I agree that these programs should have top priority. However, I feel that the cost of the SST is justified. Royalties are due the Government on every SST sold. With the sale of 300 aircraft, all of the Government's investment will be returned. When 500 aircraft are sold, the Government will receive over $1 billion more than its investment. On the other hand, to cancel the program at this time would mean the loss of all of the $708 million appropriated to date plus approximately $60 million in termination costs. It is interesting to note that both the British-French Concorde and the Russian TU–144 are entirely funded by their Governments.

On the plus side, the SST will become a prime national asset, far beyond its primary mission of advancing air transportation. The effect of the SST on our economy will be dramatic. The recent unemployment has caused me great concern. The SST represents employment potential for more than 150,000 persons. Many of these jobs would go to Ohioans. Historically, a favorable balance of trade is nationally desirable. The U.S. trade advantage in other product areas has been diminishing. The aircraft account has been strong, and the SST exports will strengthen the account further in the years ahead.

The fact of commercial supersonic flight is upon us. The British-French

Concorde and the Russian TU–144 will be in service years before an American SST could be available. The question is whether the United States is going to participate. To sum it up the SST can contribute: jobs; a potential return to the Government of $1 billion; tax revenues; major support to our foreign trade balance; the safest, most comfortable, fastest, and cleanest transportation ever built; and continued technological and scientific advances for the benefit of mankind.

Mr. SCOTT. Mr. President, I was fascinated to read the lead editorial in this morning's Washington Post, dealing with the setting of priorities for the supersonic transport plane. The editorial left the clear impression that somehow the priority position—whether the SST is No. 1 or No. 8 or 9—or some other number in our scale of national priorities—was set by President Richard M. Nixon.

Whatever the priority placed on the SST—and I do not feel a numerical order can be placed on it—that priority was created long before the present administration came to office. Indeed, Mr. President, that priority, that decision, was first set by President John F. Kennedy back in 1961 when he decided to proceed with the SST.

For fiscal 1962, President Kennedy asked and got $11 million to begin the design work on the SST. By the time of his death President Kennedy had already committed nearly $100 million—a little less than a tenth of the total cost—to the project. By the time President Nixon took office there was no longer a choice as to priorities. Nearly three-quarters of the proposed budget for the SST had already been spent. No prudent man would toss aside with cavalier indifference, as one would a wornout slipper, nearly a billion dollars of tax moneys already committed to a project. Mr. Johnson determined to continue the project. Mr. Nixon determined to continue the project; that is, the construction of two prototype aircraft. And I would remind my colleagues that this is all this debate is about—two prototype aircraft, not a fleet of them.

The big gamble had already been made by the time the present administration took office. Most of the money has already been spent. If I may use a simile, the dice had already been cast and the national bets made.

I do not choose to dissent from anyone as to what level of priority has been set for the SST. I simply wish to point out to Senators who have read this editorial that whatever the level of priority, it was set 9 years ago, and not on January 21, 1969.

## JOINT RESOLUTION SIGNED

The PRESIDENT pro tempore announced that on today, March 23, 1971, he signed the following enrolled joint resolution, which had previously been signed by the Speaker of the House of Representatives:

S.J. Res. 7. Joint resolution proposing an amendment to the Constitution of the United States extending the right to vote to citizens 18 years of age or older.

## ENROLLED JOINT RESOLUTION PRESENTED

The Secretary of the Senate reported that on today, March 23, 1971, he presented to the Administrator of the General Services Administration the following enrolled joint resolution:

S.J. Res. 7. Joint resolution proposing an amendment to the Constitution of the United States extending the right to vote to citizens 18 years of age or older.

## FURTHER CONTINUING APPROPRIATIONS, 1971

The Senate continued with the consideration of the joint resolution (H.J. Res. 468) making certain further continuing appropriations for the fiscal year 1971, and for other purposes.

The PRESIDING OFFICER. The Senator from Louisiana is recognized.

Mr. ELLENDER. Mr. President, soon after the Congress convened in January, I felt that, since the continuing resolution would be up for debate before March 30, it would be well for the Appropriations Committee to hold further hearings on the subject of the civil supersonic aircraft development.

So, on March 10 and 11, the Appropriations Committee held hearings. It was my intention to develop new insights, new knowledge, and new information on the subject.

My good friend from Nevada (Mr. BIBLE) had previously held several weeks of hearings last year. I studied much of the record compiled at that time. The meetings that we had earlier in March were very fruitful. We had eminent scientists before us, and fine representatives from the airline industry. All of them were in agreement that we should go forward with the production of these two prototype planes.

Mr. President, I have listened with interest to the statements made concerning the origin of the SST program. I am proud to say that I was on the Independent Offices Subcommittee when we had the first discussions about the advisability of constructing a supersonic aircraft. Authority for such development stems from a provision included in the Federal Aviation Act of 1958, section 312(b). The point is that the program has been with us for almost 10 years, in fact. I was on the committee when we appropriated the original funds to start this work.

That first appropriation, $11 million, was actually made available in 1962, and $20 million in 1963. Those moneys were for research, which was carried out by the Federal Aviation Agency, the National Aeronautics and Space Administration, and the Department of Defense.

Much of the research work that resulted in the development of this plane was undertaken previously by the Defense Department. Personally, I think it would be a shame—almost a calamity—for us to permit other nations to take the lead in the production of these planes. Today, as was stated by my good friend from Colorado, more than 80 percent of the commercial aircraft in the world was produced in the United States. That export business has brought to our national economy in excess of $10 billion in the last 5 years. Certainly if another nation begins to produce a better plane than what we have available on the marketplace, they will get the business. I think it is incumbent upon us to provide these funds, and complete the construction of these two prototypes.

Much has been said that the Government might be required or expected to provide the funds to build the production plane after the prototypes are built and the 100 hours of flight testing are completed. Mr. President, neither the authorizing legislation or the bill we are now considering provides authority for the Federal Government to continue spending money on the production model of this plane. On the contrary, there is no authority in the law to spend any more money beyond development of the two prototypes. In the pending measure there is also a clause which reads as follows:

SEC. 3. None of the funds provided by this joint resolution shall be available for the execution of a program for commercial production of a civil supersonic aircraft.

In addition to that, Mr. President, we have the statement from the President of the United States in his fiscal 1972 budget message to the Congress. What did he say? I read from it, on page 123:

The manufacture and assembly of two prototype supersonic transports will near completion in 1972. These two aircraft will be completed and flight tested during 1973. Federal funds will not be required after the flight testing since the experience gained from this program should enable the aviation industry to proceed to the production of an economically efficient aircraft that will not create adverse environmental effects.

That is from the President of the United States himself. I wish to emphasize that should a request, or should any effort, be made to provide funds beyond the development of the two prototypes, the proponents will have to come back to Congress, and as far as I am concerned, I would join the opponents of further funding.

Mr. President, this development financing is nothing new. In the defense program, we have had many companies which have had the advantage of research and development in other fields. This is a more or less one shot affair, in order to provide opportunities for private enterprise to proceed and produce, on a commercial basis, supersonic airplanes.

Mr. President, unless we do that, there is no doubt in my mind that if a supersonic airplane is produced by other countries—and I am sure it will be—we will lose the markets we have had in the past.

I repeat that those markets have helped us in our balance of payments to the tune of more than $10 billion in the last 5 years. Certainly we should try to keep that going.

Mr. President, I ask unanimous consent that a table prepared by the Department of Commerce and headed "Balance of Trade—How the U.S.A. Is Doing" be included in the RECORD at this point.

There being no objection, the table was ordered to be printed in the RECORD, as follows:

BALANCE OF TRADE—HOW THE U.S.A. IS DOING

[Dollars in billions]

| | 1965 | 1966 | 1967 | 1968 | 1969 | 1970 |
|---|---|---|---|---|---|---|
| Other industrial machinery and parts | 2.1 | 2.2 | 2.2 | 2.4 | 2.6 | 3.9 |
| Civilian aircraft engines and parts | 1.0 | 1.0 | 1.5 | 2.1 | 2.0 | 2.5 |
| Chemicals, excluding medicinals | 1.4 | 1.6 | 1.7 | 2.0 | 2.1 | 2.6 |
| Construction and non-farm machinery | 1.6 | 1.7 | 1.7 | 1.7 | 1.9 | 1.4 |
| Hides, minerals, woods, etc | 1.3 | 1.4 | 1.5 | 1.6 | 1.7 | 1.3 |
| Electrical, electronic machinery parts | .8 | .8 | .9 | .9 | 1.0 | 1.0 |
| Business and office machines, computers | .5 | .5 | .7 | .7 | .9 | 1.2 |
| Tobacco manufactured | .3 | .3 | .3 | .4 | .5 | .4 |
| Scientific, professional equipment | .3 | .4 | .4 | .4 | .5 | .5 |
| Consumer goods, except autos | −1.5 | −1.9 | −2.1 | −3.0 | −3.9 | −4.8 |
| Fuels and lubricants | −1.3 | −1.3 | −1.1 | −1.4 | −1.7 | −1.5 |
| Automotive vehicles, parts and engines | 1.0 | .5 | .2 | −.8 | −1.4 | −2.3 |
| Building materials, except metals | −0.6 | −0.8 | −0.8 | −1.1 | −1.2 | −0.9 |
| Tires, rubber, resins, gums, etc | −.7 | −.7 | −.7 | −.9 | −1.0 | −.3 |
| Iron and steel products | −.6 | −.6 | −.7 | −1.4 | −.8 | −.5 |
| Other metals | −.7 | −1.0 | −1.1 | −1.2 | −.8 | −.7 |
| Paper and paper base stocks | −.7 | −.8 | −.7 | −.6 | −.7 | −.4 |
| Foods, feeds, and beverages | 1.0 | 1.0 | .4 | −.5 | −.5 | −.3 |
| Textile supplies and materials | −.1 | −.3 | .1 | −.2 | −.3 | −.8 |
| Steelmaking materials | −.4 | −.4 | −.4 | −.4 | −.2 | −.2 |
| Other | .2 | .3 | −.1 | −.1 | | |
| Total | 4.9 | 3.9 | 3.9 | .6 | .7 | 2.1 |

Source: Department of Commerce.

Mr. ELLENDER. Mr. President, as I understand it, these cost estimates are based upon firm contracts. The entire amount that will have been spent by the Government, through 1973, in order to construct these two planes, to operate them, and to fly them for 100 hours, is $1.342 billion. Boeing will have spent $228 million. General Electric will have spent $94 million, and the airlines $59 million, for a total of $1.723 billion.

This is partially set out in a table which appears on page 6 of Report No. 97-40 of the Senate Committee on Appropriations. I ask unanimous consent that the table be included at this point in my remarks.

There being no objection, the table was ordered to be printed in the RECORD, as follows:

GOVERNMENT AND INDUSTRY COST SHARING

[In millions of dollars]

| | Government | Industry | Airlines | Total |
|---|---|---|---|---|
| Through Mar. 30, 1971 | 864 | 217 | [1] 59 | 1,140 |
| Additional to complete | 478 | 95 | | 583 |
| Total through prototype phase | 1,342 | 322 | [1] 59 | 1,723 |

[1] Excludes $22,000,000 in delivery deposits—in escrow at Treasury.

Mr. ELLENDER. Mr. President, I think it is incumbent on the Senate to provide the entire amount that is being requested, for 1971, which is about $134 million in addition to the $156 million provided under prior temporary continuing appropriations.

If the money is to be forthcoming later from some source, or even from Congress, all the contracts would be subject to renegotiation, which could add a quarter of a billion dollars to the cost of these planes. These estimates are firm. They were made years ago and confirmed in the recent hearings.

I believe that the building of these two prototypes has gone far enough to assure us that they can be completed and flown for the amount mentioned. Prior to 2 or 3 years ago, there was very little vocal opposition to the program in the Congress or the country. Recently we have developed a strong public concern over the environment, and that is as it should be. I believe that our concern must be informed if it is to be effective, however, and it seems to me that a good deal of the information we have received on this subject cannot be substantiated in fact. No scientist of repute has been able to state with certainty what will happen. But at the hearings that were concluded on March 10, we heard a very eminent scientist, Dr. Leo Beranek, who is a renowned scientist in noise abatement work. I read from his testimony:

In summary, based on the findings of the SST Community Noise Advisory Committee, there does not appear to be any technical reasons why a commercial supersonic transport cannot be built which will be acceptable with regard to noise. The airlines are presently evaluating two SST design configurations which can meet the noise standards of FAR-36. Out of these airline evaluations and others which undoubtedly will occur, we feel certain that a viable SST can result.

In addition, we have the testimony of Mr. Volpe, who is now Secretary of Transportation, wherein he states, in effect, that under no condition will these planes be permitted to fly if in any manner they endanger our environment. This is his language:

If testing of the two prototypes or the concurrent environmental research show that the SST will do irreparable harm to our environment, I will do everything possible to insure that a U.S. SST does not fly in commercial service, and this is a commitment I make on behalf of this Administration.

In addition to this noise abatement expert, we had Dr. Fred Singer, who testified that we have enough technology now to treat any adverse effect that may possibly arise from SST operations. We also had Dr. William Kellogg. They are three eminent scientists.

Up to now, we have spent $864 million. We should not let that go to waste. Under the contracts we now have with private enterprise, if as many as 500 of these planes are manufactured, the Government will not only get back all its investment but also will make a profit of more than a billion dollars. That is important, but the first, most essential thing is for us to take step 1 and complete the development of these two planes so that we can test them and find out whether the dire results that have been predicted by the opponents will come to pass.

I am very hopeful, Mr. President, that the Senate will vote for this resolution as presented to it.

Mr. PERCY. Mr. President, I ask Senator PROXMIRE for 30 minutes.

Mr. PROXMIRE. I am happy to yield 30 minutes to the Senator from Illinois.

Mr. PERCY. Before the distinguished chairman of the Appropriations Committee leaves the Chamber, I should like to say that I have great respect for the tone of this debate, for the way it has proceeded, for the way it has gone along rational rather than emotional lines. But I should like to repeat the offer I made once before on the floor of the Senate: I will wager with any Senator, regardless of his age, that if he ever sees, in his lifetime or in our lifetimes, this billion dollars ever come back to the U.S. Government, I will give him 2-to-1 odds, I will give him 3-to-1 odds, I will give him 10-to-1 odds on a limited amount of wager, for the spirit, not the money involved in it.

Mr. ELLENDER. The Senator is very generous.

Mr. PROXMIRE. I calculated that the odds are, conservatively, 256 to 1 against the Federal Government getting its money back.

Mr. PERCY. Then, the 10-to-1 odds is again putting me in the category of being a fiscal conservative.

Mr. PROXMIRE. That is right.

Mr. PERCY. Mr. President, as the Senate approaches what may well be the last, crucial vote on the controversial SST program, it is interesting to consider the impact this long and heated debate has had on the Nation's press and public. Despite the volume and intensity of efforts to secure Federal funding, there seems to be an increasing commitment to end this wasteful project and turn our attention, our energies, and our financial resources to areas of surer and broader benefits to the public.

Even a cursory glance at recent editorials, columns, polls, and news articles reveals why the proponents of the SST have had to gear up their campaign; no one seems to want the SST, except perhaps the aerospace companies, their workers, and a handful of travelers.

In a column that appeared last week in the Washington Evening Star and other newspapers throughout the country, James Reston called the pro-SST campaign "one of the most vicious and misleading debates of the year." Mr. Reston observed that the pro-SST coalition is "paying little attention to the evidence of the economists and scientists who oppose the project, but is using every argument, no matter how feeble or false, to overwhelm rather than to persuade the opposition."

Only today, three of the most respected daily newspapers in the United States devoted considerable space on their re-

spective editorial pages, pointing out the folly of continuing with the SST.

Writing in the Wall Street Journal, economist Allen R. Ferguson, formerly coordinator for international aviation in the State Department, states clearly and forcefully why the SST is not good business.

The basic economic fact about the U.S. SST is that if it were expected to be economical, there would be no need to subsidize it.

The New York Times analyzed the argument that the prototypes are needed for research without themselves posing any hazard to the environment and found it wanting.

This prototype argument sounds open-minded and reasonable in the best pragmatic American tradition, but in this context—as its proponents well know—it is fundamentally misleading and irrelevant.

The Times concludes:

The prototype argument is a fallacy. Prototypes could not test out the environmental issues and are not needed to test the economic issues. More tests are not the answer. The time has come for the Senate to say—"Enough is enough. Let us lay this white elephant to rest."

In today's lead editorial, the Washington Post hits upon what is perhaps the crucial point in the argument over the SST: where it stands in our system of national priorities, "the values that a government attaches to things."

The Post concludes:

What is troublesome to us, and what is also so demoralizing about it to those who are resisting it (the SST) (is) this sense that the government must finance this gamble *as a matter of top priority* at a time when there is so much else to be done.

Last week, in urging that we ground the SST, Life magazine said:

What finally swings the balance strongly against the SST, however, is the attitude of the airlines that would have to fly it. Elwood R. Quesada, the former head of the FAA who is now a director of American Airlines, says, "The airlines privately wish the SST would go away."

Department of Transportation spokesmen, in urging continued development of our SST, have stressed the competition posed by the British-French Concorde and the Russian TU–144. Japan Air Lines is often painted by them as one of the most eager to operate the SST and the most likely to purchase the Russian plane. Mr. President, I shall read the first two paragraphs of an important dispatch by Samuel Jameson, chief of the Tokyo Bureau of the Chicago Tribune. Mr. Jameson's article, datelined Sunday, appeared in yesterday's Tribune:

As far as Shizuma Matsuo, president of Japan Air Lines is concerned, aircraft manufacturers can forget about developing the Concorde and other supersonic transports.

Airline companies are being spun around in circles by the manufacturers who keep coming up with new planes.

Matsuo said in an interview here.

It's all right with me if they don't make any supersonics.

In last Sunday's Washington Post the distinguished French author and statesman Jean-Jacques Servan-Schreiber concluded his analysis of the Concorde this way:

The European SST looks to us, on this side of the Atlantic, like an industrial Vietnam.

Yesterday, in commenting editorially on Du Pont's announced decision to take its losses and discontinue Corfam, the Wall Street Journal drew a parallel between the demise of that expensive leather-substitute and the likelihood of failure for the SST. Like the SST following on the heels of the 707, DC–8, 747 subsonics, in the shoe market Corfam was more dazzling, in many ways better, and more expensive than its predecessor, leather. But competition and a price-conscious public drove Corfam, which was to "do for shoes what nylon did for stockings" off the market.

Lately the SST proponents have talked about having laid the environmental issues to rest, the implication being that all the answers are in hand or just around the corner. This is far from the truth. The Appropriations Committee heard one of the most distinguished atmospheric scientists in the world, Dr. Reginald E. Newall of MIT, suggest that it would take 10 years to get the answers to the questions about stratospheric contamination and weather interference.

The New York Times last week, March 17, editorialized on the claim that the sideline noise problem has been solved, pointing out that:

The design changes increase the weight of the plane, reduce its cost efficiency, and thereby further jeopardize the profit prospects which have never been better than marginal.

The Times also observed that the promised goal of 108 decibels, heralded as a great technological and environmental breakthrough, is much too loud and follows on the heels of a recent National Academy of Sciences recommendation that the noise limits for Kennedy Airport should be reduced to 98 decibels by 1975, 3 years before the American SST would make its first commercial flight.

And, as the Chicago Daily News editorialized just last week, March 15:

There's no separating the environmental and economic aspects, for it's the sonic boom—only one of the environmental drawbacks—that rules out the prospect that the SST can be a moneymaker. If it can't fly faster than sound except over water and frozen wastes, then it loses its chief reason for being, which is superspeed.

Writing in Chicago Today, March 3, columnist Jack Mabley has calculated that the $1.3 billion minimum cost to the taxpayers for the SST comes to $50 per family in Illinois. What will those Illinois families get in return? Very little, as less than 3 percent of the public now flies internationally. As Mr. Mabley observes:

What the whole stupid project still boils down to is a means of getting a handful of well-to-do travelers across the ocean or across the country a couple of hours faster than they can make it now.

Mr. President, I submit that what our youth thinks about the SST is one of the most important issues before this Congress. The SST is heralded by its proponents as the plane of the future, the aviation workhorse of the 1980's and 1990's, the decades when our young people will be coping with the world they have inherited from us. Last month the Chicago Tribune published the results of a University Index survey which polled 1,097 students at 43 colleges and universities around the country. The students were asked to describe their attitude about continued development of the SST and to explain their reasons. The results are illuminating.

Over 70 percent of the students polled opposed SST development. "Very unfavorable" was the largest category with 41.3 percent, and "somewhat unfavorable" next at 28.8 percent. Only 16.6 percent called themselves even "somewhat favorable," and a minuscule 4.7 percent "very favorable."

According to the poll:

Among the reasons given by those students who were against production of the transport, the plane's potential noise and air pollution outnumbered all other arguments by a margin of nearly two to one.

The Department of Transportation may feel confident the environmental issues have been laid to rest, but that confidence is not shared by those who will have to live with the SST, our young people.

Mr. President, I ask unanimous consent that the complete texts of these recent editorials and columns be printed in the RECORD. In them I find, and I believe a majority of Senators will find, ample reason to vote against continued subsidization of an airplane with which the American people have grown increasingly disenchanted.

There being no objection, the material was ordered to be printed in the RECORD, as follows:

[From the Washington Star, Mar. 17, 1971]

PRO-SST PROPAGANDA RUNS WILD

(By James Reston)

The most serious problem in Washington today—because it affects most other problems—is the decline in honest argument.

There has always, of course, been an element of propaganda in most political discussion, but now the techniques of advertising seem to be overwhelming the normal procedures of congressional debate, and the language in the capital is more inflated than the currency.

In its efforts to win congressional approval for the continued development of the U.S. supersonic transport airplane, the Nixon administration, with powerful support from the aerospace industry and the unions, is now paying little attention to the evidence of the economists and scientists who oppose the project, but is using every argument, no matter how feeble or false, to overwhelm rather than to persuade the opposition.

On the scientific front, a $350,000 advertising campaign has been launched by an organization called "American Labor and Industry for the SST," with the ads appealing to fear of Soviet domination of the international airways, and claiming that the SST, moving at 1,780 miles an hour "will emit no more pollutants per mile than three compact automobiles traveling at 60 miles an hour."

At sea, the ads say, the boom effect on the surface of the waters will be "comparable to the impact of a fisherman's spinning lure hitting the water."

On the economic front, William M. Magruder, director of supersonic transport development in the Nixon administration's Department of Transportation, argued before the House Transportation subcommittee that building the SST was going to be a good investment for the U.S. government, create as many as 200,000 jobs in the de-

pressed aerospace industry, and help the nation's international balance of payments.

From right to left, some of the nation's most distinguished economists have denounced his testimony as a misleading fraud. The president of the American Economics Association, Wassily Leontief, a Harvard Professor, estimates that the project would create less than 3,000 jobs in the next few years, and that it would take 10 to 15 years before it would create 200,000 jobs.

"I find it disgraceful," said Milton Friedman, professor of economics at the University of Chicago, "that knowledgeable government officials should use arguments . . . that are demonstrable fallacies and have been so demonstrated.

"The economic selections of Mr. Magruder's testimony are special pleading of the most blatant kind. They display a willingness to drag in any argument, however disreputable, so long as it appears to support a pre-ordained conclusion. This is propaganda, not the honest and reasonable presentation of relevant evidence and argument that the public is entitled to from the servants it hires."

Walter W. Heller of the University of Minnesota, former chairman of the Council of Economic Advisers, is more specific in his opposition. "If the SST is such a profitable undertaking," he asks, "why does the U.S. government, i.e. the taxpayer, have to put up 80-90 percent of the development costs?

"As of March 30, the U.S. government has put up $864 million of the $1.009 billion thus far invested in this program.

"If private industry can't even take it from here . . . one can only conclude that the SST dismally fails the fundamental test of the marketplace. . . . The SST approach to job creation seems to say that no matter how questionable the priority of this project, let's push ahead with it because it preserves jobs in areas where aerospace unemployment is high.

"That's a little like saying that, as Vietnam winds down, we should start another war to restore employment in the defense industries and the Pentagon. . . ."

Richard R. Nelson of Yale calls Magruder's arguments on productivity "an intellectual scandal." Arthur M. Okun, of Brookings, another former chairman of the Council of Economic Advisers, characterizes the administration's job-creating argument as "nonsense and palpable nonsense."

Paul Samuelson, professor of economics at MIT, says: "We are faced here with a colossal economic folly.

"In this day, there is no excuse for pyramid-building to make work, and add to the nation's spurious glory . . . Any realistic cost-benefit analysis will reach the conclusion that at every stage in the history of this project, nonpolitical commissions have arrived—namely, that government subsidy of the SST or similar supersonic aircraft is at this stage of technology and economic development both an economic and a human disaster."

It is true, of course, that opponents of the SST have created their own lobby and their own selected evidence to place before the Congress, but the point is that the contradictory testimony, under present circumstances, is not being carefully analyzed and debated, and the SST argument is only the latest example of the general corruption.

The more the evidence has piled up against the SST, the more the administration, and its industrial and labor backers, have turned on the propaganda. It is the old question of special interests and regional interests, which stand to gain by a project, lobbying for votes with promises and political threats, and the pro-SST campaign is obviously making progress.

In the end the vote will be very close, but either way, the democratic process is likely to be the loser. For this has been one of the most vicious and misleading debates of the year and most of the time, the national interest has been lost in the turmoil.

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[From the Wall Street Journal, Mar. 23, 1971]

WHY THE SST IS NOT GOOD BUSINESS

(By Allen R. Ferguson)

The question that the Senate will settle tomorrow afternoon is not whether there should someday be an American SST, but whether one should be developed and built before the private sector is prepared to finance it, and hence whether the taxpayers should be required to pay for its development.

The basic economic fact about the U.S. SST is that if it were expected to be economical, there would be no need to subsidize it. Its advocates argue that the investment is too large and too risky for the private sector, but it is obvious that the private capital market could raise the $1.3 billion the administration plans to put into the development. Last year the capital market provided American industry with more than $30 billion in new debt and equity money. That the large financial institutions resist financing the prototype development simply indicates that the SST is not a good business.

It is economically unsound because it poses a problem that is largely new in aviation. Until the SST, innovation has typically combined greater speed, comfort and range with reduced costs per seat-mile. Since World War II, with the introduction first of the large four-engined piston aircraft and then with the jets, the American aircraft industry has dominated the airways of the world. This dominance has been based on designing and producing technically and economically superior aircraft that could be operated at lower unit cost than their foreign rivals. The consequent secular decline in the costs of air travel and shipment has, of course, been the major force behind three decades of spectacular growth in commercial aviation.

With the SST the situation is different in a crucial way. Whereas the SST would offer many technical advances and be a monument to the sophisticated design and production capabilities of American industry, it is expected, even by its most enthusiastic supporters, to be more costly per seat-mile than the subsonic jets it is intended to replace.

COST INCREASES

The FAA has estimated that ideally the seat-mile costs of the SST would approximate those of present subsonic jets at maximum range, but they would be higher at shorter ranges and, of course, over populated areas where, according to present regulations, it would have to fly at subsonic speeds. Thus, its average cost, even by FAA estimates, would exceed those of present jets. However, in the eight to ten years before the SST was in extensive service, there will be improvements in the wide-bodied subsonic jets that will reduce their operating costs. Further, clearing up the remaining technical problems and imposing any additional restrictions on its use, such as restricting airport operations at night, would probably raise its operating costs further. The SST is expected to cost one-quarter to one-third more per seat-mile than the then-existing fleet of subsonic jets.

This would pose a serious problem of both domestic and international fare policy for the government. A policy that would be both efficient and equitable would require a fare premium reflecting the cost differential between the supersonic and the subsonic vehicles. If the fares were set 25% to 30% above the corresponding fares of the subsonics, SST passengers would have to pay for the speed advantage, and travelers at subsonic speeds would not have to subsidize SST operations through excessive fares. The pressed aerospace industry, and help the naavailable to passengers in accordance with their willingness to pay. However, aviation experts simply do not believe that to most travelers supersonic speed will be worth what it costs. Consequently a fare policy that made broad economic sense would visit financial disaster on the whole SST venture.

If the SST is eventually reduced under federal support it is likely to be impossible for the U.S. government to insist on rational pricing of its services. Once the government has subsidized its creation and in various ways induced American and foreign carriers to buy it, letting the U.S. SST become a financial failure would be, to say the least, politically difficult. Obviously, to retain the appearance that the American taxpayers were recouping their investment in the SST, the government would be under great pressure to force many of them to subsidize the SST through excessive fares.

If, as is to be expected, there were little or no fare differential, travelers would presumably prefer the time-saving and would fly on the SST. Payloads on subsonics would tend to be depressed. Their early retirement from the affected routes would be forced on the industry. A larger and larger proportion of at least the trans-ocean fleets would become supersonic, and hence, to avoid losses, the fares on those services would have to approach the seat-mile costs of the SST. Thus, such a fare policy would almost certainly force fares on virtually all types of aircraft substantially above the level at which they would otherwise rest.

Given the effect of the SST on fares, the implications of "success" of the SST program are not hard to draw. First and most obvious, there would be less air travel than otherwise.

If air travel is constricted there will be less employment in the airlines, fewer aircraft will be needed and, hence, eventually perhaps less employment even in the aircraft industry.

DECREASE IN AIR TRAVEL

How much of a decrease in air travel could be expected is impossible to predict with precision, but in 1964, when the most recent sweeping reductions in trans-Atlantic rates went into effect, an average reduction of about 15% was followed by a 40% increase in travel. A major study of the sensitivity of the volume of travel to fares in the North Atlantic indicated that for each one-percent change in fares there had tended to be a two-percent change in travel. If this sensitivity in the future is only half its estimated level in the past, a 20% increase in overall fares would cause a 20% drop in travel compared to what it would be with a more efficient, subsonic fleet.

These are the obvious direct consequences for the aviation industry of a technically successful SST program. They are at least among the reasons why many airline executives privately—and a few publicly—express reservations about the SST. There are other consequences. Since subsonics would be displaced at a faster rate than would otherwise be the case, the obsolescence of the recently acquired wide-bodied and other subsonics would be accelerated; consequently, depreciation and interest charges or equipment write-offs would be increased, reducing airline profits. The financial problems of the airlines would be aggravated. Their debt is now at historic highs; major carriers are incurring unprecedented losses, such as American Airlines' $10 million loss in the month of February. To burden present operations and financing with the prospect of billions of dollars of additional investment for a basically inefficient vehicle seems hardly prudent.

There is another serious adverse potential. The U.S. international air network is based on a traditionally liberal structure of bi-

lateral agreements, which impose relatively few limitations on traffic and operations. Opposition to this relatively free and expansive arrangement has been increasing in recent years and has accelerated frequently in response to American innovations and to financial difficulties of foreign airlines. The introduction of the SST might induce major restrictions by foreign governments, removing one of the foundations on which American efficiency and pre-eminence in world aviation are based.

But what of the "threat" of foreign supersonics, the British-French Concorde and the Russian TU-144? Will the airlines of the world be forced to replace their American-built fleets with them—as is often alleged? Both these foreign supersonics are ahead of the U.S. SST. Both will probably prove technically operational But neither is certain. More important, some things about both are certain. Neither will be able to fly even New York-Rome non-stop, to say nothing of Los Angeles-London or San Francisco-Tokyo. Neither will be allowed to fly across the U.S. or across Europe at supersonic speeds. Both will be extremely costly to operate: Last November the British Aircraft Corporation announced that the Concorde's expected seat-mile cost would be 36% higher than that of the 747.

There is simply no way that such equipment can penetrate a large segment of the world's aviation market. Whether it penetrates any significant fraction of the U.S.-international market at all depends largely on the policy of the American government. Unless the U.S. government permits fares in international travel (over which it can exert considerable influence) to force travelers on the American-built subsonics to subsidize the Concore or the TU-144, they will have virtually no markets of significance—even if their remaining technical and operational problems are all solved.

This brings us to the question of American "aviation leadership." Aviation leadership consists of the leadership of our manufacturers and of our airlines.

It is clear that within the aviation community both at home and abroad the U.S. would certainly gain some "prestige" from producing a superior and ultimately dominant SST. Throughout the world there are many aviation authorities afflicted with that form of myopia which prevents their seeing beyond technoligical elegance to social and economic utility. But many aviation officials also do understand and would resent the economic and financial strains that would be imposed upon their own carriers by artificially premature obsolescence of their American-built subsonic jets, in the interest of U.S. prestige.

The consequences for U.S. leadership in aircraft production go much further. Now, the U.S. has an indisputable lead: The world flies American equipment. The British failed to capture any significant fraction of the market with the technically premature Comet or the luxurious but costly VC-10. The U.S. leadership is soundly based on economic reality, not technological novelty. To jeopardize it with a speculative program whose economics are so unpromising that the private sector eschews its opportunities to participate fully would be, at least, a most questionable choice.

Similarly, the U.S. airlines enjoy a highly prestigious, traditionally profitable and socially functional position in international aviation. This, too, is based more on superior economic efficiency than on any other single factor. To try to shift the basis of this leadership to some intangible and rather esoteric advantages associated with the employment of an elaborately inefficient vehicle is, at best, risky.

What would be appropriate policy, in the real interests of U.S. aviation? First, the aerospace industry is facing its present serious problems, not because of any developments in the civil air market but because of shifts and reductions in the nature and level of defense expenditures, particularly the secular decline in the procurement of strategic weaponry (and space equipment). No policy concerning civil aviation can solve its problem. It is clearly not appropriate to undertake half measures to try to help some aircraft companies at the expense of the taxpayers or American aviation interests in general. The problms of unemployment in the aerospace industry can only be addressed effectively through a national policy of maintaining generally high levels of employment and through suitable manpower programs.

SUBSIDIES AND UNCERTAINTIES

Second, appropriate policy on the SST for most U.S. aviation interests would involve opposing the present program to subsidize the SST. The SST should be allowed to develop in due course as technological advances in various areas and changes in air transport markets reduce the costs and uncertainties now associated with it—or produce other developments that obviate the "need" for the SST.

Third, aviation interests should press for an early statement that American policy on fares will not permit discrimination either against foreign-built vehicles or, more particularly, against travelers using subsonic equipment—a policy in the interest of air travelers of all nationalities and in the interest of most foreign as well as U.S. airlines.

Fourth, once the U.S. SST is stopped, the U.S. should pursue an international agreement to discontinue subsidization of SST development.

In general the self-interest of U.S. airlines and most manufacturers is served by policies that play to their established economic superiority, rather than to the unstructured game of competitive governmental subsidization.

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[From the New York Times, Mar. 23, 1971]

SST: THE PROTOTYPE FALLACY

Under pressure of repeated defeats in the Senate last December and in the House last week, the Nixon Administration and other advocates of the supersonic transport have retreated to what they hope is a defensible position. As the Senate prepares to cast what could be the final vote on this question tomorrow, SST advocates are contending that nothing more is at stake than the building of two SST prototypes. Surely, they argue, there cannot be any harm in going ahead with a couple of test models to obtain research data on disputed issues.

This prototype argument sounds open-minded and reasonable in the best pragmatic American tradition, but in this context—as its proponents well know—it is fundamentally misleading and irrelevant.

If the supersonic transport were in regular use, it is possible—not certain but possible—that it might eventually produce a sharp increase in the incidence of skin cancer. If this came about, it would be because the engine vapor introduced into the thin air of the stratosphere reduced the protective ozone, thereby permitting more ultraviolet rays to reach the earth. This result could not occur immediately but only after several hundred SST's had been flying every day for some years. For the purpose of finding out the cumulative effect of a huge fleet of planes, a few test flights by only two planes would be clearly irrelevant. Careful atmospheric research could find out the desired answers, but academic scientific experts believe that ten years would be needed.

The Boeing Company, chief contractor for the SST, envisages selling 500 or more planes. If that many planes were in regular use, they would possibly derange the life patterns of migratory birds and have incalculable effects on marine life. Birds, like humans, can withstand the isolated shock of one sonic boom, but that is entirely different from adjusting—if adjustment is possible—to a sonic boom every half-hour of every hour. Two prototypes could not provide quick answers to these imponderables.

The severe sideline noise produced by an SST on takeoff is another major argument against the SST, as no less an air enthusiast and expert than Gen. Charles A. Lindbergh has pointed out. It is unnecessary to build two prototypes to convince the public that the sideline noise can be reduced to 108 decibels. It can be brought down to that level if Boeing is willing to sacrifice some of the plane's cruising range or otherwise reduce its cost efficiency. But 108 decibels is not a satisfactory long-term value. As a Presidential commission observed in a report on noise pollution released over the weekend, existing noise levels are dangerous to health and becoming intolerable.

Two prototypes are unnecessary to decide the economic argument against the SST. It is beyond dispute that it would require another $477 million to build them. That is in addition to $864 million in Government funds already spent. Unless private financing can be found, another $5 billion would be necessary to pay production costs. Reputable economists have repeatedly testified that it is highly improbable that enough planes could be sold at a price that would reimburse the taxpayer for these enormous sums.

Since an Anglo-French combine has already built prototype of the Concorde, there is no reason to doubt that Boeing could produce a plane that would fly and be technically feasible. But feasible prototypes do not resolve market-place doubts about profitability. The president of Continental Airlines has already told a Senate committee that the Concorde is a fine plane but he would not buy it because he could not make money with it on the California-to-Hawaii run. Its seat-mile cost ratios are simply not good enough.

The prototype argument is a fallacy. Prototypes could not test out the environmental issues and are not needed to test the economic issues. More tests are not the answer. The time has come for the Senate to say—"Enough is enough. Let us lay this white elephant to rest."

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[From the Washington Post, Mar. 23, 1971]

THE LIFT OF A DRIVING SST

There are limits to the amount of political capital that Presidents, however popular, have available to spend for the things they want from Congress and so it is always instructive to see how they ration it, and on which issues they are prepared to plunge most heavily. With the Nixon administration, for example, the really big expenditures—the massive, no holds barred lobbying efforts—have been on behalf of the anti-ballistic missile, and the President's unfettered freedom to wage war any way he likes anywhere in Indochina, and Judge G. Harrold Carswell. Which brings us now to the SST, for the real question in this conflict over government support for the development of a supersonic transport comes down, in the end, to a matter of priorities. It isn't just the money—what's left to be spent by the government and the taxpayer on this project is not very much. And it isn't just the unanswered questions having to do with the economics of the project or the environmental risks, although these are obviously imponderables that have to be taken into account. But more than all of this, it is the symbolism involved, the message you send forth, the kind of leadership you are offering, the sense of values you are demonstrating to this country and to the world at large.

Here, in fact, was a glittering opportunity for the President to give us that lift of a driving dream that he has talked so much about; here he could have placed himself in the vanguard of those whose first concern is to preserve this planet as a place fit to inhabit and to improve the lot of humanity. Instead he has unleashed his legislative liaison men to do battle for a project which can enhance the lives of a minute fraction of our populace. Some 3 percent of Americans travel by air internationally, by some arbitrary estimate, that figure is supposed to grow to 10 per cent by 1985. But even if you accept that projection, what we are really talking about is not tourists but a far smaller slice of international air travelers—businessmen who already have it made and are merely in a hurry to make more; it is said that their time and talent are precious and that supersonic speeds will allow them to arrive in Paris or Rome or Tokyo clear-headed and ready to do business without the awful inconveniences of "jet lag."

So that is where we come out value-wise, as it were. Our national security is to be measured in terms of the ease with which a few men can do international business—that and this matter of our continued supremacy as a world producer of aircraft. We are supposed to be scared into doing this thing by the threat that the British, with the Concorde which they are jointly building with the French, or the Russians with their TU–144, will sweep the boards. Well, our reading of European enthusiasm for this venture is considerably closer to that of Mr. Jean-Jacques Servan-Schrieber as set forth in an article on this page the other day; the way he tells it, the French are also beginning to question the sense of priorities implicit in an SST. Our own hunch is that American leadership could send the SST the way of the dirigible—that the British and the French aren't all that eager to produce their SST and that the Russians are not likely to take over the world market with theirs. And frankly, we doubt that this country's international stature would be diminished much even if the TU–144 scored some modest success, because this sort of prestige item doesn't pull people very much, not in the ghettos of America, and still less in the *favellas* of Latin America, or the slums of Africa. Nor is supersonic travel what is on the minds of the leaders of government in the Third World where the plight of people and the development of new nations is the principal concern.

But what of progress, and of the advance of science and technology? Our answer is that this is a faulty argument; if you believe the backers of the SST, we already know how to make it ecologically safe and economically sound. As for "progress," the atomic bomb was progress, but that does not incline us against the need for arms control and for a reduction of our arms burden in favor of more urgent needs. The superpowered automobile was "progress," but we have pretty much agreed, for our own safety, on upper limits on the speed and horsepower of passenger cars. So to be against the SST is not to be against technological advance but to raise the question about its pace and direction and to observe that there is ample scope for progress elsewhere—in housing and rapid transit and health care and all the rest.

The simple fact of the matter is that the campaign for the SST is being waged by special interests concerned with jobs and profits and sales, which is fair enough and basic to our system. So basic, in fact, that we would not object if the private enterprise system were to pursue this project with private financing, under adequate and strict federal safeguards.

But we would not welcome it, either, because we do not see the need. That is what is troublesome to us about the campaign in Congress on behalf of the SST, and what is also so demoralizing about it to those who are resisting it—this sense that the government must finance this gamble as *a matter of top priority* at a time when there is so much else to be done. It may be that the opponents are overstating their fears—though no more recklessly, we would judge, than the proponents are recklessly overstating their hopes. But what is distinctive about the arguments of the opponents (and we would like to emphasize this point today, because the last time we argued it in this space "distinctive" came out as "destructive") is that their concern is not narrowly tied to one industry's fate or to our national self-esteem; it is tied to the quality of life and the welfare of peoples and the values that a government attaches to things.

The Nixon administration promises us a dream. And it gives us the lift of a driving SST.

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[From Life magazine]

LET'S GROUND THE SST

After a respite of only two months, the Nixon administration is back trying to pin wings on the SST. The Senate in December voted 52 to 41 to halt further funds for building two test models of the 1,800-mph supersonic airplane, but a compromise kept the project going until the end of this month. Now the SST forces are again asking Congress for money, and the anti-SST forces are vowing to kill it for good.

The time to decide the issue clearly is now. The project is at a good "stopping place," with actual construction of the airplanes just getting under way at Boeing Co., the SST's prime contractor. Already the federal government has spent $864 million on the project—putting up 90% of the money for the prototype phase, to be repaid by the contractors later if SST's are produced in quantity. By current estimates, it will require only $476 million more to build and test-fly the two prototypes. Halting the project doesn't create big savings right now, for the government might have to pay $100 million to $300 million in termination costs and refunds to the contractors.

Despite this arithmetic, the government should stop putting taxpayers' money into the SST. Its advocates argue that the U.S. must stay competitive with the Russians, whose supersonic Tu-144 is slated to begin scheduled flights later this year, and with the British and French, whose jointly developed Concorde has recently been test-flown. Otherwise, they darkly predict, foreign-built supersonic planes will someday reign supreme on the world's airways. Both the Concorde and the Tu-144, however, show signs of being economic white elephants. The seat-mile operating costs on the Concorde, for example, may run anywhere from 50% to 100% higher than on the Boeing 747, and passengers may have to pay stiff surcharge. Neither plane looks like a real threat to this country's dominant world position in jet aircraft manufacture, or to our ability to keep up with "the state of the art" in airplane design.

Some of the environmental arguments against the SST can be overcome, yet only by crimping the SST's style. Sonic booms are a major problem, but the government has already agreed that the plane will fly at supersonic speeds only over the oceans, and Congress could quell remaining fears on this score by banning forever any overland commercial flights capable of creating the thunderclaps. Somewhat scarier is the possibility that the enormous amounts of water vapor emitted by hundreds of SSTs flying through the stratosphere might deplete the ozone that shields us from excessive ultraviolet rays.

What finally swings the balance strongly against the SST, however, is the attitude of the airlines that would have to fly it. Elwood R. Quesada, the former head of the FAA who is now a director of American Airlines, says, "The airlines privately wish the SST would go away." Someday, says Quesada, an SST will make sense, but right now the airlines have enough troubles filling their new 747s with passengers, and they need a fairly long breathing spell in which to pay off these giant craft. By Boeing's own figures, the initial operating costs per seat-mile for the SST would be 15% to 20% higher than on a 747, and though Boeing thinks the SST would be truly competitive with the slower 747s by the mid-1980s, this is a far cry from the immediate cost-cutting bonanza enjoyed by the airlines when they switched over from piston airplanes to subsonic jets in the late 1950s.

In short, there is no prospect of a solid economic payoff that would justify the further gambling of government funds. If there were such a prospect, the airlines would be clamoring loudly for the SST—which they are not. Funds for its development, moreover, could be raised privately, and if not there would at least be a stronger case for government support than exists now. Besides, costs in such untried areas keep getting out of hand. The British and French governments have already spent $2.4 billion on the Concorde, far more than originally foreseen, and the U.S. could very easily find itself guaranteeing up to $3 billion of private loans before our first passenger-carrying SST ever took off.

The benefits of this huge governmental gamble would be enjoyed by amazingly few. Only 3% of Americans fly overseas each year on routes on which supersonic flights would be allowed. Those who fly frequently on such routes—business travelers, for example, who might *need* to get from New York to London in three hours instead of seven—constitute less than one percent of the population.

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[From the Chicago Tribune, Mar. 22, 1971]

JAPAN AIR LINES DOESN'T WANT AN SST

(By Samuel Jameson)

TOKYO, March 21.—As far as Shizuma Matsuo, president of Japan Air Lines, is concerned, aircraft manufacturers can forget about developing the Concorde and other supersonic transports.

"Airline companies are being spun around in circles by the manufacturers who keep coming up with new planes," Matsuo said in an interview here. "It's all right with me if they don't make any supersonics."

Matsuo said J. A. L. had placed orders for three British-French Concordes "only to make sure we remain competitive." Whether it will purchase them is another matter, he said.

ALL WILL FOLLOW SUIT

"If one company buys one of the new planes, all of the airlines are forced to follow suit in order to compete. That piles up debts, intensifies competition and often leads to operating deficits," he said.

He pointed out that Pan-American, which competes with J. A. L. in the Pacific area, has ordered 15 Concordes, and said:

"If Pan-Am doesn't buy the Concordes, we won't either."

J. A. L. has placed an order for five American supersonic jets with the same thinking in mind, he said.

FEARS THEY'RE UNECONOMICAL

In addition to the noise problem, Concordes probably could not be operated economically, Matsuo said. If they were put into operation, special fares would be necessary, he added.

Matsuo, 68, will step down after 10 years as J. A. L. president to become chairman of the airline in June. He said the airline, which is 50 per cent owned by the Japanese government, would undoubtedly continue to press for landing rights in Chicago even after he leaves the presidency.

A diplomatic source revealed that the Japanese government is seeking to win Chicago landing rights as part of a deal in which the United States will return American-controlled Okinawa to Japan, probably in 1972. The Japanese proposal would allow Northwest, Trans-World Airlines and Micronesia Airlines [a subsidiary of Continental Airlines] to continue their present rights to fly into Naha, capital of Okinawa.

WOULD LOSE STATUS

After reversion, the Naha stop would lose its present international status.

Matsuo admitted that J. A. L.'s bid for Chicago landing rights, which has been brought up four times in governmental negotiations, has made little progress.

"There is nothing else left for Japan to concede to American carriers," said Matsuo, who has opposed an American bid to increase the number of unscheduled flights by supplementary carriers into Japan.

He said he didn't think it "fair to the commercial airlines which have spent years building up their scheduled services" to give extra business to supplementary carriers.

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[From the Washington Post, March 21, 1971]

A EUROPEAN VIEW OF THE SUPERSONIC TRANSPORT

(By Jean-Jacques Servan-Schreiber)

(Note.—Servan-Schreiber, former editor of L'Express and author of "The American Challenge," is a deputy to the French National Assembly from Lorraine. The following is excerpted from a statement he submitted to Senator Proxmire, chairman of the hearings on the SST.)

The debate in the Congress of the United States on supersonic transport may remain in the history of the industrial state as the first truly universal debate. The problem is the same in each modern democracy—man and technology. Decisions of government and parliaments in each of our nations has immediate consequences on all others. In view of the SST debate there is no such thing any more as "natural independence." The multinational political decision at long last, confronts the multinational industrial complex. . . . France and Great Britain now have nine years' experience with supersonic transport and that experience can, perhaps, shed some light on this vital debate.

Every single cost analysis from the beginning has proved to be wrong. The cost of the [French-British] SST has multiplied here, as it will everywhere, four times since the initial evaluations. By all normal decision-making systems, it should have been canceled long ago, but the debate and the cost have for years been kept from the public. The facts have not been available until the most recent months when they could no longer be hidden.

Now the public eye is on the project and what it sees is bankruptcy. The Rolls Royce disaster of last month already looks small compared to the financial quagmire of the SST.

Not only those who had doubts about the project, but more and more former supporters of supersonic transport are now frightened by the project. Mr. Charles de Chambrun, a major political figure of the ruling party in France, making a special report for his parliamentary committee declared: "Even a superficial analysis now reveals to us the terrifying truth, on purely prestige projects (like the supersonic aircraft) we are throwing away billions with no hope whatsoever of any future commercial returns. So much so that we should urgently face these problems and if possible, before they become public scandals." Former Conservative Prime Minister Antoine Pinay, a cautious and respected man, who seldom speaks out in public, decided last week that he could no longer remain silent and came out flatly against it as an immensely costly gadget on taxpayers money designed for an incredibly few rich people, mostly North Americans. The impact of his unprecedented and violent attack is shaking the establishment and prefaces more defections from the pro-SST ranks among public figures.

If the number of persons in America that could profit by SST flights is evaluated, officially, at 0.5 per cent of the population, that figure in France is only 0.3 per cent—thus an unavoidable political assault, in a country like ours where housing, schools, hospitals, roads, telephone, urban problems are in such dramatic need of immediate attention. . . . In Paris, for instance, it has been revealed that over 70 per cent of housing dates back to 1920, and only less than 10 per cent has been rebuilt in the last 20 years. Also, Paris, considered the most advanced city in France, 52 per cent of housing is without central heating and 45 per cent has no internal sanitary facilities. Again in Paris, there is, today, one child care center for 2,000 working women with children.

For the first time since General de Gaulle left the public scene these truths are rising to the surface. A fundamental reappraisal of the whole range of public appropriations is the inevitable result. In face of these social scandals the SST has now few defenders. Only those directly concerned by the contracting industries are still openly in favor of the project.

Even if there were no problem at all of public opinion of urgent social needs, there are now even more pressing problems confronting the SST builders and their clients. We shall note here the latest developments in the first two months of this year.

The minimum transport capacity of the European SST was considered to be, as of last year, for any competitive use, 134 passengers per plane. After the first flight tests this capacity is now being reduced to 110, or less. At that level, the plane can be bought by Air France and BOAC only if it flies at full capacity on every flight. An impossible assumption, as any airline executive knows.

The flight distance of the European SST has also been drastically decreased. It is still considered able to fly from Paris and London to New York, but it is now officially admitted that it will not be able to fly from Berlin to New York and not even from Rome, Hamburg or Frankfurt. The use of the SST for European airlines is shrinking. Practically, the British and French clients are, at this point, left alone.

Maintenance costs for the SST climbed from the first estimated 30 per cent margin for present jet planes to 60 per cent at least, in the latest accounting. The initial and basic idea that the fare for an SST passenger would not be more than the first-class seat today on normal jet aircraft is abandoned. The SST passenger will have to pay at least 30 per cent more than the first-class fare. At that price level, company executives, not paying for their own travel expenses, will be the only routine passengers taking advantage of the new plane.

Finally, the latest requirements from airlines to add qualitative changes in order to lower the noise level and to make luxury flight more comfortable have been flatly refused by the builders as impossible within the present budget, already 300 per cent over the initial estimations.

Some major leaders of the pro-SST crusade have now decided in my country to express in public their unwillingness to continue the project under present conditions. Among them the Chief Executive of the SST program in Toulouse has considered it to be his duty to release, last month, some new facts and figures in an unprecedented press conference.

Since its first test flight in 1969, the SST prototype has flown less than 10 per cent of the number of hours of test flight that were planned as a minimum for testing the project. Also, he revealed, in anger, that the budgeted investments planned for the middle of last year had still not been allocated by the government.

He made public that, on the basis of the latest developments, a new postponement of test flights is unavoidable. What was planned to be achieved in 1973 will not be accomplished before the second half of 1974. Finally, he concluded, that all of this will cost an eventual loss of 50 SST commercial options per year and that one more delay, after the deadline of 1974, would simply see the European SST cancel itself out of any possible market.

The conclusion in France today, after a few weeks of publicly airing the facts, is that the project is, at a minimum, a commercial and financial disaster. Technologically it has lost most of its significance for two reasons. First, because the engineers and scientists are not permitted to continue their research due to budget limitations. Second, the only remaining technological fallout (supersonic flight experience) has lost its meaning since this aircraft will not be the first of its generation of planes, but the last. To create a new generation of aircraft a varied geometry wing system and new metal alloys were, and are, needed, but they have been abandoned.

It is a common belief among responsible politicians in this country that the concrete social problems of daily life in the cities of France and the dramatic problems of balance of payments in Great Britain are now converging to move public opinion in Europe against projects that contradict the elementary needs of the mass of the people. Ninety seven per cent of the population of France is not, in the least, concerned by the luxury of supersonic flying, but in anguish with the deterioration of urban life, the bankruptcy of public service in every city.

The European SST looks to us, on this side of the Atlantic, like an industrial Vietnam.

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[From the Wall Street Journal, Mar. 22, 1971]

OF SHOES AND SUPERSONIC PLANES

The demise of Corfam, the Du Pont Co. leather substitute, came as Congress prepared to decide the future of federal subsidies for the supersonic transport. It isn't stretching things much to suggest a relationship between the two developments.

Corfam was originally introduced in 1964, and its prospects seemed auspicious. Du Pont, after all, was the same company that brought out nylon, the fiber that was to make silk stockings obsolete. Corfam, the Du Pont marketing men promised, would "do for shoes what nylon did for stockings."

Hardly anyone questioned that Corfam was a superior product. It was durable, water repellent, easy to take care of. Although its price was fairly high, it was quite competitive with better-grade leathers. Yet it bombed.

Oh, a great many people bought corfam shoes. Du Pont estimates that there are now between 75 million and 100 million pairs in use. But competitors appeared, claiming to offer Corfam's virtues for less money. Shoe buyers became more price-conscious, and thus less willing to pay for the higher-priced Corfam shoes. So Du Pont finally decided to take its losses and quit the field.

Now, nobody questions that supersonic flight eventually will have a wide appeal. Any reasonable man, moreover, must assume that American technology can turn out a supersonic transport that will fly.

That leaves the question of cost and timing. With the timetable largely determined by federally subsidized development, would an American SST reach the market at the right time? Would it sell enough tickets, at high enough prices, to make the plane

economic? The House vote to end federal subsidy must reflect doubts on that score.

The current troubles of the airlines scarcely indicate that the industry is ready to absorb a whole new class of planes. The SST doesn't really seem designed to draw the mass market that most analysts think the airline industry needs.

For our part, we'd like to see research continue, but we'd rather have private industry decide when and whether actually to build an SST. That might delay matters, but it also might make it less likely that the supersonic transport would crash like Corfam.

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[From the New York Times, March 17, 1971]

CONGRESS VOTES ON SST

As a vote in both the House of Representatives and the Senate Appropriations Committee on the supersonic transport plane nears, the Administration and its business and labor union allies in the aircraft industry have joined in a major propaganda drive to squash the public's doubts.

Yet no new facts have been brought forward. The monstrous difficulties and dangers of the SST remain. The first difficulty is that the plane produces a sonic boom of such terrifying, excruciating loudness that it cannot be flown over land, at least not in any free country where the victims can also vote. Secondly, the plane on takeoffs is much louder than normal jets.

The pro-SST lobby has cleverly attempted to suggest in recent weeks that the noise problem has been "solved" by releasing expert opinions that certain modifications in the plane could reduce the noise level from 124 decibels to 108 decibels. There are two things wrong with this solution: the design changes increase the weight of the plane, reduce its cost efficiency and thereby further jeopardize the profit prospects which have never been better than marginal. The other thing wrong is that 108 decibels is still much too loud. Noise pollution is a worsening problem in every sizable community. Even at 108 decibels, the SST would barely reach the interim standard set by the F.A.A. in December 1969. The National Academy of Sciences has recently recommended that the limit for Kennedy Airport should be reduced to the more reasonable level of 98 decibels by 1975.

In addition to sonic booms and intolerable ground noise, the SST would pose risks to the oceans and the atmosphere. In routine operation on the New York-to-Paris run, planes flying at supersonic speed would carpet more than half the North Atlantic with sonic booms of an intensity of 2 to 4 pounds per square foot as often as every half-hour during peak summer travel. What would be the effect over ten or twenty years of repeated sonic booms, day and night, on migratory birds, on fish and other marine life, on the ocean itself? No one knows the answer. But the nation's foremost oceanographers and marine scientists have joined in a petition warning Congress against the easy assumption that supersonic flight across the oceans poses no risk.

An SST discharges vapor into the thin air of the stratosphere. The climatic and health effects are unknown at this time. Atmospheric research over a period of ten to twenty years would be required to find some of the answers. If the effect of the SST were to permit even a slight increase in the amount of ultraviolet rays reaching the earth, the number of cases of skin cancer would increase dramatically. It is Orwellian that men are prepared to take these risks, to manipulate mankind's only livable planet and its precious envelope of air for something so trivial as cutting the travel time to Paris by three hours.

The pro-SST lobby has put heavy emphasis on the economic argument. But to invest certainly $2 billion and more likely upward of $5 billion of Government funds in this project would be wildly irresponsible when there are so many urgent human needs that could be met with the same amount of money. Almost every well-known economist is on record against the SST on economic grounds. If the objective is to create jobs for the unemployed or to improve the balance of payments, there are quicker, cheaper, more direct alternatives.

The final argument is prestige. But where is the prestige if the plane proves to be one which no airline can operate at a profit? The Anglo-French Concorde has so far exceeded cost estimates that its future is still uncertain even though prototypes have been successfully flown. No airline in Western countries has ever bought a plane from the Soviet Union because spare parts and replacements from the U.S.S.R. are subject to political control. There is no reason to believe that the airlines will change policy with regard to a Russian-built SST.

In summary, there is no public demand for an SST, no social or human need to be met. If it is approved, it will be a triumph for a small group of companies with tremendous political pull. Any member of Congress who votes for the SST will be voting against the weight of scientific opinion and of economic opinion.

A vote in favor is a vote to waste public funds and to endanger mankind's environment. The materialistic, prestige-obsessed Communist bureaucrats in the Kremlin can proceed with this dangerous, expensive toy because they can ignore their own public opinion. The representatives of a free people can be expected to act in a more responsive and responsible manner.

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[From the Chicago Daily News, Mar. 15, 1971]

FASTEST WHITE ELEPHANT

To build or not to build the SST: The question requires an answer from Congress by the end of the month, for the funding of the supersonic transport runs out then. Last year, Congress—grudgingly, agreed to a three-month extension into 1971, and then only because the issue had become so hot it interfered with adjournment.

It's still hot, and the vote is likely to be close. But as more evidence piles up in Senate hearings, it reinforces our opinion that no more public money should be spent on the SST.

It isn't good enough to say that we might as well go ahead and build two prototypes of the plane in order to find out how much they would pollute the air with gas and noise, and whether they could operate economically. Even if the pollution factors are minimized—and the administration has gone to great lengths to minimize them—the odds against economic success for this venture are mounting.

Actually, there's no separating the environmetal and economic aspects, for it's the sonic boom—only one of the environmental drawbacks—that rules out the prospect that the SST can be a money maker. If it can't fly faster than sound except over water and frozen wastes, then it loses its chief reason for being, which is superspeed. The time saved in transoceanic flights would be too little to justify the enormous extra cost.

The aircraft industry has of course led the fight to build the SST, but the hard-pressed airlines themselves concede they can't see the day when they could afford to buy and operate them. Their problem now is an oversupply of space for passengers in their new generation of jumbo subsonic jets. Air travel will doubtless resume its growth in the future, but it could be a long, long time before there is any demand for a plane that carries fewer passengers at a much higher cost. And by that time, perhaps the air transport industry can finance its own development instead of depending on the public to do it.

By that time, too, an impending fuel shortage may clinch the argument against the SST as the least efficient form of mass transportation known to man. Recent studies have shown that in terms of people or cargo hauled per mile per gallon of fuel, the SST is in a wasteful league all its own. It would carry only 13.6 passengers per mile per gallon, compared with 22 for the jumbo Boeing 747 (and compared with 200 for a double-deck passenger train).

So enormous is the SST's appetite for fuel that if the government's dream is realized and 500 of them are in the air by 1990, the fleet would consume 40 billion gallons a year. A little more than a decade ago, all forms of transportation in the United States put together used not much more than that in a year.

The more that is learned about the SST, the less attractive it becomes from any angle. The thing to do, it seems to us, is to put it on the shelf and study it, at least for a while, rather than sink more money into what could be the fastest white elephant in the world.

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[From Chicago Today, Mar. 3, 1971]

HOW MUCH WILL YOU PAY FOR SST?

(By Jack Mabley)

The planemakers and subcontractors and politicians trying to ram the supersonic transport subsidy thru Congress are trying to wear down the opposition. With problems like the war and inflation and crime and bad schools, the SST isn't the sexiest problem to come down the pike this year.

Maybe interest would sharpen if we knew how much each of us must pay for the plane. The minimal cost to taxpayers is $1.3 billion. Illinois' share of that is $115.7 million. That comes to about $10 for every man, woman and child in the state, or $50 for an average family.

We won't get a bill from the government marked "$50 for Development of SST." But we'll pay, every one of us. There is no other source.

What the whole stupid project still boils down to is a means of getting a handful of well-to-do travelers across the ocean or across the country a couple of hours faster than they can make it now.

The arguments about stimulating the economy, providing needed jobs, aiding the balance of payments and competing with the French and British have been demolished by the most objective and well-informed people in these fields.

Milton Friedman, University of Chicago economist, and John Kenneth Galbraith, Harvard economist, don't agree on many issues. But here's what they say about the SST:

Friedman: "I oppose government financing of the SST as I oppose almost all other government subsidies. If the SST is worth building, the market will make it in Boeing's interest to build without a subsidy; if a subsidy is needed, the SST should not be built."

Galbraith: "All jugments on the balance of payment effects of building the SST are purely speculative. By choosing the figures and selecting the assumptions, one can reach whatever results he wants—there can be a big adverse effect from an adverse tourist balance or a favorable effect from the planes sold.

"The truth is that these calculations are strictly fraudulent and should detain no one. What is certain is that the SST will cost a great deal of money that is needed for other things, and that it isn't needed."

Paul Samuelson, M. I. T. economist whose thinking won him the Nobel Prize, states, "The strongest political argument they can make for the SST is that it will make jobs. Any way that the U.S. government or anyone else spends a billion dollars on goods will make a billion dollars worth of jobs, and it would be a return to the outmoded depres-

sion philosophy of makework—in which men are hired to do useless things like digging holes and filling them up again, to increase jobs and purchasing power."

Nixon's people will argue that the government already has spent $860 million on the SST, and the money will be wasted if Congress doesn't appropriate another $210 for the next stage of development.

Mr. Nixon provided a precedent for that several weeks ago, when he halted work on the cross-Florida canal after more than $50 million had been spent, because a reexamination of the facts shows the negatives outweigh the positives in building the canal.

If we were an economically healthy nation, and had little poverty, and had schools that ranked with the best in the world, and had a death rate lower than most civilized nations, and the cities were in good shape, and our debt were going down, and the federal budget were not deep in the red—we could afford the SST, with the understanding it would be abandoned if it were found that the sonic boom could not be controlled or that the plane would pollute the atmosphere.

But there is so much that needs to be done, that giving priority to something as frivolous as a plane on which private industry won't risk money is governmental madness.

The SST is politically sensitive, and the vote in Congress may be close. This would be a fine time for people who care enough about that $50 per family to give their congressman a nudge thru the U.S. postal service.

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[From the Chicago Tribune, Feb. 6, 1971]

OPINION ON THE CAMPUS: SST PLAN HAS LITTLE SUPPORT AMONG U.S. COLLEGE STUDENTS

(By Daniel C. Beggs and Henry A. Copeland)

While arguments for and against this nation's development of a supersonic transport are waged vigorously by proponents and critics of the project, a recent poll shows that the proposal will find little support among the nation's college students. Other priorities for government expenditures, pollution and sonic booms weighed heavily on collegians' minds in opposing the project.

Interviewers at 43 representative colleges and universities polled 1,097 students by telephone for the most recent University Index survey completed the week ending Jan. 23.

The students were asked the following question:

"There have been several arguments for and against development of this country's supersonic transport [SST]. Arguments in favor of the SST cite the development of similar planes by other countries and the increased speed provided in transcontinental and intercontinental flights. Arguments against center on the high cost of development and the increased pollution of the atmosphere. Which of the following would best describe your attitude toward continued development of the SST?"

[In percent]

| | |
|---|---|
| Very favorable | 4.7 |
| Somewhat favorable | 16.6 |
| Indifferent/undecided | 5.2 |
| Somewhat unfavorable | 28.8 |
| Very unfavorable | 41.3 |
| No opinion | 3.4 |

The collegians then were asked to explain their reasons for either supporting or opposing the continued development of the SST in this country. Among the reasons given by those students who were against production of the transport, the plane's potential noise and air pollution outnumbered all other arguments by a margin of nearly two to one. Second most frequently cited was the substantial expense entailed in developing the plane. Coupled with this was the feeling among students that the huge funds for the SST could be spent better in other areas deemed more crucial to the country, such as in combating poverty and pollution.

Most frequently mentioned by students who favored the development of the SST was the increased technological progress which the plane would bring. Second most frequently cited was the perceived need for this country to maintain its world leadership in aircraft manufacturing and its potential impact on the United States balance of payments. Many students also cited the added prestige and competitiveness the plane would bring to the U.S. in world markets. The five most-frequently used arguments named by students, both pro and con, are listed below:

ARGUMENTS FOR THE SST

1. Technological progress which might accompany the development of the SST.
2. The maintenance of U.S. competitiveness with other countries in aircraft development.
3. Increased speed in long-range flights.
4. Economic benefits to the country [more jobs, etc.].
5. The solution of certain air and noise pollution problems through SST-related research.

ARGUMENT AGAINST THE SST

1. Possible increases in air and noise pollution by SST's.
2. Large expenditures required in developing the transport.
3. Funds for the SST could be better spent in other areas [poverty, pollution, etc.].
4. The apparent need for an SST is already being filled by existing aircraft [Boeing 747, etc.].
5. The increased speed of the SST is not really all that necessary.

Students holding Republican Party preferences were more inclined to support SST development than were their Democratic or "independent" counterparts, tho a slight majority of the Republicans [51%] were opposed to the transport. However, those students holding either Democratic or independent philosophies voted against SST development by a margin of five to one.

THE SST: A MATTER OF PRIORITIES

Mr. PERCY. Mr. President, on March 10 and 11, the Appropriations Committee of the Senate held hearings on the SST. John Gardner, chairman of Common Cause, had been invited to testify but was unable to schedule an appearance. At my request, he has made available the testimony he had prepared for these hearings.

Mr. Gardner's reputation precedes him. His stature does not require documentation when he addresses this body on the SST. In the same incisive manner in which he addressed the need to reorder national priorities in his recent book, "The Recovery of Confidence," he advises the Senate that—

> There is no more illuminative example of this nation's need to reorder its budgetary priorities than . . . the . . . request for another $290 million for the supersonic transport.

I shall not attempt to summarize his testimony. John Gardner remains his own best spokesman. However, I shall note for the RECORD that the views he expresses and the position he takes on the SST are those of himself and of Common Cause, the 100,000-plus member organization committed to changing national priorities through changes in congressional procedures, election laws, and legislation. In my judgment, when John Gardner speaks as an individual, that is reason enough for us to listen; when he speaks as the leader of this large and effective citizens' lobby, we have even greater cause to listen.

I commend Mr. Gardner's testimony to the attention and consideration of my colleagues, and ask unanimous consent that it be printed in the RECORD.

There being no objection, the testimony was ordered to be printed in the RECORD, as follows:

REMARKS OF JOHN W. GARDNER

I am submitting this statement on behalf of Common Cause, a rapidly growing citizens' organization of more than 100,000 members. Its purpose is to work for changed national priorities, the most basic of which is reform and renewal of our institutions of government. Common Cause has been active in pressing for changes in Congressional procedures, reform of election laws, improvement of the welfare system and an end to the war in Indochina.

There is no more illuminative example of this nation's need to reorder its budgetary priorities than that this Committee should be hearing testimony on the Administration's request for another $290 million for the supersonic transport. To oppose the request one need not seek (as some opponents have sought) to prove that the supersonic transport project lacks any shred of validity. It is a matter of priorities. We stand at a moment in our national life when grave domestic problems are going unsolved for lack of funds. Every new spending proposal must be weighed against competing national needs.

It is against that background that we must assess the proposal that we spend a minimum of 1.3 billion tax dollars (and virtually everyone agrees that the cost will go much higher) on a project which is not only of questionable technical and economic merit, but involves possibly grave environmental dangers.

Most proponents of the SST reflect an attitude which I think we are beginning to outgrow. I cannot condemn them very harshly for the attitude, because most of us once shared it—but let me try to describe it to you.

For a long time in this country, we were in love with technology for the sake of technology, and also—it must be admitted—in love with bigness and speed and newness. And most of all, perhaps, we were in love with the idea that America must be first in everything.

But today we are re-examining those attitudes. Typically, some of our citizens are ready to go to the other extreme—to hate anything smacking of technological advance and to look back nostalgically to a simpler, more primitive time.

If we are really ready to behave like adults in this matter—and that question remains open—we will welcome technological advances that serve human needs. We will actively encourage technological progress but we will *never* fail to ask whether the progress is being achieved at the cost of other values, never fail to ask what a specific technological "gain" may mean for the quality of life, never fail to consider what kind of society we really want.

So we cannot listen with uncritical acceptance when proponents of the SST insist that it is the essential next step in technological progress, and that therefore we *must* take it. "It *can* be built; therefore it *must* be built."

Nonsense.

The question is, given the SST's putative advantages and possibly grave disadvantages, where does it stand in our scale of national priorities. We must ask whether, at a time when the nation is suffering grievous domestic problems, we wish to spend our tax resources building an enormously costly machine to cut a few hours off trans-Atlantic flights. Even the interests of those who make

such trips would be better served, dollar for dollar, with improvements in airport access.

Proponents of the SST have made much of the argument that we cannot afford to fall behind other nations in this field. It is true that SST prototypes developed by the British and French governments and the USSR are flying. These are aircraft of aluminum rather than titanium, which is to be used in the American version; and they are smaller and slower than the U.S. craft is planned to be. Backers of the American SST argue that although we can no longer be first chronologically, we can put the best SST into the air. They argue further, that this is necessary to the American industry's future, that it will produce great profits and contribute positively to our international trade accounts.

To deal with the last point first, even assuming substantial foreign sales (and that's a big assumption), there is no economic case for subsidy of exports to aid international payments. Milton Friedman calls the balance of payments case for the SST a "red herring". Most of the fifteen economists who made statements of opposition to the SST voiced the same view.

With regard to the broader question of prestige, no one is asking that America default her leadership in aviation. We have already proved that we can develop supersonic craft. We will still lead the world in sales of the much more economical subsonic jet aircraft.

The Anglo-French SST (The Concorde) is in serious financial and technical difficulty. Its operating costs are estimated at double those of subsonic jets. No Russian aircraft has ever been marketed in any significant numbers in the non-communist world, and the TU-144, also a marginal airplane technically and economically, will almost surely be no exception.

America's international prestige does not hinge on so marginal a commercial achievement as the SST.

SST proponents argue that more than 500 aircraft will be sold at some $40-$50 million each.

Everyone recognizes that optimistic assumptions were used in arriving at this level of projected sales. The plain truth, recognized by everyone in the industry, is that no one knows how many could be sold. And the costs are going up, which could mean even fewer sales. If the costs of environmental protection devices (including development costs of quieter engines) are added to the selling price of the planes, as they should be, cost per plane will be substantially greater, and sales lower. (The government has argued that it would be possible to have an SST as quiet as a subsonic jet, but has not yet said who is going to pay for this very expensive development.) Another factor is that the aviation industry stands in substantial overcapacity and that the airlines themselves have misgivings about the plane—its cost, range, payload, premium fare and noise, plus the possibility it may be banned from airports around the world.

Proponents point out that the production level implied in the estimate of 500 aircraft would create 150,000 jobs. (Later estimates escalate this figure to 500,000—which is the sheerest fantasy.) We have already pointed out the shakiness of the 500 aircraft estimate. As of today, between 12,000 and 17,000 are employed on the development of a prototype. These are the jobs that are directly at stake.

The loss of any job hurts. But there are many other ways that the talents of these workers can be used, notably in mass transit and the anti-pollution field. Government and private industry should cooperate in working out this conversion.

The cities and states, financially strapped, cannot provide all the services the public needs. But on grounds of economizing, President Nixon vetoed a Public Service Employment bill that would have financed 250,000 sorely needed jobs in public agencies. Each of those jobs could have been created at only a fraction of the public cost of the SST jobs which are now the subject of so much debate.

One piece of pro-SST literature that has come to our attention makes the following claim. The SST will be: "The safest, most comfortable and fastest transportation ever devised. The cleanest transportation ever built, from the pollution standpoint. The quietest commercial aircraft ever built." This kind of public relations puffery must test the patience of reasonable men. The U.S. SST—as it is now planned—would be the fastest commercial craft. But its safety performance cannot yet be established. It would offer cramped quarters by comparison with the jumbo jets—though indeed the discomfort would be shorter-lived. The statement that it would be "the cleanest" is bewildering. Perhaps they are referring to the fact that because of faster turn-around time on trips, fewer aircraft would be in the air at any one time. But what is important is pollution per passenger mile. SSTs, according to Professor Rice of Carnegie-Mellon University, would produce less than half as many passenger miles per gallon of fuel than the automobile, and only about one-fifteenth the fuel efficiency of double-decker suburban trains. SST fuel efficiency is said to be only half that of the Boeing 747, so that a fleet of 500 SST's would require the equivalent of another major oilfield and another Trans-Alaskan pipeline.

There remains much to be proven about possible atmospheric dangers. We cannot evaluate the dangers, other than to say that they have been asserted by reputable scientists and not adequately rebutted by the government. A scientific advisory panel to the President's Science Advisor submitted a report on the subject, but the President never released it to the public. One wonders why. This circumstance does not build our confidence that the government's first priority is environmental protection.

But there is one environmental consequence of the SST that is virtually certain, and that is noise pollution. Even the proponent Department of Transportation agrees and has offered operating stipulations to ease this threat. The problem is that development of quieter engines may cost from $60 to $120 million, and that efforts to recoup these costs from users will cut into sales dramatically, just as will the restriction on flight over populated areas at speeds that would produce a sonic boom. The counsel offered by Charles A. Lindberg is worth repeating: "I do not now see any practical way to avoid the disturbance that would be caused by regular sonic booms. As a citizen, I feel we are already subjected to more than enough technological noises, and my vote will be against adding to the present noise level in any unnecessary way. I do not accept as practical or lasting the idea that supersonic transports would be flown at supersonic speeds only over water."

The government says that SST's will not be produced and flown if they are environmentally damaging, but in the same breath it argues that the program is a good public investment because some 500 of the aircraft will be sold. If this is anything more than double talk, it says that 500 planes will be sold despite the unpredictably higher costs of the quieter version. That cannot be regarded as a serious estimate. It is a propagandistic guess.

President Nixon says it would cost $277 million to terminate the SST contract. The amount is debatable—the Administration has not provided detailed documentation of its figure. Opponents say $80 million is a likelier figure. But even if the Nation paid out $277 million, it would save $300 million now and more in the future by terminating the project. Moreover, the costs of certifying the safety and feasibility of the plane are estimated at $600 million. If private capital for production is not forthcoming—and it now appears quite doubtful—then several billion dollars more will be requested of the government.

If development were carried to the production stage, we would have spent even more money and it would be just that much harder to extricate ourselves. The temptation would be even stronger to ignore threats to the environment, ignore the uncertain market for the plane, and plunge ahead in order to get back some of the taxpayers' investment. The project should be ended now and immediate steps should be taken to aid the conversion of affected workers to other uses of their talents.

I wish to thank the Committee for inviting me to present the views of Common Cause on this important issue. We hope they will help the Committee and the Congress in reaching a wise decision.

Mr. EAGLETON. Mr. President, this body debated at great length the President's 1971 fiscal year request for money to support the supersonic transport prototype program. The waning days of the 91st Congress were largely consumed in those discussions. The debate ranged from questions of national priorities to environmental concerns about the SST. Both sides of those issues were addressed extensively and eloquently. It seemed then that everything that could be said about the supersonic transport had been said.

But the exhaustive debates on the supersonic transport that have taken place in this body to date have been incomplete in at least one vital respect. At no time has debate considered precisely what the American public is being asked to forgo in return for the prototype supersonic transport.

If we approve the President's request, we must make a clear-cut choice between proceeding with the supersonic transport and pursuing other goals.

What are some of the alternatives—the things we are deciding not to do if we build the SST? What else could we do with the money and manpower we are asked to invest in a supersonic transport?

This body must answer these questions if it is to claim fiscal responsibility. Leaders on both sides of the aisle will agree with President Nixon who said, as a candidate, in 1968:

> Perhaps the current Administration's greatest failure has been its disinclination or inability to take on the hardest job in government—the setting of priorities. As a result, the aggregate size of the Federal Budget has risen to unacceptable levels . . . In this disciplined context, the entire budget needs exhaustive review from which major expenditure savings and revised emphases will surely follow. Some programs like post-Apollo space, highways, public works, the SST—must accept less than maximum funding; . . . every major program, defense included, must be scoured for economies . . ." (*Business Week*, September 27, 1968)

Today, I want to set forth just one alternate opportunity for the use of the SST funds.

It is a here and now proposition—not pie in the sky.

It would use existing facilities and existing manpower which are now

underutilized to remedy existing problems—not create the possibility of new problems.

It would spread the benefits of the expenditure we are about to make through many States, rather than concentrating it in a few.

Rather than feathering the nest of a supersonic jet set, it would meet the real problems that beset Americans in their everyday lives—the needs of people who are old, or sick, or oppressed by a fouled environment, or just plain tired of paying out tax dollars and getting no real benefits.

I think the American people could use some down-to-earth solutions for a change.

What I propose is creatively to use our existing national laboratories, as well as university-related, federally funded laboratories and aerospace companies—and all the trained people who go with them—in a high priority program to apply our advanced research and technology to human needs.

I propose that we use the unspent portion of the 1971 SST appropriation—about $134 million—as well as the President's 1972 request of $290 million, for purposes such as research and development work on urban mass transit systems, health care delivery systems, ways of controlling land, air, and water pollution, research on crime control, energy sources and needs and other similar areas.

For the years following fiscal 1972, I suggest that we commit no less public money to this effort than would have been spent on the SST. Thereafter, expenditures should be sustained at a level commensurate with the demonstrated benefits of the program.

This proposal would be pie in the sky but for the fact that the vehicle for a quick start on these and other problems already exists. It is ready and waiting. It is the National Science Foundation's new unit called Research Applied to National Needs—RANN—which is specifically designed to stimulate the application of science and technology to down-to-earth problems.

Commenting on the reason why RANN was established, the Director of the National Science Foundation said:

> The National Science Foundation has as its central objective to support basic research and science education. In addition, however, it has become increasingly obvious that the Foundation has an important and perhaps crucial role to play, through the contribution of new scientific knowledge, in the struggle to alleviate a number of pressing national needs and problems. While we have had an on-going program of research on a variety of such problems, it is now apparent that a broader and more concentrated effort must be made towards their solution.

Mr. President, the RANN project is a plan for action—now. In selecting projects to be conducted through RANN, NSF focuses on those problems for which government, academic, and industry capabilities already exist—today—to mount successful research programs. RANN will focus its efforts on concentrations of governmental, academic, and industrial capabilities that already exist and where there is skilled, but at present idle or under-utilized, manpower ready to go to work.

I want to contrast what I have proposed with the SST prototype program.

The proponents of Federal funding of prototype development for the SST rest a part of their case on the need to rebuild a healthy economy. No one would deny that the aerospace industry has been among the most hard-hit in the current economic slump. Unemployment is high. Thousands of people have been laid off for long periods of time. Declines of this magnitude cannot easily be absorbed by any industry.

Unlike past declines that the aerospace industry has weathered, this one has resulted in the breakup and dispersion of expert teams of skilled people with proven ability. Teams of scientists, engineers, and technicians have been among the hardest-hit groups.

And the slow-down is not confined to private industry.

Highly trained individuals in governmental laboratories and in universities, as well as private industry, find themselves in "holding patterns." Too many of them are doing make-work projects of little consequence to them and of little consequence to society at large. They wait for a time when money will be available to do work that is rewarding to them and rewarding to all of us. Many leave the fields of scientific and engineering research entirely. With their jobs, many have lost their self-esteem and pride. And some may have lost the essential ingredient in the creativity that has characterized their work in the past—their capacity to think in daring terms and to pursue those thoughts to fruition.

Development and production of an SST is not the most effective way to create jobs. Both Nobel laureate Paul Samuelson and Prof. Milton Friedman agree on this point.

Samuelson says:

> In terms of the creation of American jobs, the sums squandered will be relatively ineffective. The same totals of expenditure can be applied in alternative directions so to better effect not only in terms of overall employment but also in terms of alleviation of surpluses of workers in particular occupational and regional categories.

Friedman concurs:

> On strictly economic grounds, the SST is an enormously costly way to create jobs. Except by attaching some dubious and unproved multipliers to the limited direct employment on the SST, one can't begin to match the job-creating power of a public service jobs program, or a housing program, or even a carefully selected program of consumer stimulus that could be mounted with the same funds that are involved in the SST program.

My proposal faces up to today's hard economic facts. It would put to work the highly trained and skilled available manpower in the aerospace industry and other high-technology areas. Moreover, it would insure that proved teams of highly trained individuals would be available to serve the aerospace industry when that industry needs their capabilities—as it undoubtedly will.

What could we actually accomplish?

Let me give you several examples describing the track record of the Atomic Energy Commission's national laboratories, Government-funded university-related laboratories, and the aerospace industry.

Argonne National Laboratory, a member of the AEC's fine laboratory system, has conducted research that includes work on a battery for vehicular propulsion and on a fluidized bed treatment of coal, looking toward solutions to the looming national energy crisis. It also has worked on artificial kidney research, research on a braille reader, and research on an implantable secondary battery for biomedical uses.

The AEC's Brookhaven National Laboratory has conducted research ranging from work on chemical dissection and therapy of brain disorders to research on ozone treatment of acid mine drainage that has destroyed tens of thousands of miles of streams and rivers in the United States. About 250 people will lose their jobs at Brookhaven on June 30.

AEC's Oak Ridge National Laboratory's efforts range from work on automated analysis of polluted water to solid waste disposal and smoking and health. Yet at Oak Ridge, 350 fewer people will be working after June 30.

AEC's Oak Ridge Associated Universities complex has conducted research on whole-body irradiation used to treat cancer.

AEC's Pacific Northwest Laboratory has done research on uranium mining hazards, as has the AEC's University of Rochester atomic energy project.

These are but a dozen or so of 68 environmental and health related projects being carried out in AEC laboratories.

A similar story can be told for Government-funded, university-related laboratories.

Since 1965 the Applied Physics Laboratory of the Johns Hopkins University has, for instance, done work in the development of advanced transportation and automotive systems, and is working on design, fabrication, and installation of an automated radar system in San Francisco Harbor. This will help prevent recurrence of the recent disastrous ship collision in San Francisco Bay and the resulting pollution. It has submitted proposals in cancer patient care, air traffic control, and in the detection and prevention of arteriosclerosis. None of these proposed programs would cost more than $500,000 per year.

Numerous other programs have been submitted to the Johns Hopkins Applied Physics Laboratory but not funded. Examples are an implantable artificial heart, a project for the diagnosis and monitoring of cardiac disease, a permanently implantable heart pacemaker, a program for the study of air pollution, and finally an investigation into the use of educational technology in the rehabilitation of handicapped children.

I have cited but a few random examples, both in AEC National Laboratories and in the Applied Physics Laboratory.

APL is but one of many similar installations. The Lincoln Laboratories in Lexington, Mass., the Lawrence Radiation Laboratory in Livermore, Calif., the Los Alamos Scientific Laboratory in Los Alamos, N. Mex., and the Jet Propulsion

Laboratory in Pasadena, Calif., all have similar capabilities.

I am not alone in my belief that Government-funded laboratories have a unique capability to contribute to the solution of some of our most pressing domestic problems. As long ago as 1969, Secretary of Defense Laird, the Director of Defense Research and Engineering, Dr. Foster, and Secretary of the Navy, John Chafee, all encouraged the greater use for the benefit of society at large of the capabilities in the national laboratories whose principal mission was defense-oriented. I ask unanimous consent that these three letters be inserted at the conclusion of my remarks.

The PRESIDING OFFICER. Without objection, it is so ordered.

(See exhibit 1.)

Mr. EAGLETON. Mr. President, I hasten to point out that the suggestions that I offer today do not conflict with, nor are they offered as substitutes for, the several retraining and manpower conversion proposals that have been introduced. What I propose will complement the retraining and manpower conversion proposals in several respects.

If my suggestions are acted on, scientists and engineers can be put to work almost immediately developing a base of new ideas and concepts that will generate a need for people to carry them out—creating the all-important demand for people retrained in manpower conversion programs.

Let me re-emphasize, however, that there are many individuals and teams in governmental, academic, and industrial organizations with existing capabilities to mount successful research programs. Many of them require little or no retraining. Given the financial resources, they could begin work tomorrow. These teams and individuals must not be ignored as we try to redirect our skilled manpower into new areas. They represent a quick-start, early payoff capability. There is no doubt that these individuals and teams will be called upon in the near future to begin work on precisely the kinds of questions and problems that RANN proposes to attack. The question before this body is simply how soon and how much—and time is short.

The proponents of taxpayer financing of the supersonic transport rest another part of their case on the value of technological "spin-off" and "fall-out." They assert that the SST prototype program, like the space program and a number of military weapons programs, will produce spin-off's that will provide benefits for all Americans. Teflon frying pans seem to be a favorite example.

The real value of technological spin-off from past space and military programs has been seriously questioned by some students of those programs. I also understand that this administration has been advised by one of its own advisory groups that the SST would provide little in the way of spin-off's beyond those already anticipated from other military and space programs.

The real question, however, is whether we can afford to wait patiently for spin-off that may just happen along, or whether we should make a positive effort to capitalize on the abundant product of past research to benefit the citizens who paid for it.

Technological spin-offs are crumbs. They fall to those waiting below the table. The overriding purpose of the meal clearly is not to make crumbs for those who wait, but to satisfy the requirements of those who feast around the table.

The time has come when the American people must be seated at the table. It is too much to ask the American public to continue to pay for the meal, but only receive the crumbs from it.

Only 5 percent of the population of the United States alive today would ever ride the SST. The few crumbs of technological spinoff that may fall to the rest of us in return for the use of our funds in the SST prototype program are just not enough to justify our investment. I daresay, moreover, that it will be a long time before the American public will get any financial dividend from a project our most astute bankers will not touch.

If the Senate decided to reorder our national priorities and to proceed on the general premise that the approximately $430 million now programed for SST prototype development could be used to provide greater benefits to more people, then these would be the results as I see them:

First. Answers to some of the urgent problems that affect all Americans.

Second. Creation of jobs for workers now in defense-related laboratories and aerospace industries, and prepared development of manpower retraining and conversion programs.

Third. Maintenance of scientific and engineering teams for future aerospace needs when private capital becomes available.

There are, in my judgment, more advantages for more people under my proposal. It is a positive alternative to the SST prototype development.

I am not opposed to the American SST. If the American SST becomes an economically, technically, and environmentally sound project, Boeing, General Electric, and the great American financial institutions will build and sell American SST's. I look forward to the time when that will happen. In the meantime, my choice is to defer further Government sponsorship of SST prototype development and instead to use that money on problems which affect all Americans.

I will vote against further funding for the supersonic transport and will instead press for the implementation of a program of the sort I have outlined.

Mr. President, I ask unanimous consent to have printed in the RECORD at this point a letter to me from W. H. Mautz, Assistant Director of APL, along with a complete list of the ongoing projects there, and a list of environmental and health-related research projects being conducted in AEC laboratories. Mr. Mautz's letter is particularly interesting for its discussion of the application of advanced technology to social needs. I also ask unanimous consent to have printed in the RECORD a list of civil-sector-related contracts performed by defense-related organizations and two articles which appeared in the March 12, 1971, issue of Science: The first, "Interdisciplinary Problem-Oriented Research in the University," by F. A. Long, and the second, "Unemployment: What Nixon Is/Isn't Doing To Help Jobless Scientists," by Philip M. Boffey.

There being no objection, the material was ordered to be printed in the RECORD, as follows:

APPENDIX A

THE JOHNS HOPKINS UNIVERSITY,
*Silver Spring, Md., March 18, 1971.*

Hon. THOMAS F. EAGLETON,
*U.S. Senate,*
*Washington, D.C.*

DEAR SENATOR EAGLETON: Mr. Lauren Walters of your staff informs us that you are interested in the difficulties associated with the entry of institutions which have been doing defense and aerospace work into programs aimed at understanding and alleviating critical civil and social problems. Mr. Walters felt that we might be of help in the particular case of university affiliated laboratories. In order to provide this assistance we have discussed below some of the central problems which arise when a university affiliated nonprofit organization attempts to initiate work on civil and social problems. We are including the names of a few possible contacts at similar laboratories which may be helpful to you. In addition, to give you a feeling for our program in this area I have attached lists of programs in progress, programs for which we submitted proposals but which were not funded, and programs for which we have submitted proposals but which have not been acted upon at this time.

There are a number of factors which make the movement into these areas rather complicated and slower than most of us would desire. Of course, the shortage of funds available to research in many of the socially related areas is very important; however, it is by no means the only major factor. The successful evolution of research and development programs in a mission-oriented area requires the delineation of fairly clear objectives into a well planned and systematic approach. For many of the social problems the fractionation of responsibility among a multitude of government agencies often makes the pulling together of a cohesive program most difficult. Most of the agencies concerned have not had the experience that the Department of Defense and NASA have had in organizing complex efforts on a large scale and have been more concerned, in their more limited efforts, with the support of research on an individual investigator basis rather than on the concept of integrated interdisciplinary teams carrying a systematic development through to a pilot operation stage. The result is that the methods of focusing modern technological approaches on our social and environmental problems are ones that will take time and major effort to evolve.

Another item which I feel should concern you is the problem of "matching funds". As you are probably aware, many of the agencies such as the National Science Foundation or the National Institutes of Health, for example, operate under the requirement imposed by Congress for cost-sharing by the recipients of grants. In the case of the nonprofit institutions in the country, and particularly so-called Federal Contract Research Centers like our Laboratory, which are devoted entirely to carrying out work for the United States Government, this poses a very serious difficulty because there are, in general, no nonfederally derived funds available to cost-share. There is a question as to whether the Congress has given the executive agencies the authority to alleviate this problem in attempting to put oragnizations such as APL/JHU to work on problems considered to be of great urgency. It is self-defeating to urge, on the one hand, such organizations to devote more effort to civilian areas and, at the same time, to impose rules that make it most difficult to do that very

thing. In our medical programs, which you will find are a major part of our joint activity with the other divisions of the University, our cost-sharing has been achieved by the contribution of the time and support of our collaborators in the School of Medicine. Since the School of Medicine is in fact "running in the red", this mechanism is in some danger and certainly is not easily expandable beyond its present level. In some of the other areas in which we are interested, but in which there is no particular professional competence already in endowed divisions of the University, the mechanism will not be available at all. We are facing this problem head-on in terms of various programs we are trying to initiate in areas such as education of retarded and culturally deprived children.

Another factor which is acute for the University affiliated nonprofit institution is the lack of resources for supporting the sequential steps necessary to enter the newly emphasized critical problem areas. In order to institute programs in these areas, flexible support must be available to allow a sequence of prerequisite steps:

(1) Orientation in the new area. Understanding basic problems and relation to symptoms, etc.

(2) Selection of a problem for which the Laboratory has high prospects of making a significant contribution.

(3) The organization of collaborative interdisciplinary teams if the nature of the problem requires disciplines from other University divisions or other institutions.

(4) The generation of a specific viable program.

(5) Writing of a research proposal, and

(6) Waiting the 6–9 months between submission and support of a successful proposal.

You will note that even in an area where the Laboratory has the background experience and the necessary disciplines, steps 4–6 must still be supported to make a contribution in these national problem areas. For university affiliated nonprofits, such as the Applied Physics Laboratory, the support "in-house" for these activities is very limited.

We hope that this broad statement of "some of the problems faced by University associated research centers" may be helpful to you. Many of these observations are probably applicable to other free-standing nonprofit organizations as well as industrial organizations.

With respect to the Defense sponsored R&D centers, we believe you will be interested in the positive position taken by the Secretary of Defense in his letter of March 4, 1969 to other Cabinet Officers suggesting that the capabilities of the Defense sponsored Federal Contract Centers might assist those Departments in alleviating some of our serious domestic problems. Memoranda from the Director of Defense Research and Engineering to the Military Departments and the heads of Defense FCRC's in this regard are also included.

As Mr. Walters is aware the Applied Physics Laboratory, as a Division of The Johns Hopkins University, has since late 1965 been developing programs to bring the fruits of advanced defense technology to bear on problems of civilian concern, first with NASA and shortly thereafter with collaborative work with the Johns Hopkins Medical Institutions, and programs for the Department of Transportation, ESSA, NIH, Veterans Administration, Coast Guard, and HEW. In our fiscal year of 1966 approximately 7.8% of the staff was working on civilian programs. Currently about 17.5% of the staff are engaged on such programs.

I hope these materials will be helpful to you. Please call us if we can be of further assistance.

Sincerely yours,

W. H. MAUTZ,
*Assistant Director.*

Active Programs

THE JOHNS HOPKINS UNIVERSITY,
APPLIED PHYSICS LABORATORY.

*Nuclear Medicine*—$300,000 (5 years)—Radionuclide imaging system evaluation and optimization in collaboration with the JHU School of Hygiene and Public Health. Supported by National Institute of General Medical Sciences.

*Myocardial Infarction Research Unit*—$750,000 (5 years)—Development and implementation of patient data management, sensors and data processing for on-line patient monitoring. Supported by National Heart and Lung Institute.

*Neurosensory Interdisciplinary Research Program*—$1,125,000 (5 years)—Development search on neuromuscular applications and human communication. Supported by the National Institute of Neurological Diseases and Stroke.

*Retinal Cinematography*—$86,000 (3 years)—Development of a Fundus Camera for Retinal Cinematography in collaboration with JHU School of Medicine. Supported by the National Eye Institute.

*Prosthetic Arm-Hand*—$300,000 (3 years)—Interdisciplinary development and evaluation of an externally powered upper limb prosthesis in collaboration with the JHU School of Medicine. Supported by the Veterans Administration.

*Three-Dimensional Radiography*—$300,000 (2 years)—Development of prototype clinical equipment for three-dimensional radiographic imaging in collaboration with the JHU School of Medicine. Supported by National Institute of General Medical Sciences.

*Advanced Transportation Systems*—$635,000 per year:

Screening of proposed transportation systems which show promise for the solution of mass transportation problems. Supported by the Department of Transportation; and

Assistance in defining control system, components and performance criteria for the installation of an automatic system at the University of West Virginia (subcontract to system manager Jet Propulsion Laboratory) or $200,000.

*Advanced Automotive Propulsion Systems*—$159,000 per year—Study and development program for the application of flywheels to advanced automotive propulsion systems. Supported by the Department of Health, Education, and Welfare.

*Fire Research*—$470,000 (2 years)—Research and synthesis of existing knowledge on fires; the development of engineering technology and education in fire management. Supported by the National Science Foundation.

*Marine Traffic System*—$960,000 (2½ years)—Design, fabricate and install an automated radar system for traffic advisory service in San Francisco Harbor. This system will help prevent ship collisions and will thereby also help prevent pollution spills. Supported by U.S. Coast Guard of the Department of Transportation.

*Data Buoy Location System*—$27,000 (1 year)—Design a satellite receiving system for use aboard free-floating data aquisition buoys to provide position information. Support pending but expected from the National Oceanic and Atmospheric Administration, National Data Buoy Program.

*River and Harbor Position Location*—$49,000 (1 year)—Development of the definition of the capabilities required in a river and harbor position location system. Supported by U.S. Coast Guard of the Department of Transportation.

*Loran Assist Techniques*—$48,000—Development of equipment to be used in conjunction with LORAN to provide navigational information. Supported by U.S. Coast Guard of the Department of Transportation.

PROPOSALS SUBMITTED BUT NOT YET ACTED UPON

*Interdisciplinary Ophthalmological Research*—$1,250,000 (5 years)—Program of research and development in the understanding of basic ophthalmological phenonemna in the application of this understanding to clinical use. Support requested from the National Eye Institute.

*Cancer Patient Care*—$300,000 (4 years)—Application of technical and scientific expertise to diagnostic and therapeutic management of patients with cancer in collaboration with the JHU School of Medicine and to be submitted to the National Center for Health Services Research and Development.

*Air Traffic Control*—$500,000 per year—Development and implementation of radar signal processing and data processing for Air Traffic Control. Submitted to the Federal Aviation Administration, Department of Transportation.

*Cooperative Biomedical Projects*—$100,000 per year—Development of new instruments and clinical devices for programs in progress under existing grants in the Johns Hopkins Medical Institutions. Various funding agencies.

*Clinical Engineering Task*—$80,000 per year—Supply technological support to Johns Hopkins Hospital to use modern systems and instruments to handle patients and patient data reduce health care costs. Supported by the Johns Hopkins Hospital.

*Detection and Prevention of Arteriosclerosis*—$700,000 (5 years)—Develop new instrumentation to facilitate clinical studies from the pediatric to the geriatric to define protocols for the prevention of arteriosclerosis.

PROPOSALS TO BE SUBMITTED

*Chesapeake Bay*—(Applied Physics Laboratory participation in multiuniversity consortium)—On the environmental impact of growth in the Chesapeake Bay Region—an interdisciplinary study of the Bay ecology. This is proposed to be a collaborative effort with all Johns Hopkins University Divisions and several other institutions. The Applied Physics Laboratory's effort in the first year is budgeted at $160,000. The budget for subsequent years has not been established. To be submitted to the National Science Foundation (1971).

PROGRAMS SUBMITTED BUT NOT FUNDED

*Short-Lived Radiopharmaceuticals*—$2,314,000 (5 years)—Development of new short-lived radiopharmaceuticals for biomedical research using cyclotron-produced nuclides in collaboration with JHU School of Hygiene and Public Health. Funded by the National Institute of General Medical Sciences (1966) contingent upon a facilities request being funded.

*JHU/APL Radiopharmaceutical Research Center*—$490,000—Construction of a building to house the short-lived radiopharmaceutical research facility. Submitted to the Division of Research Resources, National Institutes of Health (1966). Not funded.

*Instrumentation for Monitoring Cardiac Devices*—$69,000—Development of transducer and telemetry instrumentation for pressure monitoring of artificial hearts and cardiac assist devices in collaboration with the JHU School of Medicine. Submitted (1967) to the National Heart Institute. Not funded.

*Blood Flow Instrumentation*—$94,000—Development of Blood Flow Instrumentation for clinical application in collaboration with the JHU School of Medicine. Submitted to the National Heart Institute (1968). Not funded.

*Implantable Artificial Heart*—$3,800,000 (5 years)—Development of ambulatory externally powered implanted artificial blood pump (heart) in collaboration with JHU School of Medicine. First proposed to National Heart Institute. Judged as engineering rather than research. Support sought from Hartford Foundation without success.

Presently, we are seeking support from health supply industry. Profit possibilities not attractive to industry.

*Intrathoracic Pump*—$157,000 (1 year)—Development of an intrathoracic pumping device for temporary total left heart bypass in collaboration with JHU School of Medicine. Subitted in 1969 to the National Heart Institute. Not funded.

*Diagnosis and Monitoring of Cardiac Disease*—$1,624,000 (5 years)—Interdisciplinary development of clinical procedures and devices for diagnosis and monitoring of cardiac disease in collaboration with JHU School of Medicine. Submitted to the Center for Health Care Research and Development (HEW 1969). Not funded.

*Permanently Implanted Pacemaker* — $149,500 (2 years)—Development of a permanently implanted externally adjustable demand pacemaker. Submitted (1969) to the National Center for Health Services Research and Development (HEW). Not funded.

Two proposals above were submitted to the then relatively new Center for Health Services Research and Development. One on an adjustable demand heart pacemaker and the other on monitoring and diagnosis of heart disease. The submission of the pacemaker proposal was enthusiastically encouraged by personnel of the Center. There was no explanation as to why they were not funded.

*Visual Prosthesis*—$315,000 (2 years)—Development of a Visual Prosthesis in collaboration with JHU School of Medicine. Submitted (1970) to National Institute of Neurological Diseases and Stroke. The Institute requested that a revised proposal with reduced scope be submitted.

*Biomedical Image Processing*—$1,230,000 (5 years)—Proposal for study of computer processing of Biomedical Data and Images in collaboration with the JHU School of Medicine. Submitted to Division of Research (NIH). Not funded. Related proposal later submitted to National Institute of General Medical Sciences. Not funded. The reviewing group recommended that one part of the proposal, the Three-Dimensional Radiography Project, be supported under contract. Eighteen months later (after the submission of a third proposal) the National Institute of General Medical Sciences funded the Three-Dimensional Radiography Project as a contract.

*Air Pollution*—$1,200,000 (5 years)—An experimental study of air pollution using remote electromagnetic probing and direct measurements of contaminant diffusion. Program is in collaboration with Brookhaven National Laboratory. Submitted to the National Science Foundation (1970). Not funded.

*Educational Technology*—$75,000 (first year)—An investigation of the use of educational technology in special education in collaboration with staff members of Johns Hopkins, University of Maryland, George Washington University and several institutions devoted to the rehabilitation of handicapped children. Proposal for planning grant submitted to National Science Foundation (1970). Not funded.

*Weather Radar Signal Processing*—$110,000—Application of pulse doppler radar processor to the study of rainstorm turbulence. Submitted to the Federal Aviation Administration (1969). Not funded; lack of funds.

APPENDIX B

ENVIRONMENTAL AND HEALTH RELATED RESEARCH FOR OTHERS AT AEC LABORATORIES

| Sponsor | Title | Estimated fiscal year 1971 costs |
|---|---|---|
| **Argonne National Laboratory:** | | |
| Department of Defense (DOD). | Battery for Vehicular Propulsion | $150,000 |
| Do | 2 Phase MHD System | 70,000 |
| Environmental Protection Agency (EPA). | A Study of the Fate of Carbon Monoxide in the Atmosphere. | 29,000 |
| Do | Air Pollution Episode Control Planning Agreement No. 690003. | 118,000 |
| Do | Air Pollution Land-Use Planning | 74,000 |
| Do | Chicago Air Model | 11,000 |
| Do | Development of the Integrated Puff Atmospheric Dispersion Model Computer System. | 60,000 |
| Do | Fluidized Bed Treatment of Coal | 383,000 |
| Department of Health, Education and Welfare (HEW). | Artificial Kidney | 125,000 |
| Do | Braille Reader | 146,000 |
| Do | Implantable Secondary Battery | 192,000 |
| Coordinating Research Council, Inc. (CRC). | A Study of the Fate of Carbon Monoxide in the Atmosphere. | 63,000 |
| **Brookhaven National Laboratory:** | | |
| Department of Defense | Studies on Meningococcus polysaccharides | 25,000 |
| Environmental Protection Agency. | Ozone Treatment of Acid Mine Drainage | 20,000 |
| Do | Stable Tracers for $SO_2$ | 119,000 |
| Department of Health, Education, and Welfare. | Chemical Dissection and Therapy of Brain Disorders. | 108,000 |
| Do | Radiation Studies re Cancer and Radiobiology Training Grant. | 60,000 |
| Department of the Interior (DOI). | Concrete Polymer | 285,000 |
| National Aeronautics and Space Administration (NASA). | Low g Effects on Tradescantia | 83,000 |
| National Science Foundation (NSF). | Superconducting Electrical Power Transmission Studies. | 40,000 |
| Department of Transportation (DOT). | Development and Use of the BNL Dose Equivalent Meter for Measurement of Radiation Levels at Elevations of 20,000–70,000 Feet. | 30,000 |
| American Heart Association (AHA). | Environmental Genetic Interactions in Hypertension. | 12,000 |
| The Population Clinic, Rockefeller University. | Effects of Progestogens on Serum | 26,000 |
| **Lawrence Radiation Laboratory—Berkeley:** | | |
| National Aeronautics and Space Administration. | Heme Catabolism | 27,000 |
| **Los Alamos Scientific Laboratory:** | | |
| Department of Health, Education, and Welfare. | Application of High-Speed Flow-System Methods of Cell Analysis and Sorting to Cancer-Related Cell Populations. | $150,000 |
| Do | Microfluorometry of Cell Cultures | 78,000 |
| Do | Study of Potential of Reversibly-Arrested Cell Populations for the Screening of Certain Anti-Neoplastic Agents. | 17,000 |
| **Oak Ridge National Laboratory:** | | |
| Environmental Protection Agency. | Application of Cross-Flow Filtration to Pollution Control Problems. | 102,000 |
| Do | Automated Analysis of Polluted Water | 74,000 |
| Do | Cooperative Gas Aerosol Study | 13,000 |
| Do | Hydrodynamic Control of Flux of Cellulose Acetate Membranes Used in Hyperfiltration of Municipal Sewage Effluents. | 82,000 |
| Do | Hyperfiltration of Sewage Effluent | 80,000 |
| Do | $SO_2$ Absorbers | 31,000 |
| Do | The Development of Electrochemical Air Monitors for Chlorine and Chlorides. | 25,000 |
| Department of Health, Education, and Welfare. | Biological Separations | 563,000 |
| Do | Clinical Analyzer | 271,000 |
| Do | Co-Carcinogenesis | 1,717,000 |
| Do | Desalting Protein Solutions | 32,000 |
| Do | Electron Microscopy | 121,000 |
| Do | Environmental Mutagen Information Center | 20,000 |
| **Pacific Northwest Laboratory:** | | |
| Department of Defense | Critical Atmospheric Turbulence | 114,000 |
| Environmental Protection Agency. | National Precipitation Washout of Sulfur Dioxide | 94,000 |
| Department of Health, Education and Welfare. | Dissipation of Heat | 35,000 |
| Do | Uranium Mining Hazards | 421,000 |
| **Puerto Rico Nuclear Center:** | | |
| Department of Agriculture (DOA). | Irradiation Control of Sugarcane Borer | 6,000 |
| **Savannah River Operations Office:** | | |
| Environmental Protection Agency. | Construction of 6 Stream Channels | 40,000 |
| **University of Rochester Atomic Energy Project:** | | |
| Department of Health, Education and Welfare. | Uranium Mining Hazards | 119,000 |
| | Total for the 68 projects listed | 11,424,000 |

RECENT CIVIL SECTOR SYSTEM-RELATED CONTRACTS PERFORMED BY DEFENSE-RELATED ORGANIZATIONS

| Contractor | Description | Customer | Completion date and/or duration | Contract amount |
|---|---|---|---|---|
| Aerojet-General (Von Karman Center) | California waste management | California Department of Health | 6 months, August 1965. | $100,000 |
| Do | Solid waste study, compilation of information | U.S. Department of Health, Education, and Welfare | 7 months | 60,000 |
| Do | Solid waste management study for Fresno area | California Department of Public Health | 24 months | 175,000 |
| Aerojet-General (AERTON and Von Karman Center). | Industrial waste water pollution treatment (demonstration plant). | Federal Water Pollution Control Administration | 15 months, May 1968. | 323,500 |
| Aerojet-General | Salinity balance model for Santa Ana River Basin | Southern California Regional Pollution Control Board | (1) | (1) |
| Do | Special equipment for recording dam bank pressures | California Department of Water Resources | (1) | (1) |
| Do | Data for Elko, Nev. weather modification experiment | Desert Research Institute, University of Nevada | 12 months | 30,000 |
| Aerojet-General (AETRON) | South Bay aqueduct control model | California Department of Water Resources | Late 1967 | 772,000 |
| Do | Automated ship control systems | Jacksonville Shipyards | do | 700,000 |
| Do | do | Defoe Shipbuilding Co | April 1968 | 350,000 |
| Aerojet-General | Sack-parcel sorter | U.S. post office | (1) | 5,400,000 |

Footnotes at end of table.

RECENT CIVIL SECTOR SYSTEM-RELATED CONTRACTS PERFORMED BY DEFENSE-RELATED ORGANIZATIONS—Continued

| Contractor | Description | Customer | Completion date and/or duration | Contract amount |
|---|---|---|---|---|
| Aerojet-General | Management and information system for community action programs. | Sacramento Area Economic Council | (1) | $24,000 |
| Do | Total education information system | California Department of Education | (1) | 89,900 |
| Aerojet-General (Space General) | Prevention and control of crime and delinquency | California Youth and Adult Corrections Agency | July 1965 | 100,000 |
| Do | Welfare report | California Department of Social Welfare | March 1967 | 225,000 |
| AVCO Corp | Coal vaporizing research study through pilot plant | Interior Department, Office of Coal Research | (1) | 1,821,000 |
| Burroughs Corp | Letter-sorter | U.S. post office | (1) | 6,123,532 |
| Fairchild Hiller (Republic Aviation Division). | Feasibility study of a prototype safety car program | New York State Department of Motor Vehicles | 1966 | 75,000 |
| Do | Phase II development prototype safety car program | do | 1967 | 285,000 |
| Garrett Corp. (Airsearch Division) | Feasibility of linear induction motors in high-speed ground transportation. | U.S. Department of Commerce | 12 months | 72,943 |
| Gulton Industries | Blue Mesa Dam, Colo., supervisory control. Digital telemetry and closed circuit TV system. | U.S. Bureau of Reclamation | Summer 1966 | 106,000 |
| Hughes Aircraft Co | Literature survey on the command control of high-speed ground transportation systems. | U.S. Department of Commerce (OHSGT) | 1965 | 2,500 |
| Institute for Defense Analyses | Sonic boom | U.S. Department of Commerce | Nov. 30, 1964 | 65,000 |
| Do | Air traffic control (North Atlantic area) | Federal Aviation Agency | June 30, 1965 | 137,000 |
| Do | Air travel demand 1970–90 (SST) | do | Dec. 31, 1966 | 219,500 |
| Do | PPB for universities | American Council on Education (Ford Foundation grant) | June 30, 1965 | [2] 28,000 |
| Do | Office of Economic Opportunity administrative management program information system. | Office of Economic Opportunity | Feb. 28, 1966 | 194,000 |
| Do | Law enforcement and criminal justice | President's Commission on Law Enforcement and Administration of Justice. | Apr. 30, 1967 | [3] 498,000 |
| Litton Industries | Appalachian regional development | U.S. Department of Commerce, Area Redevelopment | (1) | 130,000 |
| Do | Economic land use | Greek Government | 4 months, 1966 | 125,000 |
| Lockheed Missiles & Space Co | Design of a statewide information system for California | California Department of Finance | 6 months, July 30, 1965. | 100,000 |
| Do | Analysis of a statewide information system | Massachusetts | June 30, 1966 | (1) |
| Do | Information system | Alaska | (1) | (1) |
| Do | Regional education technology laboratory | U.S. Office of Education | September 1967 | 88,000 |
| Do | Analysis of professional and vocational training standards | California Department of Professional and Vocational Schools. | (1) | (1) |
| Do | Medical service information system | Mayo clinic | 12 months, 1968 | (1) |
| Do | Disaster casualty management system | Texas Hospital Association | (1) | 80,000 |
| Do | Blood bank information system | Los Angeles | (1) | (1) |
| Do | do | Sacramento | (1) | (1) |
| Do | do | Contra Costa County | (1) | (1) |
| Do | Conceptual design of a 50 m.g.p.d. desalination plant | Office of Saline Water | (1) | (1) |
| Lockheed International | Transportation system in the Sudan | Agency for International Development | 32 months | (1) |
| Melpar | Instrumentation equipment and research for test cars | U.S. Department of Commerce | 28 months | 1,107,907 |
| MevA Corp | Regional economic impact of Bridge and Marble Canyon Dam. | U.S. Bureau of Reclamation | 1965 | (1) |
| Do | Domestic water use planning | California Department of Water Resources | 6 months, Oct. 1, 1965. | 27,000 |
| Do | System concept for Pilot River Basin | U.S. Bureau of Reclamation | 1966 | (1) |
| Do | Pilot program for Pilot River Basin | U.S. Geological Survey | 1966 | 5,000 |
| Do | Design of flood control center | California Department of Water Resources | 1966 | 5,000 |
| Do | Study of automobile rear-end collisions | U.S. Bureau of Public Roads | 24 months, 1966–68 | 343,000 |
| MITRE Corp | Technical support of major system programs | U.S. Department of Commerce | (1) | 165,000 |
| Do | Systems engineering support for the National Airspace System. | Federal Aviation Agency | 1 year, December 1967. | 2,043,000 |
| Do | Technical support for Office of High Speed Ground Transportation. | U.S. Department of Transportation | January 1967–February 1968. | 170,000 |
| North American Aviation | Design of a study to develop an integrated transportation system for California. | California Division of Highways | 6 months, September 15, 1965. | 100,000 |
| North American Aviation (Subcontractor to Burns & Roe). | Develop personnel training system | California Department of Water Resources | Mid-1968 | 1,900,000 |
| Do | Develop educational reference resource center | Department of Health, Education, and Welfare | 1 year | 177,000 |
| Do | Develop management system for Bonneville Power Administration. | Bonneville Authority, Department of Interior | 1st phase, 6 months | 70,000 |
| Do | Research on ice formation in $H_2O$ | Office of Saline Water | 1 year | 200,000 |
| Do | Use of biomass systems in water renovation | Department of Health, Education, and Welfare | do | 91,000 |
| Northrop Co. Page Communications | Satellite earth stations installation, and some operating activities; and telecommunications systems design. | Comsat Corp., and others | (1) | [4] |
| Philco-Ford | Computer model of poverty | Colorado State Department of Education | (1) | (1) |
| Do | Automated education system | Philadelphia School System | (1) | 1,300,000 |
| Do | ZIP code readers | U.S. post office | (1) | 3,500,000 |
| Do | South Bay Aqueduct control system—2d phase | California Department of Water Resources | (1) | 349,700 |
| Do | Aqueduct control center—engineering contract | do | (1) | 385,000 |
| Sperry Rand Corp | Traffic control system | New York City | (1) | 5,400,000 |
| System Development Corp | Education data systems requirements study | U.S. Office of Education | 12 months, 1965 | 153,045 |
| Do | Technical monitoring and evaluation of 4 aerospace systems contracts. | California | 6 months, 1965 | 30,000 |
| Do | Criminal justice identification and intelligence system | New York State | 48 months | 1,027,000 |
| Do | Police information system design study | City of Los Angeles | 6 months, 1966 | 50,000 |
| Do | Study of traffic flow patterns and characteritics | U.S. Bureau of Public Roads | 36 months | 509,263 |
| Do | Evaluation of automated comprehensive planning and programing systems. | U.S. Department of Housing and Urban Development | 8 months | 48,000 |
| Do | National information system in science and technology, background study. | Federal Council for Science and Technology | 15 months | 106,00 |
| Do | Manpower information system | Office of Economic Opportunity | 12 months, 1967 | 299,605 |
| TRW Systems | Edmonton health sciences center planning | Dominion of Canada | 9 to 12 months | 650,000 |
| Do | Regional medical information system | State of Vermont | October 1967 | 40,000 |
| Do | High-speed ground transporation systems engineering studies. | U.S. Department of Commerce, Office of High Speed Ground Transportation. | December 1968 | 2,900,000 |
| Do | Santa Clara land use information study | California Department of Finance | 15 months, May 1967. | 220,000 |
| Do | San Bernardino water resource study | San Bernardino Metropolitan Water District | August 1966 | 20,000 |
| United Aircraft Corp | Lease of 2 TMT-30 turbine-driven MU trains | U.S. Department of Commerce | 42 months | 2,159,626 |
| United Aircraft Corp. (United Aircraft Research Laboratories). | Feasibility of tunneling by flame jet | do | (1) | 164,921 |

[1] Not available.
[2] No contract amount expended.
[3] Additional funding of $38,000 requested.
[4] $7 to $12,000,000 a year.

RECENT CIVIL SECTOR SYSTEM-RELATED CONTRACTS PERFORMED BY NONDEFENSE ORGANIZATIONS

| Contractor | Description | Customer | Completion date and/or duration | Contract amount |
|---|---|---|---|---|
| Building System Development Corp | College facility design | State of California | (1) | (1) |
| Celestial Research Corp | Analysis and feasibility of cryopumping techniques for tubular vehicles propulsion. | U.S. Department of Commerce | 18 months | $26,000 |
| Environmental Science Services | Electronic communications for HSGT feasibility study | do | (1) | 13,000 |
| General Electric | Study of power collection at high speeds by nonsteering ground vehicles. | do | (1) | 135,735 |
| General Motors Research Laboratory | Study of the potential for HOVAIR for HSGT | do | 9 months | 71,500 |
| Hydronautics, Inc | Study of rock tunneling by high-speed water jets utilizing cavitation damage principle. | do | 7 months | 37,000 |
| Ionics, Inc | Preliminary technical and economic evaluation of the electrodialysis process on a synthetic irrigation drainage return flow water. | Office of Saline Water | (1) | (1) |
| I.I.T. Research Institute | Dynamic simulation of rail transport for autos and passengers. | U.S. Department of Commerce | 6 months | 31,075 |
| Kimball Systems, Inc | Data-tag supplies and lease of EDP equipment for passengers. | do | 39 months | 1,107,907 |
| Massachusetts Institute of Technology | Continuation of engineering feasibility study of HSGT | do | 10 months | 486,000 |
| Do | Continuation of study on system analysis of short-haul air transportation. | do | 13 months | 68,306 |
| McKinsey & Co | Management information system | Office of Economic Opportunity | 1966–67 | 135,000 |
| Midwest Research Institute | System design for development of monitoring program to detect and evaluate pesticide residue levels in humans. | Public Health Service | Dec. 5, 1966 | 59,500 |
| Do | Systems study of centralized processing for selected library function in State of Nebraska. | State of Nebraska | June 30, 1967 | 7,075 |
| Do | Study of packaging, materials, and waste disposal | Public Health Service | Jan. 18, 1968 | 53,884 |
| Do | Traffic simulation for the design of uniform service roads in mountainous terrain. | U.S. Bureau of Public Roads | July 31, 1968 | 99,391 |
| New York City | Develop, design, and test the design of a PPB system | U.S. Department of Housing and Urban Development | (1) | 50,000 |
| Oceanics, Inc | Continue research on aerodynamics, etc., of tubular vehicles. | U.S. Department of Commerce | (1) | 85,000 |
| Do | Perform aerodynamics study on tubular vehicles | do | 13 months | 29,090 |
| Polytechnic Institute of Brooklyn | Computer simulation model of urban police system | U.S. Department of Justice | 2 years; completion Aug. 31, 1968. | 43,000 |
| Rensselaer Polytechnic Institute | Extension of study of air-supported vehicles in a nonevacuated tube. | U.S. Department of Commerce | 30 months | 323,000 |
| Do | Feasibility study of air-supported vehicles in a nonevacuated tube. | do | 12 months | 225,000 |
| School Construction Systems Development. | School construction system development project | Educational Facilities Laboratory (Ford Foundation) | 1961–67 | 750,000 |
| Tulane University | Contract between the division of medical computing Sciences of the Tulane School of Medicine and the Division of Hospitals and Medical Facilities of the U.S. Public Health Services, for analysis of physical characteristics of input-output devices for computers in hospitals. | Public Health Service | (1) | 234,000 |
| University of California (Los Angeles) | Simulation analysis of Pennsylvania RR. operations between Washington, D.C., and New York City. | U.S. Department of Commerce | 4½ months | 30,000 |
| Westinghouse | Design and demonstration of a transit expressway system | U.S. Department of Housing and Urban Development | (1) | 5,000,000 |

[1] Not available.

Source: John Gilmore, John Ryan, et al., Denver Research Institute, Defense Systems Resources in the Civil Sector, Prepared for U.S. Arms Control and Disarmament Agency] (Washington, D.C., 1967), pp. 148–53.

APPENDIX D

[From Science, Mar. 12, 1971]

INTERDISCIPLINARY PROBLEM-ORIENTED RESEARCH IN THE UNIVERSITY

The societal problems that face us today are thorny ones. Even though most of them have large scientific and technological components, their solutions more often than not demand the *simultaneous and interactive* efforts of a wide spectrum of talented professionals: scientists, engineers, social scientists, political scientists, lawyers, and doctors, to name only the most obvious. These are the efforts that we have in mind when we speak of interdisciplinary research.

Neither the concept nor the practice of interdisciplinary research is new. Government laboratories, industrial laboratories, and nonprofit research groups like the Rand Corporation have been engaging in interdisciplinary research for years—often, however, oriented toward defense problems. What is new is the realization that a similar but vastly expanded approach must be directed toward society's problems. This realization has resulted in urgent calls for new research institutions: National Environmental Laboratories, Institutes for Health and Medicine, reoriented National Laboratories, and so on. In such rosters of needed organizations, the universities are often missing. Apparently there is a common conviction that universities are not the place to obtain effective interdisciplinary research on societal problems. In my judgment this belief is both wrong and dangerous.

The reasons that are given for counting the universities out are well known. The universities, it is said, are discipline-oriented (physics, agronomy, sociology), an orientation inimical to interdisciplinary research. Furthermore, universities are oriented toward basic research, while the current need is for applied research. Finally, the pace of university research is too slow to be effective. There is a germ of truth in each of these points, but they do not encompass the whole truth and, in sum, are grossly misleading. Try, for example, to persuade a College of Agriculture or Engineering that it is not interested in applied research!

Why should one turn to the universities for interdisciplinary research? First, the universities are repositories of much of the necessary brain-power and knowledge. The ecologists, political scientists, and sociologists who are essential to these interdisciplinary studies are, in large measure, to be found in the universities.

Second, the universities have a deep concern. Faculty, and especially students, are sensitive to social problems, are eager to work on them, and are often prepared to change their previous ways of life to do so. The pressures of discipline orientation and the tradition of individual scholarship are strong among faculty members, but not strong enough to counter the pressures of social concern. Universities are changing rapidly and will change much more.

But the most important reason why the universities must become involved in interdisciplinary research—and the central reason why society must *insist* on their participation—is their obligation to youth. Coming generations must be taught about society's problems and about the best ways to solve them. College students must learn a genuinely interdisciplinary approach; this can only happen when their professors have personal knowledge of and commitment to interdisciplinary research and when there are programs wherein students can learn by doing—in short, when an interdisciplinary approach permeates the universities.

Pressure the universities if you will; castigate their occasionally overly narrow behavior; insist on changed structures and reward mechanisms. But for earth's sake, don't count them out. Without their active involvement, the future will be a good deal dimmer than it might otherwise appear.—F. A. LONG, *Cornell University*

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[From Science, Mar. 12, 1971]

NEWS AND COMMENT—UNEMPLOYMENT: WHAT NIXON IS/ISN'T DOING TO HELP JOBLESS SCIENTISTS

The plight of some 60,000 unemployed scientists and engineers received high-level attention in Washington last week, but there was no indication that the Nixon Administration intends to launch a major program to put the jobless professionals back to work.

Top federal officials held a day-long working conference on 3 March with leaders from professional societies, industry, and the universities to discuss plans for alleviating the unemployment crisis caused by cutbacks in the aerospace and defense industries. The only new announcement made at the meeting was that the Departments of Housing and Urban Development and of Labor will conduct a $1.2-million pilot program to put some 400 to 600 unemployed scientists and technicians to work on urban problems. If

the program is successful, it will be expanded to serve upward of 2000 persons.

President Nixon himself was scheduled at one point to drop in on the conference, but this manifestation of high-level concern fell through at the last minute. Nevertheless, there were enough top administrators on hand to satisfy most participants. The conference was chaired by Edward E. David, Jr., the President's science adviser, and it was opened by Secretary of Labor James Hodgson. Late in the afternoon David and another key participant—Malcolm J. Lovell, Jr., assistant secretary of labor for manpower—were whisked over to the White House to summarize the thrust of the conference at the daily 4 p.m. briefing for White House correspondents. Judging by the lack of coverage accorded the matter in some of the nation's top papers, the press corps was not greatly excited by the story. But David sought to underline the Administration's desire to help alleviate the misery of unemployed Ph.D.'s by announcing: "The meeting was called at the initiative of the President, who is very much concerned about unemployment generally, but also about unemployment among scientists and engineers."

The conference was billed as an "informational" effort to make the scientific and engineering communities more aware of federal employment programs that are already under way or are in the planning stages. One of the key points that became apparent as the conference wore on was that the Administration does not propose to provide emergency "handouts" (beyond the normal unemployment compensation program) earmarked specially for unemployed scientists and engineers. Nor, according to some participants at the closed sessions, does the Administration plan to put much "pump priming" money into the economy in an effort to encourage private or public employers that don't now use many scientists or engineers to expand their research and development efforts. Instead, the government's effort will center on disseminating job information, counseling unemployed professionals on how to find a job, and funding various demonstration training programs aimed at converting the unemployed professionals to new careers. As Lovell expressed it in a speech prepared for the conference: "Providing engineers and scientists with solid information about job opportunities, job requirements, job locations, and job trends—where the action is—is the most important thing that we can do for them in the long run. Because, in the final analysis, these are educated and intelligent men who can take care of themselves once they have the facts to work with."

Figures were presented to the conference indicating that unemployment in the technical communities has grown rapidly worse, but that the numbers involved are still very small compared with the nationwide unemployment problem. Lovell said the unemployment rate for engineers increased from less than 1 percent in November 1969 to more than 2.5 percent in November 1970—a period when overall unemployment jumped from 3.5 to 5.8 percent. He estimated that some 50,000 to 65,000 engineers, scientists, and technicians who formerly worked in defense and aerospace jobs are now out of work—a relatively small slice of the approximately 5 million people from all occupations who are currently jobless. The chief problems, Lovell said, seem to be located in about 12 areas where defense and aerospace engineers have been displaced—namely, Seattle; Los Angeles and Orange Counties in California; Long Island, N.Y.; Wichita; Cape Kennedy; Huntsville; St. Louis; Boston; Atlanta; Philadelphia; and Dallas.

The chief causes of unemployment among scientists and engineers are fairly well known. As Labor Secretary Hodgson put it: "Defense and space spending has declined as the nation reorders its priorities . . . Colleges and universities, caught in an economic squeeze, have slowed down on hiring faculty members—or have sometimes reduced their staffs. And all this has happened at a time of economic slowdown that has affected employment in all sectors of the economy." The particularly devastating effect of the defense cutbacks associated with the alleged winding down of the Vietnam war was described by Barry J. Shillito, assistant secretary of defense for installations and logistics. Shillito said that between June 1968 and December 1970 the number of jobs directly attributable to defense dollars decreased by 1.9 million and the number of civilian "support jobs" dropped by 1.6 million, for a total decrease of 3.5 million. Since the increase in unemployment for the nation as a whole was only 2.1 million, he said, this gives "a significant indication of the impact that defense expenditures have on the labor market."

ADMINISTRATION REMEDIES

What's being done to alleviate the problem? According to Science Adviser David, in remarks made at the press conference and in a recent speech, the Administration is trying to provide placement and retraining services; it is "trying to cut back on the rate of increase of the pool of scientists and engineers;" it is trying to increase the rate at which activity is shifted from defense and aerospace to civilian problems; and "most important of all, we are putting a good deal of additional funds into the R & D efforts of the country in FY '72 so that the base of R & D activities will expand. We think that is the most fundamentally best way to cure this problem."

Much of the conference was devoted to description of specific federal programs aimed at finding jobs for, and sometimes retraining, unemployed scientists and engineers. The Labor Department reported that there are already a number of job openings available if the right candidates can be matched up with them. As of 31 January, Lovell said, state employment agencies reported 5023 unfilled openings in scientific and engineering occupations—hardly enough to satisfy the total demand for jobs, but still a significant chunk. In an effort to help displaced professionals find work, the Department of Labor has set up a National Registry for Scientists and Engineers (in cooperation with the National Society of Professional Engineers and the State of California Human Resources Development Agency) to provide a central clearinghouse for applications and job openings. The Labor Department, in cooperation with the American Institute of Aeronautics and Astronautics, is also supporting workshops in 34 cities which provide counseling in job search methods and information on job opportunities. And the Department, in cooperation with state employment services, has established "job banks" in 60 areas of the country which provide daily computerized listings of job opportunities. Information on these, and other government programs aimed at assisting jobless scientists and engineers, can be obtained by writing to the nearest local office of the state employment service or to various professional societies. Still, even federal officials acknowledge that their efforts are "not nearly enough." As Lovell expressed it at the press conference: "I think one of the problems we face, frankly, is that nobody really does have any foolproof, sound ideas." However, he added hopefully that, "We have probably reached a point where the layoffs of engineers and scientists are about ended in terms of the defense and space effort. So we don't see the problem getting any worse."

The relatively small number of scientists and engineers who are out of work has raised questions as to why the federal government should do anything more to help them out than it is already doing for other groups. Reporters attending the press conference indicated they thought some aspects of the Administration's program to help scientists amounted almost to special class legislation. One reporter, for example, suggested that the new $1.2 million program to help scientists is "philosophically at odds" with President Nixon's drive to reduce categorical aid programs. (The very next day, in fact, Nixon suggested that $2 billion be spent for manpower activities under his proposed new revenue-sharing plan in order to rescue manpower programs from "a thicket of narrow categories.") The answer the reporter got was that revenue-sharing is not yet here, so the Administration will continue to act in the meantime under a centralized system. Another reporter noted that there seemed to be a "job bank" for scientists and engineers and he wondered if there were any for "the ordinary working Joe." He was told there were not.

The reason for aiming special help at the scientists and engineers, according to federal officials, is that they are employable, in contrast to many of the unemployed; they have skills which should be put to use on crucial problems; they are unaccustomed to being out of work and hence don't know how to find a job; and their services will be badly needed in the coming decade. The Labor Department estimates that some 1.5 million engineers will be needed by 1980—a jump of 50 percent from today's level. Thus the existing talent must be put to work and additional talent must be attracted into the profession. As Lovell told the press conference: "We anticipate over the next decade a need of probably 70,000 to 80,000 scientists and engineers every year to meet the basic needs of the economy as it grows. We are producing currently at the rate of about 35,000 a year from college. So we are facing a shortage situation that would just be tragic if young kids start making career decisions on the basis of the current situation which is not a permanent situation."

That analysis, which was seconded by Labor Secretary Hodgson and Science Adviser David, raises the interesting question of why the Administration, if it really believes there will be a shortage of talent later in this decade, has nevertheless sharply cut back on the number of traineeships and fellowships for science and engineering students. The answer to that, according to David, is that the Administration has not cut back its support of students—it has simply changed the mechanism of support, from traineeships and fellowships to research grants. "We estimate that we will be supporting as many students, graduate students, next year through research assistantships, fellowships, and traineeships, and so forth as we were this year," David claimed, "even though we have shifted funds from traineeships and fellowships into research." David said it is "very appropriate that people go into the fields in which research is being done in universities—this is a way of steering them into the places, into the fields where there is important work to be done." The fields in which David expects a particular need for trained manpower to develop over the next decade include computers, health, educational planning and technology, and energy.

Some representatives of professional societies who attended the day-long conference said later that they were unhappy with the Administration's apparent unwillingness to spend much money to spur conversion of aerospace talents to domestic needs. Some of these professionals are no doubt pinning their hopes on legislation introduced in the Senate by Sen. Edward M. Kennedy (D-Mass.) and in the House by Rep. Robert N. Giaimo (D-Conn.) and Rep. John W. Davis (D-Ga.). The legislation would appropriate some $450 to $500 million over a 3-year period to finance retraining programs, provide grants to small businesses, fund research and planning of conversion programs, and establish nonprofit community corporations which would hire unemployed professionals and put them to work on domestic problems. Although similar legislation was bypassed in

the closing rush of the last Congress, sponsors claim it has a much better chance of succeeding this year.

PHILIP M. BOFFEY.

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EXHIBIT 1

THE SECRETARY OF DEFENSE,
*Washington, D.C., March 4, 1969.*

DEAR MR. SECRETARY: During recent months the Department of Defense has studied carefully ways in which we can assist in alleviating some of our serious domestic problems without adversely affecting our military effectiveness. I believe that our resources can be postured in a manner so that the Department of Defense makes a positive contribution to this essential national effort.

One of the areas which appears to us to have significant potential benefits is the transfer of Defense-developed technical experience to the civilian sector. I am writing to you about one particular set of unique capabilities which may be of assistance to your department in its efforts to overcome our domestic problems.

The Department of Defense has depended for some years on a group of organizations collectively referred to as Federal Contract Research Centers (FCRC's). Organizations such as RAND, Mitre Corporation and the Lincoln Laboratory at MIT are within this category. In the past these organizations generally have not participated in non-Defense activities largely because the Department of Defense felt that such "diversification" might dilute the effort assigned to critical national security work. A careful examination of this position determined that in many cases the FCRC's have skills which might be used quite fruitfully by other departments of the Federal Government, as well as state and city governments. I hope that this letter will open a constructive review of the opportunities in which your department can effectively employ the skills of the FCRC's. I have attached a list of all FCRC's and brief summaries of their interests and sizes to assist you in making this evaluation.

In order for you to establish productive relationships with the FCRC's, I believe that it is essential that you clearly understand the Department of Defense's overall position on administrative arrangements. We do not intend to fund the FCRC's for programs designed primarily to solve domestic problems. We do not expect that the total annual non-DOD activity at any one FCRC would exceed more than approximately one-fifth of their total annual effort. Although we do not see a need for DOD to act as a "middle-man" as you explore possible programs, we will be glad to assist you in assessing various technical and administrative alternatives. I suggest you assign someone in your immediate office to serve as a central point of contact in conversations as needed with Dr. John S. Foster, Director, Defense Research and Engineering, and members of his staff, with representatives of the Military Departments which provide most of the funding to the FCRC's, and with those FCRC's which you contact.

The Department of Defense has received great benefits from the skills developed and maintained by the FCRC's. I sincerely hope that, through this action and our continued cooperation, your department can also benefit from their expertise.

Sincerely yours,

MELVIN W. LAIRD.

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DIRECTOR OF DEFENSE RESEARCH AND ENGINEERING,
*Washington, D.C., March 5, 1969.*

Memorandum for Secretaries of Military Departments, Directors of Defense Agencies.

Subject: Policy on Non-Defense Work by FCRC's.

As you may recall, we have reconsidered recently the question of whether the Defense-supported Federal Contract Research Centers (FCRC's) should be permitted to participate more heavily in the complex technological and systems management problems faced in domestic programs.

Secretary Laird has decided that the most direct, appropriate way to achieve his goal is by simply informing the FCRC's that we will encourage them to consider undertaking non-Defense sponsored work whenever their capabilities are suitable to a non-DoD client, subject to the following guidelines: (a) in general, no more than about 20% of an FCRC's annual work should be supported by non-DoD agencies; (b) such non-DoD-sponsored work will not affect the ceilings established annually for DoD-sponsored work; and (c) each FCRC must keep its principal DoD sponsor informed about non-DoD activity.

I would like to have your comments on this general matter, and on any additional guidelines you believe are desirable, by April 1. In some cases, for example, there may be contractual implications in an FCRC's decision to take on non-DoD programs, and I hope you will examine such issues in the immediate future.

I have attached copies of Secretary Laird's letter to the Federal departments and my memorandum to the FCRC's on this matter.

JOHN S. FOSTER, Jr.

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DIRECTOR OF DEFENSE RESEARCH AND ENGINEERING,
*Washington, D.C., March 5, 1969.*

Memorandum for The Presidents of Defense Department-Sponsored Federal Contract Research Centers.

Subject: Policy on Non-Defense Activity.

During recent months, the Department has considered ways in which we can help to solve some of the country's pressing domestic problems without detracting from our primary defense mission. I am writing to you, on behalf of Secretary Laird, because we have evaluated a number of suggestions for improving the transfer of Defense-developed technical experience to the civilian sector.

In the past, there has been a tendency to discourage organizations such as yours from participating heavily in non-Defense activities—largely because we felt such "diversification" might dilute the effort assigned to critical national security work. But following the recent, careful examination, it became clear that the DoD-supported Federal Contract Research Centers have capabilities which might be used fruitfully by other departments of the Federal Government, as well as by state and city governments. Thus this letter is intended to serve as official approval and stimulus for you to review your opportunities to help with domestic needs such as transportation, urban redevelopment, housing, pollution control, medical services and other fields.

I wish to be quite clear about our overall position on administrative arrangements. We do not intend to fund programs designed primarily to solve domestic problems. On the other hand, we do not intend to reduce our FCRC funding, and the ceilings set for this funding will be determined solely in terms of our past criteria regarding our needs and FCRC capabilities. In general, we would not expect the total annual non-DoD activity at each FCRC in the future to exceed 20% of its annual effort, without the general concurrence of the principal DoD sponsor of the FCRC.

We do not see a need for DoD to act as a permanent "middle-man" as you explore possible programs with prospective sponsors. You should regard this letter as official encouragement for you to "diversify" in whatever selected ways, if at all, you believe to be appropriate. We do expect you to keep your principal DoD sponsor informed about your plans and activities.

I have attached copies of Secretary Laird's related correspondence with other Federal agencies and my memorandum to the Secretaries of the Military Departments on this matter. If you wish, my staff and I will be happy to discuss this policy with you.

JOHN S. FOSTER, JR.

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DEPARTMENT OF THE NAVY,
*Washington, D.C., April 9, 1969.*

Memorandum for the Director of Defense Research and Engineering.

Subject: Policy on Non-Defense Work by FCRC's.

Your memorandum on this subject, dated 5 March 1969, asked for comment on the policy of encouraging the Defense-sponsored Federal Contract Research Centers to undertake work for other sponsors, in areas related to our serious domestic problems. Three general and preliminary guidelines for such activity were enunciated.

My general reaction to the concept is favorable. Where possible, we should assist in the solution of urgent domestic problems, and I believe that the talents that have grown in the Navy FCRC's can contribute. Some diversification of the activities of the organizations will not be detrimental to their performance on Navy work, and in certain cases the broadened experience may assist in the solution of our own problems, both technically and in the increased flexibility it will give the particpating organzations. In stating this position, I am assuming that the new non-Defense work will be entirely in addition to the normal work load and that the available facilities will be adequate to accommodate the increased staff.

There are certain questions that should be resolved before plans to expand the function of the Navy FCRC's proceed much further. The first is the attitude of the Congress toward the growth in FCRC's that will be necessary. The second pertains particularly to the Navy group, all of which are operated for us by universities as a public service: what is the attitude of the universities toward increasing their Federal involvement in this fashion, under operating rules that will have to be somewhat changed from the existing pattern?

There are also several problems relating to the details of implementation. I believe they are soluble, but of sufficient moment to warrant inclusion here.

a. We shall need an opinion on the legality of using facilities provided by the Navy in support of any contracts with non-Federal agencies, such as municipalities. If such use is legal, there must be a satisfactory mechanism for reimbursing the Government for that use.

b. The Navy has had a firm policy against our FCRC's bidding competitively for work to be done under any sponsorship, either Defense or non-Defense. We have seen no other way to deal with a Government-supported, tax-exempt institution. We shall have to resolve conflicts between that policy and the desires of both potential sponsoring agencies and the parent universities.

c. Our common practice has been to handle all work assigned to each FCRC through a single contract, thus retaining a measure of control over the size of the organization and the type of activity in which it engages. Our expectation is that we would wish to continue that practice, although deviations are perfectly feasible in particular cases.

Despite the few difficulties and the necessary conditions I have listed, I believe the new policy can result in a valuable contribution to the national welfare.

JOHN H. CHAFEE,
*Secretary of the Navy.*

## ORDER OF BUSINESS

Mr. BYRD of West Virginia. Mr. President, on behalf of the majority leader I yield myself such time as I may need.

The PRESIDING OFFICER. The Senator from West Virginia is recognized.

## ORDER FOR TRANSACTION OF ROUTINE MORNING BUSINESS TOMORROW

Mr. BYRD of West Virginia. Mr. President, I ask unanimous consent that, on tomorrow, upon the completion of the remarks of the distinguished Senator from South Dakota (Mr. McGOVERN), there be a period for the transaction of routine morning business, not to exceed 15 minutes, with statements therein limited to 3 minutes.

The PRESIDING OFFICER. Without objection, it is so ordered.

## ORDER FOR THE UNFINISHED BUSINESS TO BE LAID BEFORE THE SENATE TOMORROW

Mr. BYRD of West Virginia. Mr. President, I ask unanimous consent that, at the conclusion of the period for the transaction of routine morning business on tomorrow, the unfinished business be laid before the Senate.

The PRESIDING OFFICER. Without objection, it is so ordered.

## QUORUM CALL

Mr. BYRD of West Virginia. Mr. President, I suggest the absence of a quorum.

The PRESIDING OFFICER. The time will be charged to which side?

Mr. BYRD of West Virginia. The time will be charged to the time under the control of the majority leader.

The PRESIDING OFFICER. The clerk will call the roll.

The second assistant legislative clerk proceeded to call the roll.

Mr. BYRD of West Virginia. Mr. President, I ask unanimous consent that the order for the quorum call be rescinded.

The PRESIDING OFFICER. Without objection, it is so ordered.

## ORDER FOR ADJOURNMENT FROM TOMORROW TO 10 A.M. THURSDAY, MARCH 25, 1971

Mr. BYRD of West Virginia. Mr. President, I ask unanimous consent that when the Senate completes its business on tomorrow, it stand in adjournment until 10 a.m. Thursday next.

The PRESIDING OFFICER. Without objection, it is so ordered.

## ORDER FOR A 1-HOUR PERIOD FOR COLLOQUY ON THURSDAY NEXT

Mr. BYRD of West Virginia. Mr. President, I ask unanimous consent that on Thursday next immediately following the recognition of the two leaders under the standing order, there be a period of not to exceed 1 hour, the time to be under the control of the able Senator from Minnesota (Mr. HUMPHREY), the distinguished Senator from Michigan (Mr. HART), and other Senators for the purpose of making statements and conducting a colloquy.

The PRESIDING OFFICER. Without objection, it is so ordered.

## ORDER FOR A 1-HOUR PERIOD FOR COLLOQUY ON THURSDAY MORNING

Mr. BYRD of West Virginia. Mr. President, I ask unanimous consent that at the conclusion of the hour colloquy on Thursday, the order for which has just been entered, and which will be under the control of the Senator from Minnesota (Mr. HUMPHREY) and others, there be 1 hour for a colloquy, the time to be under the control of the following Senators: Senators PERCY, JAVITS, BROCK, SCOTT, GRIFFIN, and others.

The PRESIDING OFFICER. Without objection, it is so ordered.

## ORDER FOR RECOGNITION OF SENATOR STENNIS AND ORDER FOR TRANSACTION OF ROUTINE MORNING BUSINESS ON THURSDAY NEXT

Mr. BYRD of West Virginia. Mr. President, I ask unanimous consent that, at the conclusion of the 1 hour which will be under the control of Senator PERCY and other Senators on Thursday next for the purpose of conducting a colloquy, the distinguished Senator from Mississippi (Mr. STENNIS) be recognized for a period not to exceed 15 minutes and that, at the conclusion of the remarks of the Senator from Mississippi (Mr. STENNIS), there be a period for the transaction of routine morning business, with statements therein limited to 3 minutes, the period not to exceed 30 minutes.

The PRESIDING OFFICER. Without objection, it is so ordered.

## REVISION AND IMPROVEMENT OF NATIONAL TRANSPORTATION PROGRAMS—BILL HELD AT THE DESK

Mr. BYRD of West Virginia. Mr. President, I ask unanimous consent that S. 1344, a bill to revise and improve national transportation programs, introduced today by the distinguished Senator from Illinois (Mr. PERCY) be held at the desk until tomorrow.

The PRESIDING OFFICER. Without objection, it is so ordered.

## ORDER FOR THE CONTROLLED TIME TO START EVENLY ON TOMORROW MORNING

Mr. BYRD of West Virginia. Mr. President, I ask unanimous consent that the controlled time on tomorrow on the bill start evenly so that both sides on the bill will have the same amount of time to be equally divided.

Mr. President, I have cleared this request with the proponents and the opponents.

The PRESIDING OFFICER. Without objection, it is so ordered.

## PROGRAM

Mr. BYRD of West Virginia. Mr. President, the program for tomorrow is as follows.

The Senate will convene at 10 a.m. following a recess. Immediately following approval of the Journal, if there is no objection, and the recognition of the two leaders, the able Senator from South Dakota (Mr. McGOVERN) will be recognized for not to exceed 15 minutes, following which there will be a period for the transaction of routine morning business not to exceed 15 minutes, the statements therein limited to 3 minutes, at the conclusion of which the unfinished business will be laid before the Senate and controlled time will begin.

The time on the resolution will be under the control of the distinguished majority leader and the distinguished minority leader or their designees, and the time on any amendment, with the exception of committee amendments, will be equally divided and controlled by the distinguished chairman of the Appropriations Committee, the Senator from Louisiana (Mr. ELLENDER), and the mover of such amendment.

Mr. President, under the previous order a vote will occur—and it will be a yea-and-nay vote—at 4 p.m. on tomorrow on the amendment, as amended if amended with respect to the SST.

A yea-and-nay vote has been ordered on final passage of the resolution, and it will occur at 4:30 p.m. tomorrow.

The Senators are on notice, therefore, that there will be at least two yea-and-nay votes tomorrow.

Mr. President, I am authorized by the distinguished majority leader to state that it is the intention of the leadership on tomorrow evening to lay before the Senate the nomination which is presently on the Executive Calendar—the nomination of William J. Casey, of New York, to the Securities and Exchange Commission—and that nomination will be considered on Thursday next.

When the Senate completes its business on tomorrow it will stand in adjournment under the order, until 10 a.m. on Thursday. This order, of course, is subject to change on tomorrow.

## RECESS UNTIL 10 A.M.

Mr. BYRD of West Virginia. Mr. President, if there be no further business to come before the Senate, I move, in accordance with the previous order, that the Senate stand in recess until 10 o'clock a.m. tomorrow.

The motion was agreed to; and (at 6 o'clock and 20 minutes p.m.) the Senate took a recess until tomorrow, Wednesday, March 24, 1971, at 10 a.m.

## NOMINATION

Executive nomination received by the Senate March 23, 1971:

U.S. DISTRICT COURTS

Raymond J. Broderick, of Pennsylvania, to be a U.S. district judge for the eastern district of Pennsylvania, vice a new position created by Public Law 91-272, approved June 2, 1970.