courage and honor their memory by including the following article in the RECORD:

THREE SERVICEMEN FROM STATE LISTED KILLED IN VIETNAM

Three Maryland servicemen, a Special Forces lieutenant colonel, an Army warrant officer and a Marine private first class, have been killed in Vietnam, the Department of Defense announced yesterday.

Lt. Col. Martin R. Beck, 43, the husband of Mrs. Nancy L. Beck of Columbia, and Warrant Officer Stewart B. Goldberg, 21, the son of Mr. and Mrs. Albert B. Goldberg, of 3813 Bartwood road, Pikesville, were killed in separate helicopter crashes on July 24 and 25.

Pfc. Theodore E. Mangum, Jr., 18, the husband of Mrs. Christine Mangum, of 14526 New Hampshire avenue, Silver Spring, was killed July 27 near Da Nang while he was on a night patrol.

Colonel Beck, who was born in Baltimore, served with the 5th Special Forces Group. The Pentagon said he was an observer in a helicopter which was hovering close to the ground to fire at a Viet Cong target when a booby trap exploded, causing the helicopter to explode in mid-air.

Warrant Officer Goldberg died of burns on July 26, the day after the helicopter he piloted crashed while on a mission, the Pentagon said. His death was listed by the Defense Department as "not as a result of hostile action."

His parents said yesterday that the Forest Park High School graduate was on his second tour of duty in Vietnam, and had written them that he had already signed up for a third tour.

He attended Baltimore Junior College and joined the Civil Air Patrol, then enlisted in the Army in 1967.

He began his first tour in Vietnam in December, 1967, and flew 25 helicopter missions during his first week in the Far East. A week later he was awarded the Air Medal.

He returned to Baltimore in December, 1968, for a visit, but went back to Vietnam again a month later.

His father said yesterday that the young pilot had planned to return to college after leaving the Army, and study to become an aeronautical engineer.

Besides his parents, Warrant Officer Goldberg is survived by a sister, Miss Linda Goldberg, of Baltimore.

Colonel Beck was a 28-year service veteran who lied about his age to enlist in the Marine Corps after graduating from Forest Park High School in 1941, the Pentagon said.

He saw action in the Pacific islands in World War II, then went back to school after his discharge in 1945 and won an architecture degree from the University of Florida in 1951.

While in college he joined an Army Reserve Officer Training Corps program and received a commission as a second lieutenant.

He joined the Special Forces in 1956, and served in Europe from 1960 to 1968. He returned to the United States for an assignment at Fort Devens, Mass., and went to Vietnam in March of this year.

SON IN AT WEST POINT

He had also served in Korea, the Dominican Republic, and with the Military Assistance Command in Vietnam in 1964.

Colonel Beck had won the Bronze Star, Purple Heart, Combat Infantry Badge, Master Parachutist Badge, Joint Service Commendation Medal, Army Commendation Medal and Vietnam Service Medal.

Besides his wife, he is survived by his parents, Mr. and Mrs. S. E. Beck, of Towson; three children, Mrs. William C. Douglas, of Columbia, Martin R. Beck, Jr., a cadet at the United States Military Academy, and Mark T. Beck, also of Columbia.

He is also survived by two brothers, Howard Beck, of Baltimore, and Edward S. Beck, of Chicago, and a grandson.

Private Mangum graduated from Montgomery Blair High School in Silver Spring last June, and joined the Marine Corps "to get it over with," his wife, said yesterday.

MARRIED WHILE ON LEAVE

"He wanted to go in and get it over with," she said, "so he could plan what he wanted to do with the rest of his life. He wanted to be a Maryland state policeman, or go to college and become an FBI agent."

The young marine returned home last November after finishing boot camp and married his high school sweetheart, the former Christine Heyser.

Then he returned to the Marines for final training and was sent to Vietnam two months later.

Besides his 19-year-old wife, Private Mangum is survived by his parents, Mr. and Mrs. Theodore E. Mangum, Sr., of Beltsville, Md., two sisters, Miss Barbara Mangum and Miss Deborah Mangum; a brother, Thomas Mangum; a stepsister, Mrs. Sheila Moberly, and a stepbrother, William Jones.

SENATE—*Monday, August 4, 1969*

The Senate met at 12 o'clock noon and was called to order by the President pro tempore.

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

Eternal Father, in whom we live and move and have our being, break in upon us as the dawn of a new day and the sunrise of new hope. While we strive to serve the people and at times we are unsure of the path we should follow, make us always sure of Thee. When the need is great, the work is hard, and the way is dark, shed Thy light upon our pathway that in Thy light we may see light. Make our lives incandescent with the spirit of the One who said "I am the light of the world" and so fulfill in us His commandment, "Let your light so shine before men that they may see your good works and glorify your Father which is in heaven," for it is in His holy name we pray. Amen.

THE JOURNAL

Mr. MANSFIELD. Mr. President, I ask unanimous consent that the reading of the Journal of the proceedings of Friday, August 1, 1969, be dispensed with.

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

WAIVER OF CALL OF THE CALENDAR

Mr. MANSFIELD. Mr. President, I ask unanimous consent that the call of the Legislative Calendar, under rule VIII, be dispensed with.

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

LIMITATION ON STATEMENTS DURING TRANSACTION OF ROUTINE MORNING BUSINESS

Mr. MANSFIELD. Mr. President, I ask unanimous consent that statements in relation to the transaction of routine morning business be limited to 3 minutes.

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

ORDER FOR ADJOURNMENT UNTIL 11 A.M.

Mr. MANSFIELD. Mr. President, I ask unanimous consent that when the Senate completes its business today, it stand in adjournment until 11 a.m. tomorrow.

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

ORDER FOR RECOGNITION OF SENATOR GRAVEL TOMORROW

Mr. MANSFIELD. Mr. President, I ask unanimous consent that at the conclusion of the prayer, the distinguished Senator from Alaska (Mr. GRAVEL) be recognized for not to exceed 40 minutes.

The PRESIDENT pro tempore. Is that for tomorrow?

Mr. MANSFIELD. Yes; and that would be before the controlled time begins.

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

EXECUTIVE SESSION

Mr. MANSFIELD. Mr. President, I ask unanimous consent that the Senate go into executive session to consider the nominations on the Executive Calendar.

The PRESIDENT pro tempore. Without objection, the Senate will go into executive session.

The nominations on the Executive Calendar will be stated.

NATIONAL BUREAU OF STANDARDS

The bill clerk read the nomination of Lewis M. Branscomb, of Colorado, to be Director of the National Bureau of Standards.

The PRESIDENT pro tempore. Without objection, the nomination is confirmed.

ST. LAWRENCE SEAWAY DEVELOPMENT CORPORATION

The bill clerk proceeded to read sundry nominations to the St. Lawrence Seaway Development Corporation.

Mr. MANSFIELD. Mr. President, I ask unanimous consent that the nominations be considered en bloc.

The PRESIDENT pro tempore. Without objection, the nominations are confirmed en bloc.

NOMINATIONS PLACED ON THE SECRETARY'S DESK—ENVIRONMENTAL SCIENCE SERVICES ADMINISTRATION AND COAST GUARD

The bill clerk proceeded to read sundry nominations in the Environmental Science Services Administration and the Coast Guard.

The PRESIDENT pro tempore. Without objection, the nominations are confirmed en bloc.

Mr. MANSFIELD. Mr. President, I ask unanimous consent that the President be immediately notified of the confirmation of these nominations.

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

LEGISLATIVE SESSION

Mr. MANSFIELD. Mr. President, I move that the Senate resume the consideration of legislative business.

The motion was agreed to, and the Senate resumed the consideration of legislative business.

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.

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

A SUBPENA DUCES TECUM AND RESOLUTION REGARDING DANIEL B. BREWSTER

Mr. MANSFIELD. Mr. President, I submit a subpena duces tecum issued by the District Court for the District of Maryland to Robert A. Brenkworth, financial clerk, U.S. Senate, and I ask that it be read.

The PRESIDENT pro tempore. Does the majority leader wish to have the resolution or the subpena read?

Mr. MANSFIELD. The subpena.

The PRESIDENT pro tempore. The clerk will read the subpena.

The legislative clerk read as follows:

SUBPENA TO TESTIFY BEFORE GRAND JURY

UNITED STATES DISTRICT COURT FOR THE DISTRICT OF MARYLAND

To: Robert A. Brenkworth, Financial Clerk, United States Senate; business, Disbursing Office of the Senate, Rotunda, U.S. Capitol Building, Room S233, Washington, D.C.; residence, 14904 Claude Lane, Silver Spring, Maryland.

You are hereby commanded to appear in the United States District Court for the District of Maryland at 409 Post Office Building, Calvert and Fayette Sts., in the city of Baltimore on the 7th day of August 1969 at 10:00 o'clock A.M. to testify before the Grand Jury and bring with you all records in the custody, control or possession of, or which are the property of, the Disbursement Office of the United States Senate and/or the Financial Clerk of the United States Senate relating in any way, directly or indirectly, to any and all checks cashed by or on behalf of Daniel B. Brewster or Daniel Brewster at or through the Disbursing Office of the United States Senate or by or through the Financial Clerk of the United States Senate including but not limited to all checks, or microfilm copies of checks on which the name "Daniel Brewster" or "Daniel B. Brewster" appears as maker, or payee, or endorser or in any other capacity, and further including any memoranda of such transactions as have been above described in this subpena.

This subpena is issued on application of the United States of America.

Date August 1, 1969.

STEPHEN H. SACHS,
U.S. Attorney;

ALAN I. BARON,
Assistant U.S. Attorney;

PAUL R. SCHLITZ,
Clerk.

By CHARLOTTE MAE WILLIAMS,
Deputy Clerk.

Mr. MANSFIELD. Mr. President, I now submit a resolution for the information of the Senate and ask that it be read by the clerk.

The PRESIDENT pro tempore. The clerk will read the resolution.

The legislative clerk read as follows:

S. RES. 229

Resolution relating to a subpoena duces tecum directed to the Financial Clerk

Whereas a subpoena duces tecum issued on application of the United States of America addressed to and served upon Robert A. Brenkworth, Financial Clerk, United States Senate, directs him to appear in the city of Baltimore, Maryland, before a grand jury impaneled by the United States District Court for the District of Maryland on the seventh day of August, 1969, at 10:00 o'clock antemeridian, and to bring with him certain records in the possession and under the control of the Senate: Therefore be it

Resolved, That by the privileges of the Senate no evidence of a documentary character under the control and in the possession of the Senate can, by the mandate of process of the ordinary courts of justice, be taken from such control or possession but by its permission; be it further

Resolved, That when it appears by the order of the court or of the judge thereof, or of any legal officer charged with the administration of the orders of such court or judge, that documentary evidence in the possession and under the control of the Senate is needful for use in any court of justice, before any judge, legal officer, or grand jury, for the promotion of justice, the Senate will take such order thereon as will promote the ends of justice consistently with the privileges and rights of the Senate; be it further

Resolved, That Robert A. Brenkworth, Financial Clerk of the Senate, be authorized to appear at the place and before the grand jury named in the subpoena duces tecum before mentioned, but shall not take with him any papers or documents on file in his office or under his control or in his possession as Financial Clerk of the Senate; be it further

Resolved, That when said court determines upon the materiality and the relevancy of the records called for in the subpoena duces tecum to the proceeding before the grand jury the said court, through any of its officers or agents, shall have full permission to attend with all proper parties to the proceeding at a place under the orders and control of the Senate, to take at such place copies of such records in possession or control of said Financial Clerk as the court has found to be material and relevant, and to take at such place such evidence of witnesses in respect to such records as the court or other proper officer thereof shall desire, except that (1) the possession of such records by the said Financial Clerk shall not be disturbed and such records shall not be removed from their file or custody under said Financial Clerk, and (2) no minutes or transcripts of any executive session or any evidence of witnesses with respect thereto may be disclosed or copied; be it further

Resolved, That subject to the limitations hereinbefore stated, said Financial Clerk is authorized to supply certified copies of such records as the court has found to be material and relevant to the proceeding before the grand jury; and be it further

Resolved, That a copy of these resolutions be transmitted to the said court as a respectful answer to the subpoena aforementioned.

Mr. MANSFIELD. Mr. President, this resolution is being submitted on behalf of the majority leader and the minority leader in conformity with the custom of the Senate. We ask for its immediate consideration.

The PRESIDENT pro tempore. Without objection, the resolution will be considered by the Senate at this time; and, without objection, the resolution is now before the Senate.

Mr. DIRKSEN. Mr. President, as the distinguished majority leader has pointed out, this is the customary resolution that has always been used by the Senate, and we maintain inviolate the rule that none of these documents can be taken from the possession of the Senate or taken away from here. However, if there is a finding that the evidence involved is material for grand jury and other purposes, and if it is relevant, the disbursing officer does have a Recordak machine, and he can run through and picture whatever checks may be involved so that they can be seen. I presume that, within the four corners of the resolution, probably Xerox copies might well be made and the original documents kept here. But it will satisfy the purposes of justice and is responsive to the subpena duces tecum.

The PRESIDENT pro tempore. The question is on agreeing to the resolution.

The resolution was agreed to.

Mr. MANSFIELD. Mr. President, I suggest the absence of a quorum.

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

The bill clerk proceeded to call the roll.

Mr. MANSFIELD. Mr. President, I ask unanimous consent that the order for the quorum call be rescinded.

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

CONGESTION AT NATIONAL AIRPORT

Mr. SPONG. Mr. President, when the Civil Aeronautics Board announced it would look into the problem of congestion at National Airport, there were those sanguine enough to think something might come out of it. It was certainly a better prospect than relying on the timid and largely fruitless efforts of the Federal Aviation Administration to put sensible limits on the use of that facility.

Unfortunately, no one fully reckoned with the force of bureaucratic inertia. It has been more than 2 years since the investigation was announced and it still has not gotten off the ground with a formal hearing.

A major factor in this delay has been the FAA, which understandably does not like the idea of another Government body looking into its affairs. Thus, the Department of Transportation asked some time ago for a hold on the investi-

gation while it tried again to find a solution to the problem—this time through the application of its high-density airport traffic rules.

Mr. President, these rules are designed to limit the number of flights at the Nation's busiest airports, including National. However, because National was already under restrictions of this kind, the new rules made no change in the number of flights per hour. It remains what it has been for some time—40 per hour.

When asked about this apparent contradiction at a hearing of the Senate District of Columbia Committee, Mr. Arven Saunders of the FAA conceded the new rules would make little if any change at National either in regard to air carrier operations or number of passengers.

Subsequently, I wrote to Secretary of Transportation Volpe to ask whether I could infer from what was said at that hearing that the Department no longer had reason for delaying the CAB investigation. I have since received a reply in a letter signed by Acting Secretary of Transportation James M. Beggs.

Incredibly, the Department's reply was that it not only would not withdraw its request for a delay in the hearing, but that it intended to ask the CAB to cancel it altogether. I quote from Mr. Beggs' letter:

> For a time we believed that the CAB Washington-Baltimore Airport Investigation should be delayed until we could determine the effect of the High Density Traffic Airport Rule on operations at Washington National Airport. It now appears that the rule and the earlier voluntary quota system have contained congestion at the airport. In any case, the rule provides a mechanism for further reducing operations at the airport, should that action be necessary. Further, the Department believes that the studies discussed in the answer to question 1 may well yield a better mechanism for the planning and operation of the three airports; and that such mechanism might better effect the objectives of the investigation than CAB action. Accordingly, we believe that the Washington-Baltimore Investigation should be discontinued. We plan to so recommend to the CAB Examiner hearing the case.

Mr. President, this assertion by the Department that congestion at the airport has been "contained" comes as a surprise to the residents of this area and the users of the airport. It also comes with no explanation of how it was accomplished—by a rule which admittedly makes no difference in the number of flights or the number of passengers using the airport?

Moreover, the assertion follows an announcement by the FAA that in the month of May more passengers used National Airport than at any time in its history. The total number of passengers served was 928,384 representing an increase of 8.2 percent over May of last year. In 1 month, National served about half the number of passengers which will be handled by Dulles Airport in a year.

Mr. President, since preparation of this speech, I have received later figures which show that passenger traffic at National Airport in June of this year surpassed the record figure of May by more than 5,000. Thus, June of 1969 has become National's busiest month in history. I would predict that this figure, too, will be surpassed, as congestion at National continues to grow. These new figures show that, during this past June—7 years after the completion of Dulles Airport—National served almost 4½ times the number of passengers served by Dulles. During the past fiscal year passenger traffic at National was five times greater than at Dulles.

The reported figures at National are: 942,964 passengers during June and 10,051,906 during the last fiscal year. At Dulles the comparable figures are: 218,241 in June and 2,006,374 during the fiscal year.

Mr. President, these new figures indicate that there has never been a greater need to seek reduction of traffic at National and increased use of Dulles. National Airport will go on being a source of noise, pollution, and congestion for this area unless we take the steps necessary to limit the flights of passengers. I think the facts are clear that this has not been done. Based on the Department of Transportation's letter, I seriously doubt whether the Department ever intends to take action.

The studies referred to in Mr. Beggs' letter concern ways of bringing a regional perspective to the planning and operation of the three airports in this area. How long these studies will go on, and what changes they might bring, we do not know. What we do know is that the Department intends to move ahead with its plans for the improvement and expansion of National Airport, without regard to the findings of these studies or the needs of all three regional airports or, in fact, the best interest of the metropolitan area.

The Department has it within its power now to reduce the congestion at National by diverting flights and passengers to Dulles. Until it gives some assurance that it will do that, the people of this area have no choice but to ask the CAB to use its power of certification to meet the problem.

Accordingly, I have sent a letter to the Chairman of the CAB urging him in the strongest terms to schedule a formal hearing on this question at the earliest possible date. I also intend to bring the matter to the attention of fellow members of the Senate District of Columbia Committee and the Commerce Committee and to recommend additional courses of action.

Mr. President, I ask unanimous consent to have printed in the RECORD a copy of my letter to Secretary Volpe and the Department's reply.

There being no objection, the letters were ordered to be printed in the RECORD, as follows:

JUNE 2, 1969.

Hon. JOHN A. VOLPE,
Secretary of Transportation,
Washington, D.C.

DEAR MR. SECRETARY: I am sorry you were unable to attend the hearing at Dulles Airport, but I hope you are feeling better now.

As I indicated to you in my letter of May 16, there are several policy matters affecting the future of National and Dulles Airports which Committee members are anxious to have clarified. It would be most helpful if you would respond to the following questions in a letter which could be made part of the official hearing record.

It is the Department's view that National, Dulles and Friendship Airports constitute a regional airport system and that planning should be done on a regional basis?

Would the Department agree that there should be a study of priorities and cost-benefit values to determine how a given sum of money can best be used in meeting the airport needs of the region before improvements are made at any one airport?

Has such a cost-benefit study been made or does the Department intend to make such a study before recommending major improvements at National Airport?

At the Committee's first hearing, Chairman John Crooker of the Civil Aeronautics Board testified that the Department had requested a delay in formal hearings into the question of congestion at Washington area airports until it could evaluate the effects of its new high density traffic airport rules. However, Mr. Arven Saunders later told the Committee that these new rules would make little if any change at National either in regard to air carrier operations or number of passengers. Can it be inferred from this that the Department no longer has reason for delaying this important investigation?

If the Department has some other reason for asking for a delay in the CAB investigation, would you tell the Committee what that reason is, and when the Department expects to have the matter resolved? Specifically, is this other policy matter the Kling Report on the improvement of National Airport?

What is the Department's view with regard to the early construction of a subway link between Dulles Airport and the main metro system? Would the Department recommend including funds for such an airport line in the subway authorization bill now before the Congress?

Your answers to these questions will greatly assist the Committee in its deliberations.

Sincerely,

WILLIAM B. SPONG, Jr.

THE SECRETARY OF TRANSPORTATION,
Washington, D.C., July 25, 1969.

Hon. WILLIAM B. SPONG., Jr.,
Subcommittee on Business and Commerce of the Committee on the District of Columbia, Washington, D.C.

DEAR SENATOR SPONG: This in further reply to your letter of June 2, 1969. You asked us to respond for the Committee hearing record to six questions on policy matters affecting the future of Washington National and Dulles International Airports which the Committee members wish to have clarified. As requested by the Committee Staff, we have separately responded to the last question in your letter. Our responses to the remaining five questions are as follows:

You ask "Is it the Department's view that National, Dulles and Friendship Airports constitute a regional airport system and that planning should be done on a regional basis?"

We believe that the three major airports in the Washington, D.C.-Baltimore, Maryland area should be viewed as a regional airport system. We also believe that the area would benefit if the three airports could be more efficiently planned and operated on a regional basis, giving full consideration to the comprehensive planning objectives of the metropolitan region. To this end, studies are now underway within the Department to determine how this could be accomplished and efficiently implemented.

You ask "Would the Department agree that there should be a study of priorities and cost-benefit values to determine how a given sum of money can best be used in

meeting the airport needs of the region before improvements are made at any one airport?"

When we complete the studies mentioned in the answer to question 1, we will be in a position to present for Congressional consideration our conclusions and recommendations concerning the planning and operation of the three airports. Since each of the airports is now an indispensable element in our national air transportation system, however, we believe each should be improved and maintained to the extent necessary to ensure operational safety and efficiency. We must observe that the Department now has authority to directly fund improvements at the two National Capital Airports, and our study of priorities and investment alternatives has dealt only with those airports.

You ask "Has such a cost-benefit study been made or does the Department intend to make such a study before recommending major improvements at National Airport?"

While the Department has not made the comprehensive study of the three airports described in question 2, we have stated that we believe all three of the airports serving the area need improvements. The proposals to modernize Washington National Airport are based on an economic feasibility study. As indicated in our answer to question 2, we have stated our belief that whatever is done about planning and operation of the three airports, Washington National Airport will be in need of improvement.

You ask "At the Committee's first hearing, Chairman John Crooker of the Civil Aeronautics Board testified that the Department had requested a delay in formal hearings into the question of congestion at Washington area airports until it could evaluate the effect of its new high density traffic airport rules. However, Mr. Arven Saunders later told the Committee that these new rules would make little if any change at National either in regard to air carrier operations or number of passengers. Can it be inferred from this that the Department no longer has reason for delaying this important investigation?"

For a time we believed that the CAB Washington-Baltimore Airport Investigation should be delayed until we could determine the effect of the High Density Traffic Airport Rule on operations at Washington National Airport. It now appears that the rule and the earlier voluntary quota system have contained congestion at the airport. In any case, the rule provides a mechanism for further reducing operations at the airport, should that action be necessary. Further, the Department believes that the studies discussed in the answer to question 1 may well yield a better mechanism for the planning and operation of the three airports; and that such mechanism might better effect the objectives of the investigation than CAB action. Accordingly, we believe that the Washington-Baltimore Airport Investigation should be discontinued. We plan to so recommend to the CAB Examiner hearing the case.

Finally, you ask "If the Department has some other reason for asking for a delay in the CAB investigation, would you tell the Committee what that reason is, and when the Department expects to have the matter resolved? Specifically, is this other policy matter the Kling Report on the improvement of National Airport?"

The Department has had no reason for requesting a delay in the CAB investigation other than that described in the answer to question 4. Specifically, the Kling Report on the improvement of National Airport has not been the reason for our asking for a delay in the CAB investigation since its release.

We hope that these answers to your policy questions will benefit the Committee in its hearings respecting the Utilization and Future of the Three Major Airports in the Washington, D.C.-Baltimore Area. Please do not hesitate to contact the Department if we can further assist the Committee.

Sincerely,

JAMES M. BEGGS,
Acting.

Mr. BYRD of Virginia. Mr. President, will my colleague yield to me?

Mr. SPONG. I am happy to yield to my distinguished colleague.

Mr. BYRD of Virginia. Mr. President, I concur in the statement just made by my distinguished colleague from Virginia as to the need to reduce the heavy traffic at National Airport. It seems to me that an airport that was designed to accommodate 4 million passengers a year, and which is now carrying 10 million passengers a year, presents quite a traffic hazard. I feel it is important that many of the flights be shifted from National Airport—thus reducing the congestion there—to Dulles Airport, which is an underutilized facility with the capacity to become the greatest airport in the world.

Thus, I concur in the assertions of my distinguished colleague as to the need for reduction of congestion at National Airport.

Mr. SPONG. I appreciate very much the remarks of my senior colleague from Virginia.

THE VIETNAM WAR

Mr. ERVIN. Mr. President, the Washington Post of August 2, 1969, published a column by William S. White entitled "Nixon's Trip Just Compounds Disputes Over Vietnam War." In this column, a wise commentator makes some thoughtful comments upon the President's trip and the Vietnam war.

I ask unanimous consent to have this column printed in the RECORD.

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

NIXON'S TRIP JUST COMPOUNDS DISPUTES OVER VIETNAM WAR

(By William S. White)

The realistic verdict on President Nixon's Asian mission must be that he has compounded, rather than reduced, his basic problems over Vietnam.

He has first pleased, only then to enrage, the American home-front doves, and those abroad, too, for that matter. He returns to Washington, moreover, compelled to face the bleak truth that his hard-core support for a firm posture on the war has itself been shaken, to some degree even within his own administration.

The soft-liners were enchanted by what were in fact very careful and limited presidential suggestions at Guam, early in the trip, that the American military presence in Asia would be steadily—but never recklessly—scaled down. Characteristically, and perhaps also only humanly, they chose to interpret all this for what the President never meant—the beginning of a wholesale, emotional retreat from our Asian responsibilities.

Then, they reacted furiously against presidential statements in Thailand and Saigon which amounted to pledges that the United States is simply not going to abandon its treaty obligations, its military commitment to South Vietnam and to the anti-communist South Vietnamese government of President Thieu.

The hard-liners, for their part, were made disconsolate and deeply troubled by the comments at Guam and then somewhat—but only somewhat—reassured by the strong line the President took in Thailand and Vietnam.

What it all proves all over again is the tiresome but unalterable reality that there is at the end no way out of Vietnam except for ultimate American surrender on the one hand or, on the other hand, for the application to a stubborn and arrogant enemy of unstinted American military power until a tolerable if imperfect solution can at last be attained.

Beyond this, the mission has established the wisdom of Mr. Nixon's own general view—departed from in this instance—that presidential journeys having in the popular mind something of the tone and color of "summit conferences" should never be undertaken unless and until successes for American diplomacy are more or less guaranteed in advance. Too much was inevitably expected by too many of this journey.

So the central actuality with which the President must now grapple is that his sustained efforts to placate the doves have led him into both a short-run difficulty that tends to upset both doves and hawks and a long-run peril of far more profound meaning. This later danger is that his true and final purposes may be misapprehended on both sides.

So much has been said and written of public frustrations that the present cliche insists that "everybody" in this country is "sick and tired of the war" and thus that the President simply must "get us out of it," at whatever cost to the national position in this world, before this or that election rolls around. The trouble with this is that it is in the first place a gross oversimplification. The undoubted public weariness with the war is felt as much by hawks who want more military action as by doves who want none; and this is one thing.

Quite another thing is any notion that the people will long reward or even tolerate any American administration that actually surrenders our sword in any war. For let this, the world's greatest power, actually accept a humiliating defeat, however dressed up, from a tin-pot and fifth-rate Communist state and the sentimental cheering certain at first to be heard "when the boys come home" will within months turn to a deep national growl of disillusion and rage. This will make the initial happy cries sound like a single piccolo beating against the thunder of a thousand bass drums.

In a word, there is a short-term view of this wretched affair that is so preoccupied with instant public approval as wholly to underrate the ultimate consequences of what would surely be a most evanescent national mood of rejoicing. And some of the President's advisers are pushing and will push this view of what might be called the happiness boys.

Then there is a long-term view which realizes that it is not the score in the early innings but rather the score when the game is all finished that alone determines the outcomes of both wars and presidential elections. And some of the President's advisers are pushing and will push this view.

He returns, in other words, to make a choice between the short view and the long view; and for this task the journey has done no good. This columnist, as a card-carrying hawk, has no doubt where the President will stand at last—but a man does get a little nervous sometimes.

SUPPORT FOR CONSTITUTIONAL CONVENTION LEGISLATION

Mr. ERVIN. Mr. President, a few days ago the Subcommittee on Separation of Powers of the Judiciary Committee approved and ordered reported to the full committee S. 623, a bill I

first introduced in 1967 to provide much needed procedural guidelines for a constitutional convention to consider amendments to the U.S. Constitution should one be invoked by petitions from the States.

As the country now knows, such a convention is no longer an improbable theoretical event, but a very real possibility. Thirty-three States have already submitted petitions for a convention to consider amendments on reapportionment. Under the Constitution, petitions from two-thirds of the States—or 34—are required for a convention to be called. Although news reports indicate that Wisconsin, which is the most likely candidate for No. 34, has postponed action until the fall, the possibility of a convention in the near future is still very much alive.

The legislation reported by the subcommittee has from the very start attempted to be as neutral as possible with respect to its effect on the very controversial reapportionment issue. The subcommittee's bill seeks neither to facilitate a convention on reapportionment nor to lay so many obstacles in its path that one would be impossible. The approach of neutrality is in line with what the subcommittee and I believe to be the obligation of Congress under article V; that is, to prepare machinery for the effectuation of this portion of the Constitution so as to make it a possible, however improbable, method of constitutional amendment. The bill has been drawn to meet not only the immediate needs of the country, but also to serve as the direction for the Congress and the States in the future, when the convention route of proposing amendments might serve liberal as well as conservative political interests.

The neutrality of the bill is demonstrated by the wide support it has received from the partisans on both sides of the reapportionment controversy. Senator DIRKSEN, the leading proponent of reapportionment amendment, is a member of the subcommittee, and he has approved the bill. The Washington Post and the New York Times, both ardent opponents of any change in the Supreme Court rulings on reapportionment, have also supported it. This is proof that the legislation favors neither side—and it is proof that both sides of the reapportionment issue recognize the overriding need to adopt the bill with the least possibly delay. I sincerely hope that prompt and favorable action will be taken on it.

I ask unanimous consent that a number of editorials recognizing the urgent need for this legislation be printed in the RECORD.

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

[From the Washington (D.C.) Post, Feb. 4, 1969]

BACK-DOOR AMENDING PROCESS

The threat of a new constitutional convention called by the states may not be very grave, but the fact that such a threat exists at all is cause for vigilance and effective counteraction. Senator Dirksen has indicated that he is still eager to press his proposed amendments to the Constitution to allow prayers in the schools and apportionment of one house of the state legislatures on various other criteria in addition to population. Since neither proposal can muster a two-thirds vote of Congress, he wants to invoke the never-used device of a constitutional convention called by two-thirds of the states.

In our view this sleeper in the Constitution should never be used. The threat to use it appears to have been influential on one occasion in inducing the Senate to accept the amendment for the popular election of Senators. But in general amendments to the basic law ought to have the approval of two-thirds of the Senate and House before being submitted to the states for ratification.

The first line of defense against a constitutional convention initiated by the states lies in the states themselves. Though 32 states had petitioned for such a gathering when excitement was running high over the Supreme Court's reapportionment decisions, there are indications that some of these resolutions may be rescinded by legislatures meeting this year. Newly reapportioned legislatures are less concerned than their predecessors about a return to the old structure, and they have reason to fear the outcome of a possibly unrestrained revision of the Constitution.

The second line of defense lies in Congress. Some members believe that Congress would not have to call the proposed convention even if petitions should come in from two-thirds of the states. Others who read the word "shall" in Article V in a more literal sense are trying to lay down rules that both the states and Congress would have to comply with in utilizing the rusty state-initiated convention device. Senator Ervin has introduced a revised bill which would greatly reduce the dangers of any wholesale constitutional revision by this means.

The Ervin bill would require states seeking to invoke Article V to state the nature of the amendment or amendments proposed. A resolution for that purpose would have to be passed by the regular lawmaking processes, except for the Governor's signature. Then it would be sent promptly to both houses of Congress, where it would be widely publicized to avoid the dangers of a sneak campaign. Such resolutions would remain effective for only four years, and could be rescinded any time before two-thirds of the states have joined in the petition. But Congress would decide whether the state resolutions were valid and confined to the same subject or subjects.

If a constitutional convention were called by this method, the states would have to elect their delegates—equal in number to their Senators and Representatives. Congress would specify the problems to be considered by the convention, and if the proposed amendments emerging from the convention did not conform to the congressional limitations they would not be submitted to the states for ratification. With these guidelines on the statute books, the risk of a runaway convention would probably be gone, although other powerful arguments against using the back-door amending process would remain.

[From the Washington (D.C.) Post, April 12, 1969]

CONSTITUTIONAL CONVENTION BILL

The Iowa Senate did not create much of a stir the other day when it passed a proposal for a national constitutional convention, although (if the House should concur) Iowa would be the 33d state taking such action. If 34 states join in this petition, it is widely assumed that Congress would have to call such a convention. And some people fear that a convention initiated solely by the states might abolish the Bill of Rights, create an elected Supreme Court and critically curb the powers of the Federal Government.

This venture aroused a great deal of alarm two years ago when the 32d state resolution was passed. Since then much of the steam has gone out of both the drive for a constitutional convention and the opposition to it. One reason for this is the careful work done by Sen. Sam J. Ervin Jr., which makes it evident that Congress would not need to call a wide-open convention even if two-thirds of the states should seek constitutional changes under the unused portion of Article V.

Another factor is the passage of time. The first petitions to Congress to call a constitutional convention came from 12 states in 1963. The purpose behind them was to deny the Federal courts jurisdiction over state legislative apportionment cases. Most of the petitions since then have asked for a convention to propose an amendment which would permit one house of a state legislature to be apportioned by some standard other than population. Are the two groups sufficiently related to be joined together into a single demand upon Congress? Another question must be raised about the validity of four petitions which apparently have not been received by Congress. Then there is the question as to whether the early petitions are still valid six years after they were voted. Under the terms of the Ervin bill designed to guide the submission of such petitions, they would remain in effect only four years.

Whether or not 34 petitions are ultimately received Congress ought to take up the Ervin bill at the first opportunity. It would tell the states how to proceed in petitioning for a constitutional convention and how to elect their delegates if such a convention should be called. It would make Congress the sole judge of whether the states had complied with the requirements in any instance. More important, it would confine the convention to the specific problem raised in the state petitions and the congressional call and give Congress discretion to kill any proposed amendment on other subjects by not submitting it to the states for final ratification.

In our view this safety valve is both proper and essential. Senator Ervin has noted that when the framers adopted two methods of amending the Constitution, one to be invoked by Congress and the other by the states, they did not intend to make one superior to the other. They did not invite the states to junk the Constitution and write a new one in a convention called by themselves. Both Madison and Hamilton make clear that the conventions which the states might initiate were intended for the proposal of specific amendments only.

We think Congress would be well within its rights in passing a law to implement this understanding. If it does so, most of the fear that has been associated with state-initiated conventions will evaporate. As a matter of policy it is infinitely better for constitutional amendments to be approved first by Congress and then ratified by the states, so that the will of the Nation as well as that of the states will be expressed. But as long as an alternative amendment procedure remains in the Constitution, and it is not likely to be repealed, Congress has an obligation to provide sensible guidelines for its use and not to risk a constitutional crisis after petitions from two-thirds of the states have been laid at its door. This would be a good bill for Congress to get to work on while it is complaining that it has nothing to do.

[From the Washington (D.C.) Post, June 21, 1969]

GUIDELINES FOR A CONSTITUTIONAL CONVENTION

Congress has waited until the eleventh hour to face the problem of a possible constitutional convention called by the states. When a Senate subcommittee reported out a bill the other day to guide such ventures, 33 of the 50 states were on record as having approved a convention to deal with legisla-

tive reapportionment. Affirmative action by one more state legislature would, according to some views, require Congress to summon a convention under the terms of Article 5. But there are no rules whatever on the books as to how such a convention should be called or how it should operate.

At last the Judiciary Subcommittee on Separation of Powers has offered such rules, and Congress should lose no time in making them effective. No doubt the proposed rules would require many of the states to start over again in calling for a convention, but that is unavoidable. It would be quite intolerable to allow a convention to assemble under this heretofore dormant provision of the Constitution with no requirements as to how it should be constituted or as to what its limitations and responsibilities would be.

The chief provision of Senator Ervin's bill which the Subcommittee approved is designed to prevent a wide-open convention which might seek to rewrite the entire Constitution. Petitions to Congress for a convention would have to be related to a specific issue or issues, and Congress in turn would specify in making the call the nature of the amendment or amendments to be considered. The delegates would be required to take an oath that they would not propose or vote on any extraneous issue, and if they should approve a constitutional amendment outside the scope of their authority Congress could refuse to send it to the states for ratification.

This seems to us a wholly legitimate means of restricting proposed changes to the status of "amendments," as the Founding Fathers provided. There should be no question at this stage in our history of starting out afresh with a wholly new constitution initiated by the states without even the approval of Congress.

One provision of the Ervin bill, however, was broadened unreasonably. As introduced this year, the bill would have allowed the states only four years in which to petition for a constitutional convention. An amendment approved by the Subcommittee stretched this to seven. If there is really a burning issue on which the states feel they must seek an amendment, they should be able to make up their minds in less than seven years.

We hope that both the Senate and House will give early attention to these guidelines in order to avoid the chaos that otherwise may be unloaded on Capitol Hill at any time.

[From the New York Times, June 16, 1969]

MR. DIRKSEN'S TIME BOMB

After six years, Congress has at last become aware of the time bomb set off by Senator Dirksen of Illinois in his effort to erase a decision of the Supreme Court.

Unable to persuade his colleagues to adopt a Constitutional amendment that would have allowed states to elect one house of their legislatures on a basis other than population, Mr. Dirksen in 1962 launched a campaign for a constitutional convention to be called by the states for that purpose. Of the 34 required to force such convention, the like of which has not been seen since the one in 1787, 33 states have now voted to make the necessary application.

Faced with the possibility that such a convention could, in the absence of prior legislative restraint, act to undo the entire Constitution, a Senate Judiciary subcommittee has just voted to recommend drastic limitations. To prevent a runaway convention, the subcommittee under Senator Ervin of North Carolina would confine such conventions to the subject or subjects specifically stated in the applications. The bill must pass if, in Senator Ervin's words, "we are to avoid the threat of a major constitutional crisis in the very near future."

There is always the chance, of course, that the 34th state will not come through or that the applications of some of the states will be found to be irregular—partly on the ground that the very legislatures voting them were malapportioned. But the risk is far too great that Mr. Dirksen's plan will succeed mechanically and then proceed to yield more mischief than anyone could have foreseen, even including Senator Dirksen. In any case, if his interest is solely in getting the Court's opinion reviewed by a higher body—the citizens of the United States in convention assembled—he should be willing to support the Ervin proposal.

A Constitution that has stood the tests of nearly two centuries may need amending from time to time, but it must not be laid open for random surgery, casually and for reasons that suggest political maneuvering rather than political philosophy.

[From the Houston (Tex.) Post, July 6, 1969]

CONVENTION LAW IS NEEDED

There is a good chance that nothing actually will come of the effort to force the calling by Congress of a national constitutional convention, the first since 1787, for the asserted purpose of restricting the one-man, one-vote requirement of the federal Constitution as it now stands.

This is true even though the legislatures of 33 states at various times have approved petitions of some kind, and there always is the chance that 34 will join the procession to make the needed two-thirds of the 50 states.

There are so many legal questions involved, which presumably would have to be resolved in each case by the Supreme Court, that the possibility of a convention's ever being assembled are remote. While Wisconsin legislators recently debated whether that state should become the 34th petitioner, a three-judge federal court began hearings on whether or not Utah's petition was valid and the House of Representatives of the Illinois legislature voted to remove that state from the list of petitioners.

On the other hand, an effort in the recent regular session of the Texas Legislature to get rescinded a petition approved by a previous Legislature in 1967 did not succeed.

Although the Constitution provides that it can be amended by the convention method, no such convention has ever been held since the Constitution was adopted. And there are no statutes on the books to govern the procedures for implementing this method of amending the nation's fundamental law.

There is nothing to keep any such convention, once assembled, from going hog wild and attempting to rewrite the entire Constitution. In the absence of any such restraints, Congress would be endangering the nation's entire system of government and the Constitution it is sworn to uphold if it should call such a convention.

Even if it is unlikely that a national constitutional convention will be called in the foreseeable future, it still would be wise for Congress to enact legislation spelling out requirements for implementing the constitutional provision that permits the convention method of amendment, if it is to be left in the Constitution, and there are good reasons for doing so.

Any law should fix clearly the procedures to be followed in getting a convention of this kind assembled, and it should impose restrictions on what the delegates would be able to do once convened.

Sen. Sam J. Ervin, Jr. of North Carolina has proposed a measure along these lines, and it has been approved by a Senate Judiciary subcommittee. It provides that the petitions must be limited to a specific issue or issues, and the scope of the convention's authority would be limited accordingly. Moreover, the petitions would have to be filed within a specific period.

Whether or not Sen. Ervin's bill is entirely satisfactory is less important than the fact that it is a step toward filling a rather glaring gap in existing laws. The bill can be amended, of course, and made acceptable if it is not.

The current effort to force a convention on the part of politicians and others interested in limiting application of the one-man, one-vote principle at least has spotlighted the lack of statutory rules for dealing with situations of this kind, and that may prove to be constructive even if nothing else about the movement is.

It is hard to understand why the needed law has not been enacted in the past. Perhaps it has been the difficulty of getting a consensus on what the rules should provide.

But reason would seem to dictate that legislation be enacted to cover implementation of the constitutional provision, or else the provision should be removed from the nation's basic law.

[From the Grand Rapids (Mich.) Press, July 9, 1969]

LOCK THE DOOR NOW

A minimum of 34 states must act to call a federal constitutional convention. At this point in time 33 state legislatures have voted to call a convention to consider the Dirksen amendment, which is intended to undo the Supreme Court's one man, one vote decision in apportioning legislative bodies. Two more legislatures even now are weighing whether they want to take similar action. At the same time, the Illinois legislature is debating whether it can or should withdraw its vote for a convention.

At this juncture, therefore no one knows what the fate of the convention proposal will be. Or whether the Illinois Legislature can rescind the action taken by an earlier legislature. But Congress finally is awakening to the fact that constitutional chaos may be ahead unless preventive action is taken. A Senate Judiciary subcommittee, headed by Sen. Sam Ervin, a recognized constitutional authority, has recommended that severe limitations be imposed on any constitutional convention that might be called.

Specifically, it has proposed that if a convention is to be called to consider the Dirksen amendment it should be restricted to considering only that question. The reason for this proposal is that it is widely believed that unless a convention should be so restricted it could undertake to rewrite the entire Constitution. Ervin's view that a constitutional crisis could develop if restrictions were not imposed is scarcely debatable.

Regardless of what happens this year with respect to the Dirksen amendment, Congress should proceed promptly along the lines of the Ervin proposal. It can't know when the country may need some such measure to prevent a mass assault on the Constitution. And it could happen anytime now.

[From the Columbia (S.C.) State, June 25, 1969]

ERVIN'S SENSIBLE RULES

At long last, a Senate Judiciary subcommittee has approved a set of rules governing constitutional conventions. Since no such assembly has convened since the original one in 1787, it might be supposed that no great emergency exists. But this is not the case. Thirty-three states have issued convention calls—one shy of the number specified in Article V of the Constitution.

Assuming that the needed convention call comes, what next? The truth is no one is sure. Article V sets up the machinery for calling a convention to propose amendments and, having done that, lets the matter drop. With one specific exception, the convention presumably would have unrestricted authority to rewrite the national charter. Article V provides that no amendment can deny any

state of "equal suffrage in the Senate." Otherwise, it bars no holds.

By reason of this nearly unlimited authority, Congress historically has viewed convention calls with alarm. On several occasions, when it seemed likely that the necessary two-thirds of the state legislatures would call for a convention, Congress has rushed forward to propose amendments of its own. Until now, timely congressional action has prevented the convention process from coming to a boil.

This time, Congress failed to respond. One by one, state legislatures slowly applied for a constitutional convention to deal with legislative reapportionment. Specifically, they had in mind an amendment to reverse the Supreme Court's "one-man, one-vote" rule, and Congress hesitated to trifle with the court.

The result has been an accumulation of convention calls from the states. And, as the total drew nearer to the number required for a convention, so did the likelihood increase that the nation might be pitched into a first-class constitutional brawl—with two-thirds of the states insisting on a convention and Congress, contemplating the uncertainties, engaged in a mad scramble to come up with some technicality whereby to circumvent the supreme law of the land.

It was to prevent just such an occurrence that Sen. Sam Ervin of North Carolina proposed a set of ground rules defining the authority of constitutional conventions. Under the Ervin proposal, conventions would be restricted to specific amendments—those mentioned in the applications of the states. In addition, the states would have only seven years to propose a national convention. After this period, any convention movement would have to begin anew.

These are sensible requirements, well within the intent of the Framers. If adopted, the Ervin plan would do away with the objections to a constitutional convention and, as a result, actually make convention calls easier. This would restore to the states and the people a greater role in the amendment process, which until now has been monopolized by Congress, with the states having only a veto power over Congressionally initiated amendments.

Most important of all, the proposed rules would head off the constitutional crisis so far averted by a hair's breadth. Now that the guidelines have been put in final form by a Senate subcommittee, Congress should hurry them to the floor. Unless it comes this session, congressional action may very well come too late.

[From the Rhinebeck (N.Y.) Gazette, Jan. 12, 1969]

LID ON PANDORA'S BOX

There is now a fair possibility that, in spite of warnings as to the Pandora's Box that would be opened if Congress were forced to call a constitutional convention, this may happen. A two-thirds vote of the states is required. As matters stand, 32 of the necessary 34 have already applied for such a convention to take up the matter of an amendment to override the Supreme Court's one man-one vote rulings on legislative apportionment.

The prospect of a convention call is serious enough to have prompted Senator Ervin of North Carolina to introduce a bill fixing ground rules for such an assembly. The need for this is evident, since Article V of the Constitution offers no guidelines and since there are no clear precedents of any kind.

The most obstrusive danger is that, once a convention were called, there would be no constitutional restriction on what might be discussed. Debate would not be confined to the proposed amendment for whose enactment the several legislatures have applied. At present there is nothing in the law to prevent a general revision of the Constitution, with all the potential hazards involved in such a move.

Ervin's bill provides that such a convention could propose only amendments related to the specific subject of state applications. This is a vital safeguard. An even better safeguard would be for the remaining states to recognize the perils in this unprecedented course and decline to add their voice to the call.

U.S. WHEAT CRISIS

Mr. MILLER. Mr. President, the world wheat situation has now turned into a crisis of chaotic proportions. a condition of which I have been repeatedly warning ever since the Senate, over my opposition, ratified the International Grains Arrangement. The facts are these: World wheat trade has shrunk 30 percent during the past 12 months due largely to the International Grains Arrangement, which forced the United States to tax its wheat exports by specifying increased world wheat trading prices. Not only has this encouraged foreign wheat production to abnormal levels, particularly in other exporting nations, but because of technicalities contained in the fine print of the agreement, the United States does not compete effectively in any market of the world against French and Australian wheat. This results in a drastic loss of business, a reduction in foreign exchange earnings, piling up surpluses, and most importantly, a depression in the farm wheat economy. Domestic farm wheat prices recently went to a 27-year record low.

The reason is this:

The United States now taxes exports of Hard Winter ordinary wheat by 20 cents per bushel at Gulf ports. The ECC currently pays a subsidy of about $1.67 per bushel to export wheat. The U.S. export price last Thursday, July 31, f.o.b. gulf ports was $1.55 per bushel, while on the same day the equivalent computed price for EEC wheat was $1.15 per bushel. In other words, U.S. wheat was made 33 percent more expensive than EEC wheat because of the loopholes in the International Grains Arrangement. If we are going to export wheat in the face of such a situation, prices must be lowered.

Now, I ask, when, in the annals of world commerce, has the leading trading country in such an important commodity as wheat thrown away its markets by export taxation, and refused to grant an export subsidy of just 10 percent of its primary competitors export subsidy in order to be competitive, preserve its traditional markets, and strengthen a faltering economy?

Mr. President, I ask unanimous consent to have an additional 2 minutes.

The PRESIDENT pro tempore. Without objection, the Senator from Iowa is granted 2 additional minutes.

Mr. MILLER. This is the heritage the Nixon administration received from the previous administration and its ill-conceived negotiation and support of the International Grains Arrangement. Those who are complaining the loudest about the lowering of prices to keep our export trade from being catastrophically reduced seem to be the ones who supported ratification of the International Grains Arrangement, but I have not heard them admit their mistake and call for withdrawal from the arrangement.

I have just been advised today that our good neighbor to the south, Ecuador, has bought 50,000 tons of wheat—its total annual wheat import requirement—from Russia. U.S. pricing policy has sent a Latin American neighbor to a different supplier.

The crisis is here, and the time is now to demand that U.S. wheat be kept fully competitive in world markets. Immediate action is required to prevent a complete debacle in U.S. wheat export trade which will drastically impair the wheat market for U.S. farmers. I repeat my statement of July 18 that the United States should give notice of its intention to withdraw from the International Grains Arrangement.

The editorial in the July 29 issue of the Southwestern Miller effectively expresses the dire implications of this situation.

I ask unanimous consent that this editorial and several other articles relating to the subject be placed in the RECORD.

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

[From the Southwestern Miller, July 29, 1969]

THE FIRST HALTING STEP

That wheat futures advanced ahead of the expected announcement of downward revisions in export prices and declined sharply in the sessions immediately following implementation of the changes provides a broad consensus on the efficacy of the actions. What the futures market initially said was that the looked-for reductions in U.S. wheat export quotations would stimulate sales abroad to the point that the overall price level would be strengthened. The declines that followed disclosure of the actual revisions reflected disappointment over their extent as well as concern that little or no increase in business abroad will be realized. Certainly, the latter conclusion is justified on the basis of the complete absence of dollar sales abroad in the first week following the adjustments announced by the Department of Agriculture on July 18. It is difficult to dispute assessments made by a market as viable as wheat futures are. Nevertheless, it is important to keep in mind that the export price moves were initiated by men in Washington who fully recognize the impossible marketing position created for the United States by even minimal adherence to the International Grains Arrangement and whose commitment is to the expansion of wheat sales abroad.

What emerges is the necessity for balancing the good faith and practicability of the top officials of the Department of Agriculture who pressed for reductions against the dictates of world politics that extend beyond the wheat economy alone. These divergent forces came to bear, after literally months of agonizing debate and discussion. That the political considerations, as opposed to forces who desire to sell more U.S. wheat into dollar markets, prevailed is crystal clear in an analysis of the revised export rate schedule that was adopted to implement the price changes. That export rate schedule includes an incredibly complex series of different certificate costs and subsidy payments for hard winter proteins from the Gulf, excludes South America from the benefits of major hard winter adjustments and provides for no change from the Pacific coast. Even where the price cuts were deepest, about 12 cents a bushel on

hard winters, eight cents on soft wheat and varying adjustments for proteins, they are widely regarded as inadequate to meet world competition.

One particularly valid assessment of the revisions is that they represent a "gentleman's" approach to world wheat pricing, or, more specifically, a desire to assuage the clamor for U.S. actions by delicate adjustments that would not draw the ire of other selling countries. The actions taken are very similar to trying to have one's cake and eating it also. This cannot be done in world wheat pricing. A wheat exporter cannot be "half-competitive" any more than a woman can be "half-pregnant."

While the price adjustments that have been made may permit sales of a few parcels of wheat to a few buyers, the United States still has no chance at all of competing for the major dollar business in Western Europe or other areas of the world where price is the sole consideration. In order to sell wheat abroad in a volume that even approaches the rightful share for this country of world dollar business, the United States must be willing to undertake bold price moves. These obviously were prevented by the political response to the pleadings of other countries with which the United States competes in the world dollar market. Pledges by these nations to correct their ways and to lessen their competition in markets traditionally served by the United States have been worthless in the past and little reason prevails for expecting a different outcome in the future. The value of such pledges is all the more lessened by the fact that Soviet Russia and the nations of Eastern Europe were not a party to any of the discussions that preceded the U.S. moves, and that absolutely no basis exists for expecting the Communist nations to follow other than a fiercely competitive course.

While many disturbing elements have been noted in the adjustments undertaken by the United States, the most nonsensical from a practical sales viewpoint is the exclusion of South America and the major dollar outlets in the Far East from the benefits of price declines. That ruling is equivalent to telling one's best customers that they must pay more than the buyers who shift sources of supply with each fluctuation in price. Included in the nations of the Far East and South America are not only the principal dollar customers for U.S. wheat, but those buyers that have the most promise for developing into important commercial markets in the future. Japan, which in the 1968–69 crop year accounted for nearly a third of U.S. dollar wheat exports, has made its views on this discrimination known to Washington in no uncertain terms. Brazil has followed the same course. The upshot may be the unbelievable circumstances of the United States losing these markets that were important buyers before any price changes were made.

Although the price adjustments are a deep disappointment to those who had anticipated and wished for dramatic actions by the United States to regain its role in world markets, the fact that any changes at all were forthcoming must be considered a victory. The reductions were the first overt U.S. step to move away from even scant recognition of the I.G.A. price schedule as the determinant for U.S. wheat offerings abroad. This is a plus. It is a decision that came after numerous conferences between ministerial and sub-cabinet officials of the exporting member countries of the pact and after what seemed like interminable debate between all the elements in Washington that demanded a voice in U.S. export wheat pricing. At last it can be said the U.S. government has formally recognized the failings of the I.G.A.

Now that this first halting move has been made away from adherence to the I.G.A., the next step, it is hoped, will come without the long debate that preceded the initial action. The need for additional steps, in pricing, as well as elimination of exclusions and complexities, is readily apparent from a cursory examination of the U.S. position in world markets. The present U.S. stance in world wheat markets has been aptly compared to that of a young boy who had been forced for months to watch the baseball game through a knothole in the fence and at last had obtained a seat in the ballpark, even though it was in the bleachers. The youngster aspires now to a seat in the front boxes. U.S. wheat exporters are presently "in the ballpark," but they, too, seek and deserve the wherewithal, through government actions, to be in the front row of competitors for the world's business in wheat.

[From the Southwestern Miller, July 29, 1969]

SPRINGBOARD FOR WHEAT

"The time was never more propitious for those concerned with wheat, milling, baking and wheat-based foods" to make a contribution to the solution of the malnutrition problems facing the United States. This is one of the conclusions of a proposal emanating from the Wheat Flour Institute of the Millers' National Federation to stimulate all segments of the breadstuffs industry to assist in a project designed to develop a prominent place in the American diet for two wheat-based products. These products, now named Blend A and "WSB," have the potential of helping to eliminate malnutrition from the American scene through incorporation in traditional foods such as bread, cookies and pasta. The Institute statement on the opportunity facing the breadstuffs industry is hardly an exaggeration in view of widespread attention to findings of failure in supplying adequate nutrients at many levels of the U.S. population. Nutritional needs are at the very pinnacle of national concern. The Institute is providing the industry with a project that promises a dramatic role in the ending of these problems as well as offering a great vehicle for increasing consumption of wheat foods.

Responding with very commendable promptness to the thrust of the times, the Institute has mapped a domestic marketing proposal for products that were developed originally to meet special dietary needs in developing countries. Blend A is a concentration of nutrients separated from middlings and mixed with 70 per cent regular flour. It yields a bakery flour with markedly superior protein quality and quantity. WSB, or Wheat-Soy Blend, is formulated of a mixture of wheat protein concentrate and straight grade flour or bulgur flour, supplemented by soy flour and soy oil, as well as vitamins and minerals.

Several steps already have been taken by the Institute and other interested organizations to implement the plan and to gain through promotion and education a large-scale exposure of these products to consumers. Formulations and sampling plans are being worked out for breads, rolls, cookies and pastas, both for commercial and home use. An impressive array of industry groups has been enlisted—the American Institute of Baking, America Bakers Association, National Macaroni Manufacturers' Association, North Dakota State University. The proposal calls for coordination of efforts with the Consumer and Marketing Service and Agricultural Extension Service of the Department of Agriculture, Office of Economic Opportunity, Department of Health, Education, and Welfare and state and local departments of health.

Significant attention in the prospectus is given to the subtle problems of marketing such specially-compounded products among the urban poor. Just in the past week, the importance of recognizing the sensitivity of this socio-economic class received major emphasis in statements by industry leaders before the Senate Select Committee on Nutrition and Human Needs. "It must be understood that the most nutritious product in the world does no one any good unless it is consumed," Robert D. Stuart, Jr., president of the Quaker Oats Co., told the committee. Dr. Howard E. Bauman, director of science and technology for the Pillsbury Co., spelled out for the committee the basic requirements to gain acceptance for a special food—it cannot be sold only on the basis of nutritional quality, and no stigma of inferior social status can be attached; it must taste good and be comparable with other preferred foods of less nutritive quality; it must have a brand name to develop consumer confidence, and it must be familiar in flavor and form. In recognition of these marketing criteria the Institute plan gives high prominence to the projection of a "prestige" image for Blend A and "WSB," so as to make them acceptable among low income groups as well as popular with more affluent consumers.

Industry-wide support of the Institute proposal would be unique for the food industry. To achieve the success envisioned, adequate financing is required as well as all-out cooperation by associations and individual companies. In his message to Congress on hunger and malnutrition in early May, President Nixon said, "Something very like the honor of American democracy is at issue." Not an inappropriate paraphrase might be, "Something very like the honor of the breadstuffs industry is at issue."

WHEAT PRICES SKID TO 1942 LEVEL IN REACTION TO HEAVY CARRYOVER; OTHER GRAINS DECLINE

Wheat prices in U.S. markets plunged to 27-year lows yesterday.

The September wheat contract on the Chicago Board of Trade sold at $1.195 a bushel, down 5⅞ cents and the lowest since June 1942. The closing price, after a slight recovery, was $1.21, off 4⅜ cents.

Wheat prices at Kansas City retreated as much as 3⅞ cents a bushel. At Minneapolis, the drop was 1 cent.

The weakness in wheat unsettled holders of other grain contracts. Corn values fell 1⅝ cents a bushel. Oats fell 1 cent a bushel and rye slipped ⅝ cent a bushel.

The general selling of wheat contracts was stimulated by large stocks of the grain in the country and the failure of foreign buyers to respond to recent price cuts.

The U.S. Government ordered a 12-cents-a-bushel reduction on sales of wheat to Western Europe a little more than a week ago because other nations were selling the grain at less than the floor agreed on in the International Grains Agreement.

Yesterday, in Brussels, agricultural ministers of the six Common Market nations voted unanimously to authorize export sales of Common Market wheat at prices below the minimums set by the international agreement.

Foreign buyers, exporters believe, are waiting for still lower prices.

Normally at this time, domestic bakers buy a large amount of flour to cover baking needs for three months or more.

Annual midyear flour purchases by the bakers in recent years involved 20 million to 25 million 100-pound sacks. The bakers buy the flour at the height of the winter-wheat harvest or shortly thereafter. Grain merchants say the buyers are taking their time now because of the unsettled wheat price situation. Presumably they are expecting still lower prices.

COPPER FUTURES GAIN

The copper futures market in New York was strong, rising as much as 1½ cents a pound to seasonal highs.

Copper prices at London rose ⅝ cent a pound.

U.S. dealers handling scrap copper raised the scrap price 1 cent a pound to 51 cents. Quotations charged by the dealers for refined

copper made from the scrap metal or imported ore were raised ½ cent a pound.

Copper traders in London and the U.S. again turned their attention to the tight supply situation and were concerned about the continuing strike of workers at International Nickel Co. of Canada's facilities in Ontario, which had been producing 2,500 tons of refined copper weekly. The strike was called July 10.

Liquidation continued to depress silver futures prices in New York. Prices in this trading fell more than 4¼ cents an ounce for some contracts. The failure of industrial demand to be attracted to the metal at current prices created selling, brokers said.

The cocoa futures market was another weak spot. The loss was 1 cent a pound, the daily limit. Traders said some speculators who bought contracts recently were tempted to sell when it became evident that European demand, which was responsible for bolstering prices recently, was absent. Dealers also noted a favorable new cocoa crop outlook in Ghana.

CHICAGO BEEF RISES

Chicago wholesale beef prices rose ½ cent a pound, the first upturn in 10 days. Choice beef sold at 48 cents.

Beef prices fell nearly 3 cents a pound last week and were down 8 cents from 17-year tops set early in June. Brokers said the low prices attracted increased demand from the consuming trade.

Better wholesale beef prices and reduced cattle receipts prompted packers and shippers to bid steady prices for live steers. Receipts of cattle at the 12 major marketing centers totaled 44,400 head, 2,900 less than a week earlier.

Farmers shipped 52,300 hogs to the large marketing centers, nearly 3% more than a week ago.

[From the Wall Street Journal, Aug. 1, 1969]

BIG WHEAT EXPORTERS ARE TRYING TO AVERT INTENSIFYING PRICE WAR, BUT DELEGATES TO LONDON MEETING TODAY UNABLE TO DO ANYTHING BUT REPORT TO THEIR CAPITALS

NEW YORK.—The price war in the world wheat export market is reaching a point that could render the International Grains Agreement of 1968 "just a piece of paper," grain analysts say.

A delegation from the major wheat-exporting nations will meet in London today to determine if an intensified wheat "price war" can be averted, Washington officials said. Comenting on the sessions, an international grain merchant said, "The group is powerless to do anything except watch what is going on and report to their governments."

Charges of cut-rate wheat sales have been directed against the European Economic Community early this year. These applied to France, because it is the only nation in the Common Market that has a large wheat surplus. France sold wheat to the Far East at that time at less than $1 a bushel, or about 67 cents below the minimum agreed to by the IGA. Thereafter, grain men say, Australia sold wheat at price concessions.

Two weeks ago, the U.S. and Canada, in what was termed a "corrective measure," lowered export prices to Western Europe as much as 12 cents a bushel to be competitive in the export market. This was done despite previous assurances from the EEC that price cutting would be stopped.

Apparently in retaliation to the U.S. and Canadian action, the EEC yesterday increased export subsidy payments to its shippers $2.65 a ton to as much as $8.90 a ton.

U.S. exporters didn't get full details as to how the new rates would apply, but they know that subsidies prior to the rise ranged from $34.38 a ton to $61.50 a ton, depending on the nation buying. One point, however, was cleared. This is the new subsidy rate to Brazil, currently $66.55 a ton, up from $61.50.

Brazil was scheduled to buy around four million bushels of wheat on Wednesday, but refused all offers presumably thinking the grain could be bought at a later date and cheaper. Exporters said offers to sell came from many areas and the volume was far more than four million bushels.

France offered to sell Brazil soft red wheat at $1.33 a bushel. U.S. exporters offered hard wheat, a better grade, at $1.57½ a bushel.

While the common market's latest price cut, through increased subsidies, didn't apply to the Far East, exporters here said France sold soft wheat to Singapore at $1.10 a bushel. This compares with a U.S. price of $1.50 a bushel for soft wheat at the Gulf.

So far the U.S. and Canada haven't cut export wheat prices to the Far East. Japanese buyers who tried to buy the grain from the U.S. during the past two weeks refused all offers and complained of discrimination. Brazil also was excluded from U.S. and Canadian price cuts.

[From the Wall Street Journal, Aug. 1, 1969]

PRICE TRENDS OF TOMORROW'S MEALS AND MANUFACTURERS

Wheat futures prices in Chicago and Kansas City fell ⅞ cent a bushel. Loss for corn and rye contracts on the Chicago Board of Trade was 1¼ cents. All deliveries of rye sold at seasonal lows.

Futures markets in New York were quiet, with price changes mixed.

Selling of wheat contracts in U.S. markets was spurred by news Brazil and Japan refused to buy wheat in the export market. It was thought the two countries were hoping to buy wheat at lower than current prices.

The European Economic Community yesterday raised subsidies on exports of wheat in order to compete in the world market with the U.S. and Canada. Indications were that the EEC also was making cut-rate sales to some areas in the Far East.

Representatives of leading wheat exporting nations are to start meeting in London today to discuss conditions in the world wheat export market that are labeled by grain dealers as a "price war."

BUYING CUSHIONS DROP

Flour millers bought wheat contracts. Brokers said this support cushioned the wheat price drop. Millers were buying wheat to cover milling requirements on sales of flour made to large chain bakers. Flour mill representatives estimated some chains bought enough flour to cover baking needs for about one month.

Favorable new crop outlook continued to create selling of corn and rye futures by speculators.

Copper futures prices rose ½ cent a pound for some contracts. Demand was stimulated by firmness in London.

The strike at International Nickel Co.'s facility in Canada continued. Traders said the work stoppage would add considerably to the tight copper supply in the world market. The strike started July 10.

Silver futures prices in New York declined about 1¾ cents an ounce. Failure of the market to attract more buying following Wednesday's advance discouraged holders of contracts.

The Florida Canners Association said 1,694,925 gallons of frozen concentrated orange juice were shipped by processors last week, down from 1,829,366 gallons a week earlier. Traders had expected latest shipments to be between 1.8 and 1.9 million gallons. The lower than expected movement prompted some traders to take profits.

F. O. Licht, a European statistician, estimated world sugar production this year at 68,591,000 tons, up slightly from the forecast of 67,961,000 tons he made last March. The estimate was in line with previous trade predictions.

Hog prices rose as much as 50 cents a hundred pounds at Chicago and Peoria, Ill. At other terminals, quotations were unchanged to up 25 cents.

Packer and shipper demand was active for moderate supplies. Buying was stimulated by improved business in the wholesale pork trade.

Farmers delivered 42,200 hogs to the 12 major marketing terminals, less than last week's 42,326 volume. However, in Chicago the total was only 2,000 or 20% less than a week earlier.

Whole pork loin prices were unchanged but for pork bellies, quotations were raised as much as 1 cent a pound.

CATTLE PRICES MOSTLY UNCHANGED

Cattle prices were mostly unchanged in unusual quiet Thursday dealings.

Chicago wholesale beef was in demand. Prices rose ½ cent a pound. Choice beef sold at 48½ cents.

Quicksilver prices in New York fell $4 a flask yesterday to $489. This followed a drop of $10 on Wednesday. Each flask contains 76 pounds.

The weakness followed news that the Atomic Energy Commission has a surplus stock of 15,000 flasks of the liquid metal. In connection with the excess supply, a spokesman at the General Services Administration, the agency that previously sold excess stocks of Government mercury, said "market studies are being conducted at this time. No final decision has been made to sell the mercury." Last sales of Government mercury from a previous program was made by the GSA earlier this year.

[From the Wall Street Journal, July 30, 1969]

PRICE TRENDS OF TOMORROW'S MEALS AND MANUFACTURERS

Grain markets improved yesterday following recent sharp price declines.

Advance in the wheat market ranged to 1¾ cents a bushel. At Kansas City, prices rose 1⅞ cents. The corn market posted a gain of ⅞ cent.

The Chicago rye market was an exception to the trend, dropping 1½ cents a bushel to seasonal lows.

In other trading, New York copper futures prices rose to seasonal highs, gaining almost 1⅝ cents a pound for some contracts. Orange juice futures prices also were strong, but silver and world sugar futures quotations continued to drop. Some cocoa contracts fell 1 cent a pound for the second consecutive day.

Spectators and commercial dealers started to buy wheat contracts shortly after the opening yesterday when it appeared liquidation that dropped prices sharply on Monday spent its force.

Traders heard talk that some bakers may be interested in buying flour at current prices. Reports also circulated that farmers weren't satisfied with current wheat prices and were holding back supplies.

News from Moscow indicated that Russian farmers were having trouble harvesting this year's wheat crop. The Soviet Union had unfavorable growing weather, and wheat plants are short, making it difficult for machines to harvest the grain. It also was stated machinery for gathering the grain had been badly prepared and that storage sheds and elevators weren't in good condition. Russia has been selling wheat in the world market for several years. Traders thought current crop conditions may take Russia out of the export market as a seller during the present season.

WAITING FOR CHEAPER VALUES

"The world wheat export market has been stagnated by recent price cuts," said a leading international grain merchant.

Large exporting nations cut prices below the minimum established in the International Grain Agreement, and potential buy-

ers are standing by hoping to get still cheaper values.

Further explaining the present condition the grain man said, "It seems to be a case of nerves." He, however, expects a scramble to sell by the surplus wheat producers when buyers appear.

A test may come today. Brazil needs 3.7 million bushels of wheat for shipment during August and September. All nations having wheat to sell were invited to make offers. Brazil entertained offers last week, but refused to buy because prices were too high.

Japan, another large importer, shortly must buy around 15¼ million bushels of wheat needed for home use during September and later. Japan normally bought wheat from the U.S., Canada and Australia, with smaller purchases made from Russia. Japan also considered buying last week, but refused to place orders because prices were too high.

Both Japan and Brazil weren't included in the recent price cuts. They complained of discrimination. There is now a growing belief exporting nations may extend to the two countries the same cuts, amounting to as much as 12 cents a bushel below the IGA minimums. The price reductions were made to Western European wheat importers, almost two weeks ago.

STORM WARNINGS

Strong prices paid for refined copper in the U.S. dealer market and the continuation of a strike at International Nickel Co's., facility in Canada, capable of producing 2,500 tons of copper weekly, prompted heavy demand for copper futures in New York. Copper prices in London rose ⅞ cent a pound.

U.S. dealers quoted refined copper for delivery in September at 66¼ cents a pound, up 1¼ cents from Monday. The price for October delivery copper was raised 1½ cents to 65¼.

Speculators dealing in orange juice futures were concerned with tropical storm Anna now churning in the central Atlantic. The Weather Bureau expects the storm to reach hurricane intensity. Traders feared if the storm moved close to the Florida mainland it could heavily damage next season's orange crop.

Wheat prices in the world sugar export market continued to create selling of futures in New York and London.

A continuation of reports that dealers who bought cocoa earlier in the year were attempting to sell some of the supplies created further selling of cocoa contracts by speculators.

Hog prices were 25 cents to 50 cents a hundred pounds lower at Midwestern markets yesterday. Packer and shipper demand slowed after farmers delivered liberal supplies to the large terminals.

[From the Wall Street Journal, July 28, 1969]

WAR ON WHEAT PRICES BY MAJOR EXPORTERS EXPECTED TO INTENSIFY—COMMON MARKET HAS UNFAVORABLE RESPONSE TO CUTS BY CANADA, UNITED STATES TO EUROPEAN PURCHASERS

WASHINGTON.—The international wheat price war on commercial sales by major exporting countries to the Far East and other markets is expected to grow more intense.

The European Economic Community (Common Market) informed the U.S. and other big exporters of its "unfavorable reaction" to recent reductions in U.S. and Canadian prices to European buyers. The EEC is a member of the International Grains Agreement, which established "floor selling prices" for leading exporters. France has a large wheat supply, and its sales amount to about 95% of the export wheat trade from the tax nations belonging to the group. Italy is also selling wheat.

Informed sources now say the Common Market's agriculture ministers will meet this week to consider cutting export prices as a response to the U.S. and Canadian reduction on sales made to Western European nations.

Canada and the U.S., a little more than a week ago, cut the IGA floor price 12 cents a bushel to $1.55 and termed the action as a "corrective measure."

MOVE WAS PRESUMABLY RETALIATORY

This action was presumably taken in retaliation to cut-rate sales by France and other nations.

Early this year, France offered to sell wheat to Far Eastern buyers at prices sharply below the IGA minimum of $1.67 a bushel. By the end of May about 9.5 million bushels were sold to the Philippines, Hong Kong, Singapore and Taiwan. The price obtained for some of the grain was less than $1 a bushel figured back to U.S. Gulf ports, the basing point for IGA sales. Export wheat business was done earlier in the year by Australia at the IGA minimum, but after low ocean freight rates were considered, the price was less than the IGA minimums. This, too, upset major exporters.

After the U.S. and Canada lowered the export wheat price, EEC officials told the big North American exporters it would adhere to the minimum in the pact.

The U.S. and Canada had cut the price despite urgings of EEC officials to refrain from the action. The EEC promised to manage Western European wheat exports in a way that would result in no further commercial sales to the Far East. The group also proposed an International Grains Agreement "working group" be established in London to keep world wheat prices under constant review.

"Now we've been informed that this deal is off," said a U.S. official.

Despite this, he said the U.S., Canada, Argentina and Australia as well as some other wheat exporting members of the IGA intend to send delegations to London early this week to set up new administrative machinery for reviewing prices.

CANADA SEEKS TOP-LEVEL MEETING

To keep the tottering IGA, which is applicable only to wheat, from collapsing entirely, it's understood here that Canada also is seeking another ministerial-level meeting of major IGA wheat-exporting countries. U.S. sources said the Canadians are proposing that floor prices be discarded for lower grades of wheat, which at uncontrolled prices might find larger world markets as animal feeds.

While some U.S. officials believe this would be a good idea, they said another ministerial-level session so soon after the conference that was concluded at the State Department here on July 11 appeared to be out of the question.

Since the price was cut, business in the export market came to a near halt.

Japan, one of the biggest buyers in the world wheat market, said it was interested in buying 12¼ million bushels of wheat, mostly from the U.S. Exporters quoted sales prices, but these were rejected. Offers from Canada and other areas also were refused.

It was learned last week that the Japanese food agency in charge of wheat purchases "fired out protests" to U.S., Canadian and Australian officials because they didn't reduce prices to it in line with those offered on export sales to Western European nations. Brazil also was excluded from the cut-rate purchase, and postponed a buy order until a later date.

Even Russia tried to get into the act last week by offering to sell Britain spring wheat at about 3¼ cents less than the price sought by U.S. exporters. British buyers refused this order.

Exporters say Japan has placed contracts a while ago to cover wheat needs through August. "Somewhere along the line, Japanese buyers will have to start shopping," a leading exporter said. This may be a test of the present wheat arrangements, he added.

[From the Wall Street Journal, July 25, 1969]

U.S. WHEAT HOARD HITS 4-YEAR HIGH; SOYBEANS AT RECORD; CORN DROPS—WHEAT STOCK 811 MILLION BUSHELS AT JULY 1, A 50 PERCENT RISE FROM 1968; GAIN TIED LARGELY TO EXPORT FALL

WASHINGTON.—U.S. stocks of wheat were a hefty 811 million bushels at the July 1 start of the new marketing year, 50% above a year earlier and the largest wheat carryover since 1965, the Agriculture Department reported.

Soybean stocks on July 1, at a record 448 million bushels, were up 57% from last year's 284.9 million bushels, the department said.

Corn stocks dropped 6% below last year to two billion bushels but were still 18% above the 1967 hoard.

Rye stocks totaled 15.9 million bushels, down 12% from 1968 and 15% below 1967.

Wheat supplies exceeded the 780 million bushels the department predicted last January, but were 300 million bushels below its 1.1-billion-bushel April 1 expectation. Last year's carry-over of 539.3 million bushels reversed 1967's 14-year low inventory of 425 million bushels.

Feed-grain stocks rose slightly to 79 million tons from 78.2 million tons in 1968, the department reported, despite the decline in corn stocks, which normally account for about 80% of feed-grain supplies.

The wheat-stock increase includes a 69% rise in durum wheat supplies for a July 1 carry-over of 41.1 million bushels, up from last year's 24.3 million bushels and the largest since July 1966.

Department analysts said the rise in wheat was due largely to an export decline of about 200 million bushels, to about 535 million bushels, in the year ended June 30.

Durum wheat exports were good, however, and a large crop contributed to the substantial carry-over stock for that grain, a department analyst said.

Corn consumption in the June quarter showed a definite "slowdown" at 958 million bushels, a department official said, compared with 1.03 billion bushels, in the 1968 quarter. Higher corn prices, ranging from $1.15 to $1.20 per bushel, were causing farmers to turn to other feed grains and even wheat, he said.

[From the Washington (D.C.) Post, July 29, 1969]

GRAIN PRICES LOWERED

(By Richard Norton-Taylor)

BRUSSELS, July 28.—The European Common Market hit back today at the U.S. and Canadian decision to sell grain at below the minimum prices set by the international grains arrangement in 1967.

"The European community had counted on the United States and Canada abstaining from unilateral measures which did not conform to the terms of the arrangement," a communique of the six agricultural ministers of the Common Market stated.

The communique said the Common Market had no alternative but to follow suit and lower their selling prices for grains accordingly. This means that community farmers' export restitutions, the difference between the Common Market support price and the world price, will be increased at the expense of all six market members. The farm payments are paid out by a common farm fund to which all members contribute. The Common Market will hold off these measures until the end of July, in the hope that some other arrangements can be worked out in the meantime, possibly at a meeting this week of representatives of the world's leading grain exporters.

On July 18, the U.S. (soon followed by Canada) decided to lower its selling price for grains. For example, the price of hard

winter wheat was cut by 12 cents a bushel under the grain agreement minimum. These cuts affected exports from East Coast and Gulf ports.

These decisions followed a meeting in Washington earlier this month of ministers from grain-exporting countries at which the conclusion was reached that some price adjustments had to be made at a time of wheat surpluses.

A Common Market spokesman said the U.S. action could have grave consequences for the future application of the Kennedy Round of tariff cuts.

France, the market's principal exporter of grains, has been accused by the U.S. of undercutting the grain minimum price in sales to Thailand, Japan, and the United Arab Republic.

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

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

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

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

EXECUTIVE COMMUNICATIONS, ETC.

The PRESIDENT pro tempore laid before the Senate the following letters, which were referred as indicated:

REPORT OF DIRECTOR OF SELECTIVE SERVICE

A letter from the Director, Selective Service System, transmitting, pursuant to law, a report on the operations of Selective Service during the period from July 1, 1968, to December 31, 1968 (with an accompanying report); to the Committee on Armed Services.

REPORT OF THE SECRETARY OF THE AIR FORCE

A letter from the Secretary of the Air Force, transmitting, pursuant to law, a report entitled "Semi-Annual Experimental, Development, Test and Research Procurement Action Report," for the period January 1, 1969, through June 30, 1969 (with an accompanying report); to the Committee on Armed Services.

REPORT OF EXPORT-IMPORT BANK OF THE UNITED STATES

A letter from the Secretary, Export-Import Bank of the United States, transmitting, pursuant to law, a report on actions taken by the Bank during the quarter ended June 30, 1969 (with an accompanying report); to the Committee on Banking and Currency.

REPORTS OF THE COMPTROLLER GENERAL

A letter from the Comptroller General of the United States, transmitting, pursuant to law, a report on an examination of financial statements of the U.S. Government Printing Office, fiscal year 1968, dated August 4, 1969 (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 silver sales limited to small business concerns, Treasury Department, dated August 4, 1969 (with an accompanying report); to the Committee on Government Operations.

REPORT OF BUREAU OF LAND MANAGEMENT

A letter from the Acting Director, Bureau of Land Management, Department of the Interior, transmitting, pursuant to law, a report of negotiated sales contracts for disposal of materials during the period January 1 through June 30, 1969 (with an accompanying report); to the Committee on Interior and Insular Affairs.

THIRD PREFERENCE AND SIXTH PREFERENCE CLASSIFICATIONS FOR CERTAIN ALIENS

A letter from the Commissioner, Immigration and Naturalization Service, Department of Justice, transmitting, pursuant to law, reports relating to third preference and sixth preference classifications for certain aliens (with accompanying papers); to the Committee on the Judiciary.

SUSPENSION OF DEPORTATION OF CERTAIN ALIENS

Two letters from the Commissioner, Immigration and Naturalization Service, Department of Justice, transmitting, pursuant to law, copies of orders suspending deportation of certain aliens, together with a statement of the facts and pertinent provisions of law pertaining to each alien and the reasons for ordering such suspension (with accompanying papers); to the Committee on the Judiciary.

ADMISSION INTO THE UNITED STATES OF CERTAIN DEFECTOR ALIENS

A letter from the Commissioner, Immigration and Naturalization Service, Department of Justice, transmitting, pursuant to law, copies of orders entered granting admission into the United States of certain defector aliens (with accompanying papers); to the Committee on the Judiciary.

TEMPORARY ADMISSION INTO THE UNITED STATES OF CERTAIN ALIENS

A letter from the Commissioner, Immigration and Naturalization Service, Department of Justice, transmitting, pursuant to law, copies of orders entered granting temporary admission into the United States of certain aliens (with accompanying papers); to the Committee on the Judiciary.

REPORT ON ACTIVITIES IN CERTAIN COUNTRIES RELATING TO APPLICATIONS FOR CONDITIONAL ENTRY

A letter from the Commissioner, U.S. Department of Justice, Immigration and Naturalization Service, pursuant to law reporting on activities in certain countries relating to applications for conditional entry, for the period January 1, 1969 through June 30, 1969; to the Committee on the Judiciary.

PETITIONS AND MEMORIALS

Petitions, etc., were laid before the Senate, or presented, and referred as indicated:

By the PRESIDENT pro tempore:

A letter in the nature of a petition, from Allan Feinblum, New York, N.Y., praying for the issuance of certain IBM cards; to the Committee on Post Office and Civil Service.

A resolution adopted by the Board of Chosen Freeholders, Union County, Elizabeth, N.J., supporting the further extension of the Interstate System of Highways; to the Committee on Public Works.

BILLS INTRODUCED

Bills were introduced, read the first time and, by unanimous consent, the second time, and referred as follows:

By Mr. BROOKE (for himself and Mr. McINTYRE):

S. 2761. A bill to amend the United States Housing Act of 1937 to provide additional rental assistance payments to enable families of very low income to afford to live in low-rent housing projects and to improve operating and maintenance services in such projects; to the Committee on Banking and Currency.

(The remarks of Mr. BROOKE when he introduced the bill appear later in the RECORD under the appropriate heading.)

By Mr. STENNIS:

S. 2762. A bill to amend the Civil Rights Act of 1964 to assure a more uniform enforcement of title VI thereof; to the Committee on the Judiciary.

(The remarks of Mr. STENNIS when he introduced the bill appear later in the RECORD under the appropriate heading.)

By Mr. MUNDT (by request):

S. 2763. A bill to allow the purchase of additional systems and equipment over and above the statutory price limitation; to the Committee on Government Operations.

By Mr. MAGNUSON:

S. 2764. A bill to make it unlawful to install nonsafety glazing material in sliding glass doors and other high risk areas of residential, public, and commercial buildings in the District of Columbia to protect the health and safety of the public, and to direct the Director of the Department of Health to establish and promulgate standards for safety glazing material and its application; to the Committee on the District of Columbia.

(The remarks of Mr. MAGNUSON when he introduced the bill appear later in the RECORD under the appropriate heading.)

By Mr. MAGNUSON (by request):

S. 2765. A bill to consent to amendments to the Pacific Marine Fisheries Compact; to the Committee on the Judiciary.

By Mr. JACKSON:

S. 2766. A bill for the relief of Guillermo Blonquis (William Bloomquist); to the Committee on the Judiciary.

By Mr. GURNEY:

S. 2767. A bill to amend the Federal Water Pollution Control Act, as amended; to the Committee on Public Works.

(The remarks of Mr. GURNEY when he introduced the bill appear later in the RECORD under an appropriate heading.)

By Mr. TYDINGS:

S. 2768. A bill to amend the Atomic Energy Act of 1954 in order to promote the preservation of environmental quality; to the Joint Committee on Atomic Energy.

(The remarks of Mr. TYDINGS when he introduced the bill appear later in the RECORD under the appropriate heading.)

ADDITIONAL COSPONSORS OF BILLS

S. 2073

Mr. DIRKSEN. Mr. President, I ask unanimous consent that, at the next printing, the name of the Senator from Kansas (Mr. PEARSON) be added as a cosponsor of S. 2073, to prohibit the use of interstate facilities, including the mails, for the transportation of certain materials to minors.

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

S. 2108

Mr. BYRD of West Virginia. Mr. President, on behalf of the Senator from Maryland (Mr. TYDINGS), I ask unanimous consent that, at the next printing, the names of the Senator from Massachusetts (Mr. BROOKE), and the Senator from Virginia (Mr. SPONG), be added as cosponsors of S. 2108, to create a National Center for Population and Family Planning and other purposes.

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

S. 2315

Mr. BYRD of West Virginia. Mr. President, on behalf of the Senator from Washington (Mr. JACKSON), I ask unanimous consent that, at the next printing,

the name of the junior Senator from Arizona (Mr. GOLDWATER) be added as a cosponsor of S. 2315, to restore the golden eagle program to the Land and Water Conservation Fund Act.

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

S. 2470

Mr. SCOTT. Mr. President, I ask unanimous consent that, at the next printing, the names of the senior Senator from California (Mr. MURPHY), the junior Senator from California (Mr. CRANSTON), the Senator from Maryland (Mr. MATHIAS), and the Senator from Utah (Mr. Moss) be added as cosponsors of S. 2470, to amend the Food Stamp Act of 1964 to authorize elderly persons to exchange food stamps under certain circumstances for meals prepared and served by private nonprofit organizations, and for other purposes.

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

S. 2644

Mr. BYRD of West Virginia. Mr. President, on behalf of the Senator from Maryland (Mr. TYDINGS), I ask unanimous consent that, at the next printing, the name of the Senator from Ohio (Mr. YOUNG) be added as a cosponsor of S. 2644, to amend the Legislative Reorganization Act of 1946.

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

S. 2674

Mr. BYRD of West Virginia. Mr. President, on behalf of the Senator from Hawaii (Mr. INOUYE), I ask unanimous consent that, at the next printing, the names of the Senator from Montana (Mr. METCALF), the Senator from Missouri (Mr. EAGLETON), the Senator from Nevada (Mr. BIBLE), the Senator from Washington (Mr. JACKSON), the Senator from Connecticut (Mr. DODD), and the Senator from South Carolina (Mr. THURMOND), be added as cosponsors of S. 2674, to amend title 37, United States Code, to provide for the procurement and retention of judge advocates and law specialists officers from the Armed Forces.

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

S. 2689

Mr. BYRD of West Virginia. Mr. President, on behalf of the Senator from Hawaii (Mr. INOUYE), I ask unanimous consent that, at the next printing, the names of the Senator from Connecticut (Mr. DODD) and the Senator from New Jersey (Mr. WILLIAMS) be added as cosponsors of S. 2689, to amend the Internal Revenue Code of 1954 to provide the same tax exemption for servicemen in and around Korea as is presently provided for those in Vietnam.

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

S. 2761—INTRODUCTION OF A BILL TO PROVIDE ADDITIONAL RENTAL ASSISTANCE FOR LOW-INCOME FAMILIES

Mr. BROOKE. Mr. President, in just a few short years we have made significant strides in removing the social barriers to better housing. But two gross impediments still remain—the lack of sufficient standard housing to meet the needs of all our people, and the inability of our poorest citizens to benefit from the units which are available.

The measure which I introduce today—on behalf of myself and Mr. MCINTYRE—would help to overcome the second of these two obstructions. Basically, the bill would make it possible for the Federal Government to provide rental assistance payments to public housing agencies for the purpose of making up the difference between the actual cost of the unit and one-fourth of the income of the tenant. Assistance would be in the form of annual payments by the Secretary of Housing and Urban Development to public housing agencies pursuant to contracts entered into with the local agencies. It would enable families, regardless of how low their incomes may be, to afford decent housing at a reasonable cost; the "one-fourth of income" figure is exactly the same as the rent-to-income ratio used in HUD's other subsidized rental programs.

Let me illustrate how the program would work. At the present time, the nationwide average operating cost per housing unit is about $50 per month, or $600 per year. Thus $50 is the minimum monthly rent which a developer or housing agency would have to charge each tenant just in order to break even. But based on Federal calculations of a reasonable proportion of annual income devoted to housing needs, this simple minimum figure automatically excludes the many millions of families with incomes below $2,400 per year. One undesirable alternative, which has been used to some degree in the past, is to charge those tenants who can afford to pay more a higher rent for the same kind of unit in order to compensate for the low-income families who cannot afford to bear their fair share of the cost. The other alternative, which is even less desirable, has been to exclude the very poorest and most needy of our citizens from participation in public housing projects.

The bill which I introduce today is, I believe, a far better alternative than either of the two approaches outlined above. It would simply permit the Federal Government to pay the difference between what a family can afford and what the unit actually costs. It would distribute the burden of the supplement evenly. And it would insure that Federal housing programs will at last begin to meet the requirements of our most needy citizens.

Mr. President, I send this bill to the desk and ask unanimous consent that it be printed at this point in the RECORD.

The PRESIDENT pro tempore. The bill will be received and appropriately referred; and, without objection, the bill will be printed in the RECORD.

The bill (S. 2761) to amend the United States Housing Act of 1937 to provide additional rental assistance payments to enable families of very low income to afford to live in low-rent housing projects and to improve operating and maintenance services in such projects, introduced by Mr. BROOKE, for himself and Mr. MCINTYRE, was received, read twice by its title, referred to the Committee on Banking and Currency, and ordered to be printed in the RECORD, as follows:

S. 2761

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the United States Housing Act of 1937 is amended by redesignating section 24 as section 25, and by adding after section 23 the following new section:

"ADDITIONAL RENTAL ASSISTANCE

"SEC. 24. (a) In order to enable public housing agencies to provide housing within the means of families of very low income and to provide improved operating and maintenance services, the Secretary may make, and contract to make, annual rental assistance payments to public housing agencies with respect to any low-rent housing projects.

"(b) The amount of the annual payment with respect to any dwelling unit in a low-rent housing project shall not exceed the amount by which the rental for such unit exceeds one-fourth of the tenant's income.

"(c) There are authorized to be appropriated such sums as may be necessary to carry out the provisions of this section, including such sums as may be necessary to make the rental assistance payments under contracts entered into under this section. The aggregate amount of the contracts to make such payments shall not exceed amounts approved in appropriation Acts."

Mr. MCINTYRE. Mr. President, the crisis in public housing is reaching dramatic proportions. Public housing authorities across the Nation are no longer able to provide adequate maintenance and services for tenants and at the same time preserve the low-rent character of the projects. Even though the Housing Act of 1937, which established the public housing program, stated that the program would serve those "families in the lowest income group" local authorities have been forced to set minimum income requirements and raise rentals in order to meet the rising costs of maintenance and operation. As a result, more and more of the poor and very poor are barred from admission to public housing projects.

In some cities operating costs on a three-bedroom apartment, for example, are $70 per month. If a family were to spend only 25 percent of its income in order to meet that rental figure, it would have to earn $3,400 per year. The average annual income of public housing tenants is $2,709.

Since the Federal contribution to public housing pays only debt service and amortization charges, local authorities are required to charge rentals which will produce a project income equal to project operational costs. From the beginning, this meant that the very poor, those who could not afford their portion of the operating expenses of the project, could not be admitted. According to the studies of the President's Commission on Urban Problems, "This group seems to amount to at least 8 percent and possibly as much as 10 percent of the urban population."

It is this group which is forced to find housing in the most substandard, dilapidated, and overcrowded dwellings.

The Federal Government has the responsibility for assuring that all Americans have a decent place to live. That

pledge is two decades old. But two decades later there is no Federal program to provide housing for our poorest citizens.

The bill being introduced today by Senator BROOKE and myself would help to remedy that situation. It would set a standard, used in other housing programs, that tenants pay 25 percent of their income as rent in public housing. The difference between the rent paid by the tenant under this formula and the rental value of the unit would be paid by the Federal Government. The rental value of the unit would be proportionate to the operational cost of the project.

In this way, minimum rents would no longer be required by the local housing authority. Tenants with the very lowest incomes would be eligible for admission to public housing. It would also mean that tenants already living in public housing will not be spending a disproportionate amount of their incomes for shelter.

In addition, local housing authorities would receive adequate funds to maintain and operate the facilities and to provide needed services to tenants. It would no longer have to resort to the only method available, raising rents, to guarantee residents a decent place to live.

S. 2764—INTRODUCTION OF SAFETY GLAZING BILL FOR THE DISTRICT OF COLUMBIA

Mr. MAGNUSON. Mr. President, much has been said but little has been done about the large number of disfiguring and fatal injuries resulting from persons walking or falling into transparent glass doors and panels in residential housing and public buildings. The American consumer was first apprised of the problem posed by annealed glass used in sliding patio doors, storm doors, adjacent panels, and glass room partitions 9 years ago when a west coast medical journal reported $40,000 insurance claims per year by victims of glass injuries. In 1966, after further study by representatives from the Division of Accident Prevention of the Public Health Service and the National Safety Council, aided by door and glass manufacturers and code officials, estimates of glass injuries reached 100,000. And just last January, attention was again focused on the problem by the National Commission on Public Safety at public hearings held here in Washington. Testimony was heard from the parents of children who were killed or disfigured by injuries when they inadvertently plummeted through non-safety glass used in various areas of family residences. The great danger of annealed glass is that when it breaks, it does so into extremely sharp, jagged, spear-like edges which are capable of inflicting deep wounds into the victim, severing vital arteries, nerves, and muscles. One mother related at the Commission hearings how her 9-year-old daughter's jugular vein was severed when she walked through a glass room divider and in only minutes bled to death.

The frightening aspect of this problem is that unless legislative action is taken, there is reason to believe that the hazard will increase. In 1966, an estimated 1.1 million sliding glass doors were being installed in homes and office buildings each year and by 1970 this annual volume was expected to reach 1.4 million units. The free operation of our economic system has not been adequate to compel the use of safety glass in the home for a number of reasons:

First, the demands for lower costs in housing are driving contractors to cut cost on the materials they use to increase their profits; second, considering the number of people who today live in large apartment complexes, who purchase homes already built, or who buy homes in subdivisions developed by large homebuilders, the consumer seldom has a choice in the material that is used in the construction of his residence; third, at present, replacement costs for safety glass are substantially higher than for ordinary sheet—annealed—glass although original installation of a sliding glass door with tempered glass—one kind of safety glass—is only about $20 more than a door with regular annealed glass. I might point out that the industry has acted to reduce these costs by standardizing the sizes of glass used in sliding doors and storm doors and so we can expect this difference in cost to decline in the future. And further, the cost differentiation may even become less of a factor with the increase in the use of tempered glass which governmental regulations at all levels can bring about; fourth, the door manufacturer who sells a storm or sliding glass door with only annealed glass in it has a decided economic advantage over the conscientious manufacturer who will only install safety glass.

The sad aspect of the problem confronting us is that technology has provided us with the solution which will substantially reduce, if not completely eliminate, the injury hazard as it exists and yet this know-how is not being fully employed. There presently are three types of safety glass that can eliminate this problem: These are tempered, laminated, and wire glass. I have pointed out these three types of safety glass primarily to demonstrate to you that present technology is capable of eliminating the problem. However, the proposed legislation which I introduce does not hamstring the ingenuity of our modern industry by requiring a specific type of safety glass, but rather requires that whatever kind of glazing material is used, it shall meet certain impact and breakage tests designed to eliminate the hazards that I have mentioned.

Although this problem probably could be dealt with more effectively at the national level, I think it is best to wait for the report and recommendations of the National Commission on Product Safety before taking Federal action. Nevertheless, effective action can be taken at the local level, and such stopgap legislation will go far to reduce the injuries in the District of Columbia.

It is unfortunate that the District, which is seeking to become a model city, must follow, rather than lead, such States as New Jersey, Washington, Maryland, North Carolina, and California in passing similar legislation. Therefore, we would be remiss in our duties to hesitate any longer in passing legislation for the District of Columbia, and it is for these reasons that I am proposing this legislation today.

The PRESIDENT pro tempore. The bill will be received and appropriately referred.

The bill (S. 2764) to make it unlawful to install nonsafety glazing material in sliding glass doors and other high-risk areas of residential, public, and commercial buildings in the District of Columbia to protect the health and safety of the public, and to direct the Director of the Department of Health to establish and promulgate standards for safety glazing material and its application, introduced by Mr. MAGNUSON, was received, read twice by its title, and referred to the Committee on the District of Columbia.

S. 2767—INTRODUCTION OF THE WATER QUALITY FINANCIAL ASSISTANCE ACT OF 1969

Mr. GURNEY. Mr. President, today I am introducing a bill to assure that the maximum amount of money possible is available for the building of waste treatment facilities. We are currently faced with a serious problem in financing the construction of needed waste treatment works. With our present budgetary situation, it seems unlikely that the appropriation for the forthcoming fiscal year and the year following will equal the authorization for funds to build these sewage treatment works.

However, we cannot afford to lose any more time in controlling the pollution of our Nation's waters. The proverbial "ounce of prevention" certainly applies here. Reasonable expenditures now to halt further pollution of our waterways above and below ground may well preclude the enormous costs of rehabilitation of such systems later.

Intense river pollution already threatens underground aquifers, as is now the case in the Hudson River Valley. As anyone can appreciate who has stood on the shores of the Potomac on a summer's day in a freshening breeze, the cost to sweeten the stench of this river has now been estimated as high as $500 million. While it is technologically possible to redeem these sources of our water supply, the costs remain prohibitive. For this reason, it is imperative that we act as swiftly as possible to prevent further pollution.

The bill I am introducing today is designed to meet that need to the best extent possible. It provides that during fiscal year 1970 the amount of the funds for waste treatment works that has been authorized, but unappropriated will be authorized under a contract program.

The Secretary of the Interior would be authorized to enter into long term, not to exceed 30 years, contracts with a State or local governmental unit to pay in installments the Federal share of the costs of constructing such works. The Federal share would be determined in the same manner as the Federal share is determined for grants.

This bill would provide a mechanism to produce the necessary Federal financing to help meet water quality standards.

It would allow significant increases in capital investments within State programs for the construction of new facilities to help meet abatement schedules presently established in accordance with water quality standards.

For fiscal year 1971 a formula is devised to encourage increased appropriations for grants by this contract authority. In this case, the contract authority can be up to three times the amount of the grants appropriated. The purpose of this formula is to preclude any idea that we are encouraging a contract program in lieu of a grant program. It should be clear that it is the intention of Congress that there be a grant program, if necessary to be supplemented by a contract program.

Last year both houses of the Congress passed legislation to provide this supplemental method of financing waste treatment works. However, the Senate and House did not resolve differences on this legislation and it was never enacted. Congressman WILLIAM CRAMER has again introduced this legislation in the House with the full support of the administration. I am pleased to be able to do the same here in the Senate.

We cannot delay this vital program any longer. We must take action to indicate to all that it is the intent of Congress, that higher priority be given in the saving of our Nation's waterways.

The PRESIDENT pro tempore. The bill will be received and appropriately referred.

The bill (S. 2767) to amend the Federal Water Pollution Control Act, as amended, was received, read twice by its title, and referred to the Committee on Public Works.

S. 2768—INTRODUCTION OF A BILL PROMOTING THE PRESERVATION OF ENVIRONMENTAL QUALITY

Mr. TYDINGS. Mr. President, I introduce today a bill designed to grant the Atomic Energy Commission the statutory authority to take into consideration the effects of thermal discharges in the licensing of nuclear power facilities.

At present the Commission lacks this authority. It may consider only questions of national security, health, and safety. It does not have the jurisdiction to concern itself with thermal pollution and other factors of environmental quality.

Last January, the U.S. Court of Appeals for the First Circuit underscored this inadequacy of the law. In New Hampshire against Atomic Energy Commission and Vermont Yankee Nuclear Power Corp., the court affirmed a lower court decision that the AEC was correct in refusing to consider the possibility of thermal pollution from a nuclear powerplant. The court ruled that the Commission did not have the necessary authority.

In comments on my own statement regarding the proposed nuclear plant at Calvert Cliffs, Md., the Commission restated this position. The AEC writes that it "presently lacks authority to impose restrictions regarding the thermal effects of discharges from licensed nuclear facilities."

This is unfortunate.

Our national demands for power are growing rapidly. They are expected to double every 10 years. This means that the number of nuclear power plants in operation will increase substantially. A February 1968 report showed that 15 plants were then operating, 23 were under construction, and 57 more were being planned. Consequently the threat from thermal discharges looms large in the future. Substantial damage to our marine environment could result.

I am particularly concerned about the Chesapeake Bay, Maryland's great natural resource. Predictions are that there may be six nuclear stations the size of the 1,600 megawatt Calvert Cliffs facility operating on the Bay by 1980. Each one would draw two million cubic feet per minute of water for cooling purposes. On the Chesapeake and its tributaries there are presently 15 nuclear power plants operating, under construction, or planned—more than in any comparable area of the country.

Every possible step must be taken to ensure that the thermal discharges from these facilities do not endanger the bay.

While it lacks specific authority to consider such discharges, the Commission is not insensitive to the problem. As a matter of course, when issuing reactor licenses it seeks the advice and recommendations of the Interior Department and passes this on to the applicant. Such information is, unfortunately, not binding, but does at least indicate that the AEC is cognizant of the problem. Additionally, the Commission is now conducting a survey of all AEC licenses to determine the extent of their cooperation in resolving various environmental problems.

In my statement on the Calvert Cliffs facility, I urged the AEC on its own to seek redress before the Congress and seek the additional authority required. The Commission has not yet done so. I have, therefore, gone ahead and introduced the necessary legislation.

Essentially what my bill does is to insert, where required, the phrase "environmental quality" in the Atomic Energy Act of 1954, as amended.

The act's declaration of policy states that atomic energy should be developed "to promote world peace, improve the general welfare, increase the standard of living, and strengthen free competition in private enterprise." This is amended to include the preservation of environmental equality as well. The finding of facts states that nuclear material be "regulated in the national interest and in order to provide for the common defense and security and to protect the health and safety of the public." To this is added the charge of protecting the environment.

Similar insertions are made elsewhere in the act.

One of particular significance concerns that section of the act dealing with the issuance of licenses. The bill assigns an additional requirement to the licensee. Not only must he agree to observe safety standards to protect health and property, he must now agree to observe "such standards to protect and promote the preservation of environmental quality, as the Commission may by rule establish."

Another significant addition concerns the denial of a reactor license. Presently the law reads that if in the opinion of the Commission issuance "would be inimical to the common defense and security or to the health and safety of the public" it may be denied. My bill amends this to include an adverse impact on the environment as further reason for such a denial.

This bill supplements S. 7, the Water Quality Improvement Act of 1969 which contains a provision on thermal pollution. This act, which I am cosponsoring, in part requires certification by the State water pollution agency or in some cases, the Interior Department that the discharges from a nuclear facility will not violate the water quality standards established under the Water Quality Act of 1965. It is the purpose here to regulate the discharges. My bill aims at the basic statutory authority of the AEC and gives the Commission discretion to act in matters affecting environmental quality which without doubt would include thermal pollution.

Mr. President, I ask unanimous consent that the bill be printed at this point in the RECORD.

The PRESIDENT pro tempore. The bill will be received and appropriately referred; and, without objection the bill will be printed in the RECORD.

The bill (S. 2768) to amend the Atomic Energy Act of 1954 in order to promote the preservation of environmental quality, introduced by Mr. TYDINGS, was received, read twice by its title, referred to the Joint Committee on Atomic Energy, and ordered to be printed in the RECORD, as follows:

S. 2768

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That paragraph b of section 1 of the Atomic Energy Act of 1954, as amended (42 U.S.C. 2011), is amended by inserting immediately after the last comma, the following: "promote the preservation of environmental quality,".

SEC. 2. (a) Paragraph d of section 2 of the Atomic Energy Act of 1954, as amended (42 U.S.C. 2012), is amended by deleting "and to protect the health and safety of the public" and inserting in lieu thereof the following: ", to protect the health and safety of the public, and to protect the environment".

(b) Paragraph e of section 2 of such Act (42 U.S.C. 2012) is amended by deleting "and to protect the health and safety of the public" and inserting in lieu thereof the following: ", to protect the health and safety of the public, and to protect the environment".

(c) Subsection a (2) of section 274 of such Act (42 U.S.C. 2021) is amended by inserting "or other" immediately after the word "radiation".

(d) Subsection b of section 103 of such Act (42 U.S.C. 2133) is amended to read as follows:

"b. The Commission shall issue such licenses on a nonexclusive basis to persons applying therefor (1) whose proposed activities will serve a useful purpose proportionate to quantities of special nuclear material or source material to be utilized; (2) who are equipped to observe and who agree to observe (A) such safety standards to protect health and to minimize danger to life or property, and (B) such standards to protect

and promote the preservation of environmental quality, as the Commission may by rule establish; and (3) who agree to make available to the Commission such technical information and data concerning activities under such licenses as the Commission may determine necessary to promote the common defense and security, to protect the health and safety of the public, and to protect and promote the preservation of environmental quality. All such information may be used by the Commission only for the purposes of the common defense and security, to protect the health and safety of the public, and to protect and promote the preservation of environmental quality.".

(e) Subsection d of section 103 of such Act (42 U.S.C. 2133) is amended by inserting immediately before the period at the end thereof the following: "or adversely affect environmental quality".

SENATE RESOLUTION 229—RESOLUTION RELATING TO A SUBPENA DUCES TECUM DIRECTED TO THE FINANCIAL CLERK

Mr. MANSFIELD (for himself and Mr. DIRKSEN) submitted a resolution (S. Res. 229) relating to a subpena duces tecum directed to the financial clerk, which was considered and agreed to.

(The remarks of Mr. MANSFIELD when he submitted the resolution appear earlier in the RECORD under the appropriate heading.)

ALASKA NATIVE CLAIMS SETTLEMENT ACT OF 1969—AMENDMENT

AMENDMENT NO. 112

Mr. ALLOTT (by request) (for himself and Mr. JACKSON) submitted an amendment, in the nature of a substitute, intended to be proposed by them, jointly, to the bill (S. 1830) to provide for the settlement of certain land claims of Alaska natives, and for other purposes, which was referred to the Committee on Interior and Insular Affairs and ordered to be printed.

AUTHORIZATION OF APPROPRIATIONS FOR FISCAL YEAR 1970 FOR MILITARY PROCUREMENT, RESEARCH AND DEVELOPMENT, AND FOR THE CONSTRUCTION OF MISSILE TEST FACILITIES AT KWAJALEIN MISSILE RANGE, AND RESERVE COMPONENT STRENGTH—AMENDMENT

AMENDMENT NO. 113

Mr. TYDINGS. Mr. President, it is a fundamental principle of our system of government that only with congressional approval may the executive branch spend the billions of dollars that make up the Federal budget. We have developed a system of authorization and appropriation of funds in order to give Congress an opportunity to examine each of the competing claims on our Nation's resources, and to demand that each program for which funds are allocated be thoroughly justified.

A singular exception to this principle occurs in the area of national defense. Maintaining an adequate and everready military capability requires that our defense establishment have some degree of fiscal flexibility in order to pursue unexpected technological breakthroughs and to meet unexpected problems and threats. But precisely because such fiscal flexibility results in erosion of the principle of congressional control of Government spending, and inevitably poses a threat to the principle of fiscal responsibility, flexibility in military spending must be limited to the minimum amount necessary to maintain sound national defense.

One of the devices available to the Defense Department to provide for fiscal flexibility is the defense emergency fund. Established during the Korean war, the emergency fund may be used at the discretion of the Secretary of Defense "for research, development, test, and evaluation, or procurement or production related thereto." In recent years most of the money appropriated to the fund has been used to solve Vietnam-related problems.

Although in each of the last 3 years the amount of money allocated to the emergency fund has been reduced, in fiscal year 1969 Congress still approved the substantial sum of $50 million for the fund. This same amount was requested last January by the Defense Department for fiscal year 1970. On the basis of a revised DOD request, however, the defense authorization bill, S. 2546, which is now before the Senate, authorizes $100 million for the defense emergency fund, double the amount received last year.

Fifty million dollars is a remarkably large amount of money for a discretionary fund over which Congress has no control. There is no justification whatsoever for allocating an additional $50 million to the fund.

Therefore, with Senators EAGLETON, FULBRIGHT, HARRIS, HART, HATFIELD, JAVITS, MONDALE, MOSS, PACKWOOD, and PROXMIRE, I am submitting an amendment to S. 2546 to reduce the emergency fund authorization to the $50 million level of last year.

There has been no demonstration that the need for the emergency fund has increased. Last year was a period of heavy fighting in Vietnam, but even with this burden on our fighting men, and the identification of many military problem areas, the emergency fund was not fully exhausted until the end of the fiscal year. With the experience of last year behind them, the Defense Department had initially determined that no increase in the emergency fund was needed for this year. And the prolonged lull in the Vietnam war, coupled with plans for troop withdrawal, indicate that the number of Vietnam-related problems may actually decrease.

It has been argued, however, that the additional $50 million for the emergency fund is needed to insure adequate financial flexibility within the Defense Department. But the Defense Department already has more than enough fiscal flexibility and independence. Much flexibility results from the authority granted the Secretary of Defense to use up to $150 million in funds from congressionally approved programs for other projects. The usefulness of this transfer authority is not seriously impaired by the reduction in total research and development funds available this year, since the amount of money authorized in this year's bill is a full 95 percent of last year's amount. But even assuming that the R. & D. reductions have made the transfer authority somewhat less useful, by increasing the emergency fund, their effect is largely vitiated; we would be replacing programs which must be presented to Congress for approval with a fund over which Congress has no control.

Additional flexibility comes from other funds within the Defense budget which serve the same purpose as does the emergency fund. For instance, last year the military was initially authorized to spend a total of $522 million for research and development on Vietnam problems—in addition to funds used from the emergency fund and transfer authority. In addition, there are contingency funds for specific purposes, such as the $25 million requested this year for the defense agencies military construction contingency fund, which provides for military construction anywhere in the world necessitated by unforeseen circumstances. And, finally, to meet any additional needs, the Secretary of Defense has a separate $10 million contingency fund which has even fewer restrictions than the emergency fund.

With so many budgetary devices to insure flexibility, and so much money allocated to unspecified uses, the Defense Department already has more than enough fiscal independence.

In short, we cannot afford to double the defense emergency fund by authorizing a total of $100 million for fiscal year 1970—because the increase is unjustified on its face, because the increase purports to serve the purpose of flexibility already accomplished by other means, and because the increase represents an unwarranted incursion on the principle of congressional control of Federal spending.

To paraphrase Shakespeare, there comes a time when the representatives of the taxpayer must cry "Enough"—and there has already been enough money wasted by the military, and enough fiscal independence in the Defense Department. Fifty million dollars is enough for the defense emergency fund, and I, therefore, urge that S. 2546 be amended to limit the emergency fund authorization to that amount.

The PRESIDENT pro tempore. The amendment will be received and printed, and will lie on the table.

MEETING SCHEDULE OF COMMITTEE ON INTERIOR AND INSULAR AFFAIRS

Mr. JACKSON. Mr. President, I wish to announce for the information of the Senate that because of the pending vote on Wednesday, the Committee on Interior and Insular Affairs will not meet as scheduled on S. 1830, to provide for the settlement of certain land claims of Alaska natives. This hearing will be postponed until 10:30 a.m. on Thursday, August 7. The executive session of the full committee previously scheduled for 10 a.m. on August 7, will now be held at 9 a.m. to be followed by the hearing on the Alaska native claims.

DIRECTIVES AFFECTING SALARIES OF MANAGEMENT-OFFICE EMPLOYEES OF SENATE RESTAURANT

Mr. ALLEN. Mr. President, under the Federal Salary Act of 1967, the President pro tempore of the U.S. Senate is authorized and directed to issue certain directives in implementation of the salary comparability policy set forth in the law.

I ask unanimous consent that a directive affecting the salary of management-office employees of the Senate restaurant, dated June 26, 1969, and certain related correspondence, be printed in the RECORD.

There being no objection, the items were ordered to be printed in the RECORD, as follows:

ARCHITECT OF THE CAPITOL,
Washington, D.C., July 29, 1969.

Hon. JAMES B. ALLEN,
Chairman, Subcommittee on the Restaurant, Committee on Rules and Administration, U.S. Senate.

DEAR MR. CHAIRMAN: I am enclosing, herewith, copy of order dated June 26, 1969, issued by the President Pro Tempore of the Senate upon my recommendation and with your concurrence, providing for an increase in the compensation of management-office employees of the Senate Restaurants as required by Section 212 of the Federal Salary Act of 1967.

I would appreciate your having this document inserted in the Congressional Record in order that it might be a matter of record.

Sincerely yours,

J. GEORGE STEWART,
Architect of the Capitol.

ORDER PROVIDING FOR INCREASE IN COMPENSATION OF MANAGEMENT—OFFICE EMPLOYEES OF THE SENATE RESTAURANTS EFFECTIVE JULY 13, 1969

JUNE 26, 1969.

By virtue of the authority vested in me by section 212 of the Federal Salary Act of 1967 (81 Stat. 634), it is hereby

Ordered, That (a) effective July 13, 1969, the annual rate of gross compensation of each management—office employee of the Senate Restaurants (such employees having been recognized by the Comptroller General of the United States as employees of the United States Senate) whose compensation is increased by section 214(a) of the Federal Salary Act of 1967 (81 Stat. 634, Public Law 90–206) and the Order of the President pro tempore of June 29, 1968, is hereby increased by 10.05 per centum; and

That (b) for the purpose of arriving at the "annual rate of gross compensation" on which the increase of 10.05 per centum is to be applied, (these employees being compensated on a weekly, rather than an annual, basis), the weekly gross rates of compensation shall be converted for the purpose of this Order, to appropriate annual gross rates.

RICHARD B. RUSSELL,
President pro tempore, U.S. Senate.

CONTRACT COMPLIANCE AND THE "PHILADELPHIA PLAN"

Mr. BROOKE. Mr. President, one of the most serious problems which this country faces is that of improving employment opportunities for our minority citizens. Despite the passage of a great deal of equal employment legislation, there is still far too much "token compliance," particularly in the various construction industries.

It was to counter this problem that the city of Philadelphia established a program under the direction of an area coordinator for contract compliance designed to go beyond paper compliance to the adoption and implementation of specific goals of numerical standards in certain critical crafts.

This valuable program is now under serious consideration by the city of Boston in my own State of Massachusetts. I am most hopeful that an area coordinator for contract compliance may soon be approved for the New England area, and I have written to Secretary of Labor George Shultz in this regard. I ask unanimous consent that the text of my letter to Secretary Shultz be printed in the RECORD.

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

JULY 30, 1969.

Hon. GEORGE P. SHULTZ,
Secretary of Labor,
Department of Labor,
Washington, D.C.

DEAR MR. SECRETARY: I have just met with the Massachusetts State Advisory Committee of the United States Civil Rights Commission, which I understand has also conferred with Assistant Secretary Fletcher. The Committee has just completed a review of federal contract compliance in the Boston construction industry and, as they indicated to Mr. Fletcher, have urgently recommended the adoption of a plan for Boston comparable to that being implemented in Philadelphia.

I fully agree with the Committee that this is a matter of the highest priority. In particular, the appointment of an area coordinator to insure effective contract compliance is a fundamental necessity. I hope you will act immediately to appoint such a coordinator, perhaps as part of the consolidation of federal regional offices in Boston.

Your efforts to breach the barriers of discrimination in the construction industry are among the most encouraging initiatives taken by the Administration. I respectfully urge you to carry that effort forward by taking these steps in the Boston area.

With best personal regards, I am,

Sincerely yours,

EDWARD W. BROOKE.

AMERICAN PRISONERS OF WAR

Mr. BAYH. Mr. President, there are many ramifications to the conflict in Vietnam, but one of the most disturbing aspects of this tragic war is the fact that American prisoners of war are not being treated in accord with the Geneva Convention. More than 120 nations, including the United States and North Vietnam, have expressed their deep concern that personnel captured in wartime be treated humanely by endorsing the Geneva Convention of 1949.

Not only are more than 1,300 U.S. servicemen classified by the services as either prisoners of war or missing in action, but also, according to the Department of State, more than 40 American civilians are missing in South Vietnam plus more than 400 military personnel listed as missing, many of whom have been captured and are being held in South Vietnam. Of the total of 1,303 men being held captive or missing in action, over 200 have been held captive over 3½ years and over 500 have been held more than 2 years.

There is reason to believe that many of these listed as missing in action are being held captive by the North Vietnamese, but the families of these men do not even know if their loved ones are dead or alive because Hanoi refuses to provide even a list of those being held captive. This is truly the epitome of barbarism.

The State Department and the Department of Defense have been thwarted at every turn because Hanoi refuses to identify the U.S. prisoners held captive; they refuse to permit neutral inspection; they refuse to release the sick and wounded captives; they refuse to permit the regular flow of mail; in essence, Hanoi refuses to act in a civilized, humane manner. This callousness is absolutely inexcusable.

When Defense Secretary Melvin Laird demanded a full list of the prisoners held by the Republic of Vietnam on May 19, North Vietnamese negotiator Xuan Thuy replied:

> He might as well know that so long as the United States has not ceased its aggressive war in Vietnam and withdrawn its troops from Vietnam, he will never have such a list.

It is my contention, Mr. President, that the United States has demonstrated its desire for peace. At present, our troops are being withdrawn from South Vietnam and we have modified our policy of "maximum military pressure." The United States has demonstrated its sincerity to end this conflict. How can we believe that Hanoi is sincere when it refuses to comply with a simple request? The total lack of reciprocity is appalling. However, my main concern is that the North Vietnamese abide by the requirements of the Geneva Convention which they endorsed in 1957. Specifically, I call for the adherence to the Convention which requires the release of names of prisoners held, the immediate release of sick and wounded soldiers, regular flow of mail, proper treatment of all prisoners, and the impartial inspection of prisoner-of-war facilities.

I urge that our negotiators in Paris do everything in their power to influence Hanoi to abide by the Geneva Convention. I urge all foreign governments, including the Soviet Union and all regimes closely associated with Hanoi, to lend their assistance to the demands of the United States. I urge that the American public voice its cries louder than ever in demanding that the North Vietnamese behave and react in a civilized humane manner. And I appeal directly to North Vietnam and the Vietcong to terminate this lack of concern for the many families in the United States who are living in uncertainty and to respect the humane rights of those whom they hold prisoners of war. Why is it that the United Nations has not exerted itself and fulfilled its responsibilities on this matter?

How can it possibly harm the enemy to release the names of its prisoners? Think what a response to such a simple request would mean to the hundreds of wives, parents, and children who live in anguish, not knowing whether their husbands, sons, or fathers are being detained in a prisoner camp. I urge the State De-

partment and the Defense Department to continue their efforts to obtain the release of those prisoners who are sick or wounded, to do everything humanely possible to obtain a list of names from Hanoi, and to work for the prompt release of all prisoners.

The United States has abided by the Geneva Convention in regard to prisoners of war. Those North Vietnamese and Vietcong forces captured in South Vietnam are taken to prisoner of war camps which are inspected regularly by the International Committee of the Red Cross. Prisoners who are sick and wounded have been repatriated to North Vietnam. The United States, in essence, has responded in a humanitarian way. Now it is time that the enemy reciprocate and that the United States strongly demand that its servicemen be treated properly.

Needless to say, everyone has been shocked by Hanoi's uncivilized attitude and response. Hopefully, the entire civilized world will exert influence to end such flagrant violation of international law.

Mr. President, by coincidence, an excellent editorial pertaining to the families whose loved ones are being held by the North Vietnamese was published in the Washington Post this morning. It is evident that all Americans are concerned about servicemen who are missing in action and being held captive. Because of the editorial's relevance and timeliness, I 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:

[From the Washington (D.C.) Post, Aug. 4, 1969]

KEPT IN THE DARK

The letters come in every day, in big and little batches from Santa Fe and Monterey, from Aberdeen, South Dakota, and Purdy, Missouri, from Richmond, Virginia and Lake Lure, North Carolina, from Downers Grove, Illinois and Finnville, Michigan. Some are hand-scrawled and some typewritten and they all speak piognantly of the suffering of mothers and fathers and wives and sons and daughters of the over 800 men who are missing and presumed to be prisoners of the North Vietnamese. They ask about the treatment the men are getting. But because the Hanoi Government won't even confirm the names of the men it is holding, their first concern is with the cruelist question—whether a husband or a brother or a son or a friend is even still alive, let alone well. Somebody has told them that just maybe a newspaper editorial would help persuade the North Vietnamese to say at least that much to show at least that much human decency, and so the letters keep coming in.

And about all we can say in reply is that we have tried before and that we do not have any illusions—not even when it comes to counselling our own Government, which by the nature of the system it lives by is not insensitive to public pressure. But the case against Hanoi in the matter of our prisoners of war is so persuasive, and the anguish of their friends and relatives is so acute, that one wouldn't want not to keep trying.

The case against North Vietnamese treatment not only of war prisoners, but of their next of kin, rests very largely on Western values—compassion, humanity, a natural aversion to cruel and unusual punishment. And while this is the strength of the case in Western eyes, it is also of course its weakness, because the same values are not universally prized by Asian Communist Governments; we have the treatment of our Korean War POW's and more recently the crew of the Pueblo to vouch for that, as well as the treatment of our prisoners in North Vietnam.

The techniques are as subtle as they are vicious, as psychological as they are physical, and the results have nowhere been more affectingly recorded than in interviews with two of our captured pilots conducted by Oriana Fallici and published in *L'Europeo* a few months ago. Of U.S. Navy Lieutenant Robert Frishman, she wrote:

He was very young, very tall and terribly thin. Of a sickly, consumed thinness . . . He wore Chinese wool slippers and walked bent like an old man . . . With his left hand he held up the right arm, shorter and shrunken . . . He looked around with a lost expression and blinked his eyes . . . Obviously he had been kept in the dark for a long time . . . "It has been almost a year and a half since I last spoke to someone, Madam."

There are probably places in the world where this sort of thing is effective, the use of God knows what sort of inhuman pressures to reduce men to parroting banal, fawning propaganda in a crude and almost ludicrously primitive effort to influence public opinion. But there are not many, not where men are free to judge for themselves. And the tragedy of it is the pointlessness of it, leaving wholly aside the morality; it isn't working the way the North Vietnamese must think it will work. The sympathy of the world is not going to be swung toward the North Vietnamese side of the argument by barbarism, as the press comment in large parts of the world, including countries by no means sympathetic to *our* side of the argument, amply testifies. And still less is world opinion likely to be swung by the even more mindless cruelty of preying on the grief of the next of kin, by teasing them with invitations to send gifts, by releasing a handful of prisoners now and again, but never releasing the names of those still held in captivity.

More important, perhaps, the North Vietnamese have it all wrong if they think that this refusal to release the list of POW's will significantly influence American public opinion against the war or serve some purpose as a negotiating counter, as Hanoi's Paris negotiator Xuan Thuy has implied.

There are things about this war that have, and will continue to have, a profound and disquieting effect on American public opinion; merely by dragging on, the war has that effect; so do continued American casualties in battle; so does the absence of any believable end in sight. These things may sap the will and encourage the belief that the effort is not worth the price, that conciliation and a rapid transfer of the burden to the South Vietnamese is the proper course. There are countless ways that the enemy might try to encourage these tendencies by promoting the belief that an honorable accommodation is possible with the North—an accommodation within which our South Vietnamese allies and their followers and the people of South Vietnam could survive. But a continuing demonstration of relentless cruelty, of an incapacity for showing even the most elementary evidence of decency and humanity, is not one of these ways.

RETIREMENT OF BRIG. GEN. ROBERT E. LEE

Mr. BIBLE. Mr. President, on July 31, the Nation's small business firms in the defense contracting community lost a firm friend, when Brig. Gen. Robert E. Lee retired from service in the U.S. Air Force. General Lee had, for the past 3 years, served as Executive Director of Procurement and Production at headquarters of the Defense Supply Agency. In that capacity, he had been an avid supporter of the DSA small business program.

General Lee had been associated with military procurement since 1949, at which time he joined the Air Force Air Materiel Command Headquarters. He later served as Chief of the Procurement Policy Division of that command. His next assignment was as Director of Procurement and Production in the Warner Robins Air Materiel Area Headquarters at Macon, Ga., where he served for several years before becoming Deputy Director of Procurement Policy at U.S. Air Force Headquarters in 1964. He assumed the duties of Executive Director, Procurement and Production, Defense Supply Agency, in 1966.

During his tenure at DSA, General Lee gained renown as a procurement official interested in carrying out the mandate of the Congress, that:

The Government should aid, counsel, assist, and protect, insofar as is possible, the interests of small-business concerns in order to preserve free competitive enterprise, to insure that a fair proportion of the total purchases and contracts or subcontracts for property and services for the government . . . be placed with small business enterprises.

General Lee actively sought to encourage small business firms to participate in the supplying of goods and services to the military departments. He made himself available as a featured speaker at countless industrial gatherings. He gave unflagging support of DSA's procurement opportunities counseling services and always demonstrated sharp insight and keen understanding of the problems facing the small businessman in doing business with the giant Military Establishment.

During the time General Lee directed the DSA procurement program, that agency either met or exceeded the yearly small business participation goals set by the Office of the Secretary of Defense.

General Lee appeared before the Subcommittee on Government Procurement of the Senate Small Business Committee in February of 1968. Mr. President, it goes without saying that the membership of the Senate Small Business Committee will feel the loss of a knowledgeable procurement official who has understood and taken to heart the desire of the Congress to hold the doors of opportunity open for American small businesses to grow and flourish in our economy. Too often, procurement officials do not show interest in the many small businesses who are attempting to become part of the Government's massive supply system merely only because they are directed to do so. It is encouraging to know a man like General Lee, who not only enthusiastically supported the small business program, but comprehended the overall objectives of the program.

Mr. President, it is indeed a signal honor for me to rise on this occasion to express my sentiments and pay tribute to a truly fine and extremely dedicated man who has in every respect served his country well.

THE IDAHO BASQUE COMMUNITY

Mr. JORDAN of Idaho. Mr. President, yesterday, in Boise, members of Idaho's

Basque community celebrated their annual St. Ignatius Day picnic. On the same day, the Washington Post published two articles, written by Paul A. Dickson, chronicling the history of these industrious and freedom-loving people.

Idaho's Basques have made a most significant contribution to the development of our State. It is appropriate that Idaho, respecting as it does the traditions of freedom and individualism, should take the Basque people so much into its heart. Theirs is a proud legacy. So that Senators and all other readers of the CONGRESSIONAL RECORD may have access to these two articles by Mr. Dickson, I ask unanimous consent that they be printed in the RECORD.

There being no objection, the articles were ordered to be printed in the RECORD, as follows:

FRANCO FACES BASQUE POWER

(By Paul A. Dickson)

Part of the legacy that Generalissimo Francisco Franco of Spain will pass on to his announced heir, Prince Juan Carlos de Borbon y Borbon, is the "Basque problem."

Franco first faced the Basques during the Spanish Civil War, when the Basque provinces of Vizcaya and Guipuzcoa existed as the Republic of Euzkadi. The weak republic was easily conquered in a few months, but in his 30 years in power Franco has been unable to kill the Basque's independent spirit and separatist aspirations.

Events of recent months—strikes, renewed separatist activity, demonstrations by the clergy, acts of terrorism, university uprisings and the like—may portend even tougher days ahead for Franco or his successor.

"The Basque problem" has existed for those who have ruled the Iberian peninsula since the days before Spain was a nation. Often described as the oldest homogeneous racial group in Europe, the Basques are closely knit and have resisted amalgamation since the first Roman legions descended upon them. They waited until the 11th century to embrace the "foreign" influence of Christianity, but when they did, they produced such illustrious Christians as St. Francis Xavier and St. Ignatius of Loyola.

By reputation—often self-proclaimed—they are a proud, industrious and strong people. By profession, they are famed as sailors, shepherds and smugglers. They have excelled in each area.

Basques claim that their fishermen were fishing off the Grand Banks of Newfoundland before Columbus set sail. Another claim has it that when the Genoan stopped in the Azores, Basque fishermen assured him that there was land toward the setting sun. In addition, there is a Basque claim, though never given wide publicity that Basques landed in Newfoundland before 1492.

These claims aside, their position in the age of discovery is well established. Elcano, a Basque, was Magellan's navigator and took command when his master died in the Philippines. Chachu, another Basque, served as Columbus's boatswain on the Santa Maria. Basque fishermen are to this day considered the most daring in Spain and brave the North Atlantic in small boats to bring back cod and other fish from the Grand Banks.

As for their reputation as smugglers, it is not as sinister as it might sound. There are about 600,000 Basques living in the Spanish provinces of Vizcaya and Guipuzcoa and about 200,000 in the French Basque provinces of Labourd, Basse Navarre and Soule. The feeling among the Basques of both nations is that all Basques should live with the best that both countries can manufacture: hence the traffic through the Pyrenees. Part of the Basque rationalization of smuggling points out that Basques are not greedy smugglers (which may also account for their success).

LANGUAGE OF PARADISE

The Basque language is called Euskara. It has no clearly recognizable roots in any other language, although tenuous links have been made between its pronouns and Hebrew pronouns, its verbs and Aztec and Dakota Indian verbs and other elements of the language and tongues as diverse as Arabic and Japanese. One Spanish linguist early in this century went as far as to propose that Euskara is the basis of all language and was spoken by Adam and Eve.

The Basque hills are rugged and rocky and the Basque aptitude for shepherding is legendary. Many of the estimated two million Basques in the Western Hemisphere are shepherds and special immigration rules in the United States permit Basque shepherds to enter the country on a preferred basis.

The language does not lend itself to abstraction and has never lent itself to literary use. It is spoken in several dialects. There was a moment in 1937 when the Franco government tried to outlaw Euskara in an attempt to curb Basque nationalism, but the edict was written in Spanish and in many small towns, few people understood any Spanish.

The unique flavor of the language, which is peppered with Xs, Ks and Zs, can be sampled in a few words. The numbers one through five are, *bat, bi, iru, lau,* and *bost.* The sun is *eguzki* and the moon is *illargi.* The sea is *itxaso* and river is *ur.* Man is *gizon* and woman is *emazteki.* Many Basque words are onomatopoeic: *gili-gili* is the verb to tickle and *bimbi-bimaki* is the pealing of bells. The word for god is *jaungoika*—literally "the lord of the manor most high."

Basque folklore is concerned with objects and settings foreign to the Spain of the hot sun and sprawling bullranch. Witches, shegoats, night visitors, demons of all types, devils and ancient woodsmen cavort in caves, dark forests, inert swamps and rocky crevices.

The Basques' earliest history is mostly a matter of conjecture and is as elusive as their language. Such tags as Cro-Magnon, Berber, Lapp, Celt, Finn and Magyar have been used to explain their origins, and the idea that they were the basis of the original Iberian tribe has been advanced regularly. From time to time, it is suggested that the Basques are the human remnants of the lost continent of Atlantis.

A BAND OF WILD ASSES

When the Basques were found by the Romans, blood sacrifice was common among them, their staple was acorn bread and their many gods lived in mountains and among the rocks of the Basque shores. Basque customs and cults were upheld during the Roman period.

In the 6th century, they were invaded by the Visigoths, who were soon driven out. The Moors, after taking most of the rest of Spain, were content to leave them alone, calling them "a band of wild asses." Basque mountaineers trapped and defeated part of Charlemagne's army under Roland in 778. They resisted the centralizing grasp of both the Bonapartes and Bourbons.

From the early 14th century to 1839, they lived in confederation with Spain, recognizing the King of Spain as the Lord of the Basques with the understanding that he would affirm the established liberties or *fueros* of the Basques.

In the aftermath of a civil war, which ended in 1876, the Basques were fully incorporated into the Spanish state and lost their final special privileges of exemption from military service, financial autonomy and local administration. From this time forward, the Basques always have had a substantial cadre of separatists in their provinces.

The Spanish monarchy fell in 1931, and the Spanish Republic was established. The Basques immediately petitioned for independence. In 1933, the Republic authorized a plebiscite among the Basques and an overwhelming 88 per cent voted for a separate state, which was finally authorized as the Spanish Civil War broke out in 1936.

If the existence of the Basque Republic of Euzkadi was short, it was not without worldwide implication. The attack on Guernica by German planes on Franco's side clearly established the Nazi proclivity for brutality.

In a war of intense cruelty and vindictiveness, it was the Basques alone who were reported by the correspondents as incapable of atrocity. As the front moved closer, the Basques attempted to evacuate their children. (The United States made a decision during this period that struck some as particularly pathetic: to turn down a cargo of 500 Basque children who had been evacuated from Bilbao before it was attacked. Though many nations that were neutral during the Spanish war accepted children, the United States decided that such an action would be taking sides).

IGNORED BUT ALIVE

The history of the Basque national movement in Spain has been for the most part unchronicled since 1937.

None of the world's major newspapers or press services have correspondents in the area, and the Spanish press does little to report events that reflect antagonism to the government. Most of the old voices of Euzkadi are gone.

But in the more than 30 years since the fall of Euzkadi, Basque nationalism has stayed very much alive. In the last two years have occurred some of the strongest separatist demonstrations since the early 30s. It is almost impossible to know exactly how many have been arrested for nationalistic activities, but the number is sizable.

Except for major eruptions, Basque nationalism traditionally has provided those one-inch fillers in the back of major newspapers: like "15 Basques on Trial" and "25 Successionists Arrested." In the period from 1950 to 1967, The New York Times reported a total of more than 300 arrests. In the last two years, more than twice that number of arrests have been reported.

Basque priests have been consistently outspoken in their dealings with the Franco regime. The priests have been almost constantly at odds with their Franco-appointed bishops, provincial governors and the regime itself.

By making decisions that pertain directly to religion, the governors have kept dissatisfaction alive. Euskara has been banned for use on tombstones and outlawed as the language in sermons.

In 1960, 342 Basque priests signed a letter to Franco protesting the "lack of freedom" and "oppression of the Basques" by his regime. In 1963, a Basque statement was forwarded to the Ecumenical Council in Rome, denouncing a "violation of basic human rights" by the government in Madrid.

Recently, the action has been more direct. Priests have refused to allow the Spanish flag in their churches, refused to bless Franco-sanctioned public works or buildings, staged vigils (sit-ins) in the offices of higher authority (in once case, 47 stayed in the bishop's palace in Bilbao for six days) and bluntly advocated separatism.

Several monasteries have become active centers for nationalism and one went as far as to edit and publish a pro-Basque newspaper that reached a circulation of 40,000 before being stopped by the regime. Last summer, the problem became so severe that Pope Paul ordered Basque priests to stay out of politics and, at the same time, asked the Franco government to release eight priests

arrested for alleged collusion in the Basque movement.

ACTS OF TERRORISM

While much of the leadership—or at least those with a platform from which to be vocal—is in the clergy, the move to nationalism is strong among the rest of the population. It ranges from the Basque who is simply in favor of regaining old freedoms to the members of the small terrorist organization known as ETA or Euzkadi ta Askatasuna (Basque Land and Liberty). In the middle is the Basque Nationalist Party, a loosely organized group that has peacefully lobbied for separatism for almost 100 years.

For 30 years, Basque nationalists have been a tolerable nuisance to the Spanish government. Manifestations of the nationalist spirit were for the most part confined to nonviolent but illegal acts such as clandestine meetings, painting slogans on walls, circulating pamphlets and the like. In the last two years, however, matters have become much more serious.

Acts of terroism have occurred, including the killing of two Spanish policemen. Massive demonstrations have taken place in San Sebastian and Bilbao, resulting in numerous arrests and other forms of retribution. Twice, rights guaranteed under Spanish law have been suspended in the Basque area. Rights regarding arrest, house search and freedom of movement have been suspended on occasion.

Day-to-day expressions of Basque nationalism come in many forms. Speaking Basque in the presence of outsiders is one. Calling Pio Baroja and Miguel de Unamuno Basque—not Spanish—writers and pointing out that Simon Bolivar and Maurice Ravel were Basques are others. The green, white and red colors of Euzkadi are illegal on a flag but are worn discretely on jacket lapels at festival time. Basque Christian names are also illegal, but there is no way of stopping a mother from calling her son, christened Jose, by the equivalent Basque name Joseba.

EVERY MAN A NOBLE

Basque liberty is not a vague concept but a specific tradition that has been maintained, at least in men's minds, for centuries.

The Basque *fueros*, or rights, were for the most part formulated in the *Batzar*, or parliament, in Guernica. Nobody is exactly sure when the *batzar* first convened, but it produced a body of laws that were egalitarian and often unique.

A fuero written in 1526 declared that every Basque was a nobleman. The law not only prevented nobility from dominating the Basque lands but also gave Basques traveling in other lands the privileges of title.

Other fueros prohibited torture as a means of punishment, allowed for free trade with other lands and guaranteed a trial by a jury of peers.

A fuero of the 16th century stated that freedom and liberty were established by law and that any order from the king in contradiction with the fueros would be "respected but not carried out." No law or decree issued by the king went into effect until ratified by the batzar.

No taxes (stipulated as free and voluntary gifts) could be paid to the crown until all petitions were heard and wrongs redressed.

Although Basques have a reputation for being extremely religious and concerned with law, their fueros prohibited clergy or lawyers from sitting as deputies at Guernica.

Contemporary Basques claim that their 16th century forebears had more personal freedom than they do.

The Basques, who hold tenacity and strength to be great virtues, have been around for a long time and know that the irritations of a dictatorship cannot last forever. Their ideals, manners and customs have had the strength of centuries.

When John Adams wrote "A Defense of the Constitution of Government of the United States," he spoke of the Basques:

"While their neighbors have long since resigned all their pretensions into the hands of kings and priests, this extraordinary people have preserved their ancient languages, genius, laws, government and manners without innovation, longer than any other nation in Europe."

The Basque ethic and ideal may be the sanest on the whole Iberian peninsula, but it will probably be a while before they dominate in their native provinces again. Until that time, resilience will have to do.

THE BASQUES' PRESIDENT

(By Paul A. Dickson)

The North of Spain was falling and the leaders had retreated as far as the city of Santander. Jose Antonio de Aguirre was convinced by his ministers that he must escape immediately. Under heavy aerial bombardment, he managed to board the only airplane his tiny government still owned, an old Curtiss pursuit plane that had once belonged to Haile Selassie. An hour later he was in France.

Aguirre was the elected president of Euzkadi, the Basque Republic, which had come into existence in October, 1936. Now, with Aguirre's exile, it had fallen in less than a year. As the Nationalist armies of Francisco Franco moved through Vizcaya and Guipuzcoa, the two separated provinces once again became part of Spain.

As the errant provinces were again being put under Spanish rule, Aguirre had to plot and execute his escape from Europe. He stayed in France for a while, but was soon on the run again.

Aguirre had been an outspoken antifascist who rallied worldwide sympathy for the Basques when he cried out against the bombings of the undefended Basque towns of Guernica and Durango by the Nazi Condor Legion, then in the service of Gen. Franco.

The Nazis and their collaborators actively pursued Aguirre in occupied Europe. If caught, he would presumably have shared the same fate as Luis Companys, president of the similarly separatist Catalan Republic, who was captured in France by the Vichy regime, turned over to Spain and shot.

Aguirre moved from hiding place to hiding place. Just as he felt he was about to be captured in occupied Belgium, he decided upon a bold course of action: he would escape through Berlin. As he later explained in his book, "Escape Via Berlin," "While the rest of the world ran away from their clutches, I would run between their legs."

He was crafty and calm, and it seems, driven by the same sense of bravado usually attributed to spies in Hollywood movies. Posing as a Panamanian traveler, bolstered only by a false passport and a new mustache, Aguirre attended the funeral of the Spanish King Alfonso XIII in Berlin and sat in the same section of the church as Spaniards who would have had him shot had they recognized him. He dined with a Spanish diplomat and impishly brought up the subject of "that criminal" Aguirre. In occupied Belgium, he played in a well-attended tennis match with his brother—who was being watched to see if he would make contact with the escaped president.

With the help of several sympathetic Latin American diplomats, Aguirre escaped with his family to neutral Sweden, then Brazil and finally New York, where he established headquarters for his exile government. When World War II ended, the government-in-exile moved to Paris (where it still exists) and Aguirre continued as an active propagandist for the rights and separatism of the Spanish Basques.

Aguirre died in 1960. The world's press gave him the type of deferential obituary reserved for men who have had their one moment of significance. To the world he was a colorful, quixotic anachronism crying for separatism at a time when alliances, treaties and blocs were the order of the day.

Throughout history there have been many exiled leaders: men who perish in foreign lands claiming to the last that they have been slighted and their people deprived of their birthright. The Spanish Civil War alone provided a handful of such men. Often the claims of deposed leaders add up to nothing more than bids for publicity by desperate despots. To the end, Aguirre claimed that he represented a courageous, idealistic and democratic people with a long felt desire for nationhood. Seen in the context of the Spanish Basques and their history, customs and traditions, Aguirre's claim appears valid.

SAFEGUARD CREDIBILITY UTTERLY DESTROYED

Mr. YOUNG of Ohio. Mr. President, the St. Louis Post-Dispatch recently published an outstanding editorial, entitled "The Credibility of Safeguard," which clearly and concisely details the checkered history of the proposed ABM system. The editorial points out that President Eisenhower and President Kennedy both rejected the importunings of Pentagon generals and admirals for deployment of an ABM system. Furthermore, it was not until 1967 that President Johnson succumbed to Pentagon pressures and prevailed upon Secretary of Defense McNamara to yield to the Joint Chiefs of Staff and the military-industry complex. Secretary McNamara then recommended the so-called thin ABM, supposedly a defense against Communist China—a rationale that has been thoroughly discredited. It had no validity at that time as Communist China had then as it has now, but crude nuclear capability.

To embark upon a project of such dubious value and at such fantastic expense against the advice of the scientific advisers to Presidents Eisenhower, Kennedy, and Johnson and of practically all of the scientists who, incidentally, would be called upon to help build this boondoggle, makes no sense whatever. The alleged purpose of the ABM has been changed so many times and altered to fit so many conflicting assumptions that the credibility of Safeguard, formerly termed the Sentinel ABM, has been utterly destroyed.

Mr. President, I commend this excellent editorial to Senators who have not had the opportunity to read it, 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:

THE CREDIBILITY OF SAFEGUARD

As the ABM question nears a Senate vote, it is well to recall the checkered history of the defensive missile project.

The Pentagon's military planners began promoting defensive missiles during the '50s, in the Eisenhower Administration. After extensive consideration of two competing concepts, point defense and area defense, they decided to concentrate research on point defense, and the Army set about designing and testing Nike-Zeus. The Defense Department in 1959 strongly urged immediate production and deployment of this system, to be operational by 1964.

But President Eisenhower was never convinced that such a vast expenditure could be

justified. He left the matter to the incoming Kennedy Administration, which decided not to deploy Nike-Zeus but to splurge instead on a huge expansion of offensive missiles, on the basis of "missile gap" which later turned out to be the figment of somebody's imagination.

The wisdom of the decision against Nike-Zeus has been attested by Dr. G. B. Kistiakowsky, President Eisenhower's science adviser. He recently pointed out that if the system had been deployed in 1964, at a cost of perhaps 40 billion dollars, by this time it would have been made obsolescent by the current numbers and sophistication of offensive missiles being deployed by the superpowers.

Undismayed, the Pentagon during the early '60s switched its planning concept from point to area defense, and began working on Nike-X, which was intended to protect major population centers. Both the Kennedy and Johnson Administrations decided against deployment of Nike-X, for much the same reasons that had prevailed against Nike-Zeus.

After the Soviets began deploying a limited ABM system around Moscow, the Pentagon renewed its pressure. Nike-X became the Sentinel system, based on the same components. Secretary McNamara, convinced that with or without ABMs on either side the U.S. had enough nuclear power to wreak total destruction on any enemy even after absorbing a missile attack, continued to oppose ABM. He said all it would accomplish would be to force the Russians to build more and more offensive missiles.

In late 1967, Mr. McNamara compromised. Still rejecting as unnecessary an ABM defense against Russia, he inexplicably came out for a "light" deployment against China. There is every reason to believe that this was a political decision, designed to deprive the Republicans of a "missile gap" issue in the 1968 campaign. The aerospace industry's house organ, *Aviation Week*, so described it at the time.

Congress approved and work began on Sentinel. So many protests came from the proposed ABM sites around Detroit, Boston and other cities, that the incoming Nixon Administration suspended the project for a review. The upshot was the transmutation of Sentinel into Safeguard.

Now the strategic concept shifted back once more from area defense to point defense. Instead of protecting cities, the ABM was to protect the sites of Minuteman offensive missiles against a possible first strike by the Russians (not the Chinese, anymore). This doctrine required, as Senator Symington has pointed out, changing the previous appraisal of Russia's SS–9 missiles from second-strike to first-strike weapons. The Pentagon also raised the megatonnage the SS–9s are supposed to carry, and it further gave them the potential of carrying multiple warheads.

Whether SS–9s do in fact have all that capability is not known. Senator Symington notes that the SS–9 is a liquid-fuel missile like the Titan, which the U.S. abandoned years ago. Yet all of a sudden, according to the Pentagon propaganda, the SS–9 has become a fearsome weapon able to knock out all our missiles at one blow, and therefore we need the Safeguard ABM system to "protect our deterrent."

Senator Symington, one of the most knowledgeable men in the Senate when it comes to missiles, is not fooled by this propaganda, and we do not see how a Senate majority can be fooled by it. Those who pay thoughtful attention to the 15-year effort by the Pentagon to inflict a costly ABM commitment on the American people can only conclude, with Senator Gore, that the ABM is a weapons system in search of a mission. Its alleged mission has been changed so many times, the security justification altered to fit so many conflicting assumptions, that the credibility of Safeguard has been utterly destroyed.

SENATOR YARBOROUGH TALKS ABOUT THE WORLD HUNGER PROBLEM

Mr. McGOVERN. Mr. President, I noted with interest a speech made by one of the members of the committee of which I am chairman, the Select Committee on Nutrition and Human Needs. The speech, by the distinguished Senator from Texas (Mr. YARBOROUGH), constitutes a most enlightening and eloquent discussion of the problem of world hunger.

It includes a thorough review of the fundamental facts pertaining to the existence of world hunger, a brief discussion of the history of famine and hunger, an analysis of suggested solutions to world hunger, and an articulate summary of his suggested approach to the immediate problem.

I ask unanimous consent that the speech, entitled "A Beacon in the Malthusian Darkness," and delivered to the Canadian-American Assembly on World Hunger on Thursday, June 26, 1969, be printed in the RECORD.

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

A BEACON IN THE MALTHUSIAN DARKNESS

(Remarks of Senator RALPH W. YARBOROUGH to the Canadian-American Assembly on World Hunger in Toronto, June 26, 1969)

President Nelson, Distinguished Delegates to the Canadian-American Assembly on World Hunger, Fellow North Americans, Ladies and Gentlemen:

As a Texan, I feel awed in coming to the Province of Ontario, so much larger than the empirical State of Texas, and to Toronto, with a metropolitan population of over two million. But I have been to Canada a number of times before, and I know that Canada is not merely big in area, it is big in thought and ideals, which is the most important of all.

It is in keeping with the great size, the great ideals, and great compassion of Canada, that you are holding this conference here, to deal with one of the most urgent problems of mankind. The problems of hunger and malnutrition among the world's people, coupled with the population explosion, presents man with one of the gravest problems in all his life on this continent.

It is a pleasure to have this opportunity to participate in a meeting of individuals so genuinely concerned about one of man's greatest crises.

Cardinal Spellman, in his Prayer for Children, eloquently characterizes the pathos of this crisis with these words:

"Somewhere—the place it matters not
Somewhere I saw a child hungry and thin of face
Eyes in whose pools life's joys no longer stirred
Lips that were dead to laughter's eager kiss
Yet parted fiercely to a crust of bread."

Such a child can be found in any part of the world; in the river plains of India; the hamlets of Vietnam; the villages of Biafra; the teeming ghettoes of Tokyo or Mexico City; in the hills of Appalachia; or the streets of the proud but turbulent American cities. We cannot escape the haunting eyes of hunger; they see us when we dine on veal Francoise, or drive either one of our two family cars, or watch our color television.

While one billion of the three billion people on Earth share in an ostentatious abundance, the other two billion struggle on the brink of starvation and disaster. Those two billion people receive on a daily basis half or less as many calories as the one billion in the affluent nations, and only one-fifth as much high quality animal protein.

It has been established by the President's Science Advisory Committee that over 50 percent of the pre-school children in the developing nations are physically affected, from a severe to moderate extent, by protein-calorie malnutrition. The physical manifestations are tragic indeed; anemia, goiter, pellagra, beri-beri, rickets, mental retardation and other diseases associated with malnutrition. It is estimated that approximately 10,000 people, mostly children, die from hunger or from the associated effects of malnutrition each day, while millions suffer in the psychological despair created by hunger and poverty and their corrollaries of lethargy and hopelessness. As Adlai Stevenson noted, "A hungry man is not a free man."

We cannot escape a plain truth: Up to now man has not been able to eradicate the scourge of hunger. How then can man ever hope to cope with the problem as it is compounded by future population growth?

Dr. Paul Erlich of Stanford University answers this question dogmatically in the negative. He says:

The battle to feed humanity is over . . . Sometime between 1970 and 1985, the world will undergo vast famines. Hundreds of millions of people are going to starve to death. That is they will starve to death unless plague, thermonuclear war or some other agent kills them first.

Dr. Erlich thus pessimistically proclaims that man cannot escape the ominous shadow of Malthus. His conclusions paraphrase T. S. Eliot: The world will end with the whimper of a starving man, rather than with the bang of an exploding planet.

Many scientists and experts disagree with Dr. Erlich, and do not feel that the situation is hopeless. But even those hasten to recognize that the hunger problem has thrown the world into crisis, a crisis that is calculated to be frightfully deepened by the sheer reality of mathematics.

According to United Nations studies, the world population will be at least doubled by the year 2000 and the population could reach 7 billion. In 1966 alone, the world population was increased by some 70 million, and there was no compensating overall increase in food production. Because of the agricultural disasters of 1965 and 1966, each person on earth had 2 per cent less to eat in 1967 than in the preceding year.

We must face up to some stark facts:

According to the study of Dr. Thorkil Kristensen, Secretary-General of the Organization for the Economic Cooperation and Development, the less developed countries' demand for food in 1960 was 47 billion in terms of dollars, and their production was 48 billion; but by 2000, their demand will be 170 billion with a production of only 135 billion.

As Dr. Frank Notestine, President Emeritus of the Population Council, stated, there is no realistic possibility that the population growth can be reduced by human fertility control or family planning to an extent sufficient to significantly lessen the projected food deficiency.

The less developed nations will have to double their historic rates of growth in food production if they are to break their dependence on food aid and reach minimum levels of adequate diet by 1980, and to do this the resources required are far in excess of present levels of investment in agricultural development.

So, in the absence of drastic measures, the dreadful gap between the nations that have and the nations that have not is calculated to widen. Even the most optimistic among us have to yield to the incontrovertible: mankind is on a collision course with catastrophic famine if it continues its present direction, at its present pace.

It is true that man has always been plagued with hunger and famine. The first historically recorded famine occurred in ancient Egypt some 2000 years before the time of Abraham. The so-called Stele of Famine, found over a granite tomb at the first cataract of the Nile, recorded with terrible foreboding the famine that ravaged the land of the Nile during the reign of Tosorthrus:

I am mourning on my high throne for the vast misfortune, because the Nile flood in my time has not come for 7 years. There is lack of crops and of all kinds of food. Each man has become a thief to his neighbor. The child cries, and the youth creeps along, and the old man—their souls are bowed down, their legs are bent together and drag along the ground, and their hands rest in their bosoms. Everything is exhausted.

In A.D. 331, Antioch in Asia Minor was afflicted by so devastating a famine that a bushel of wheat sold for 400 pieces of silver. In Scotland, after 4 years of famine about A.D. 936, "people began to devour one another." During the Irish famine of 963, peasants sold their children for food.

Hunger and misery were the impelling forces of two of history's greatest revolutions: the French and the Russian. In 1876–78, 5 million persons perished from famine in Bombay, Madras, and Mysore, India; while in a famine in Northern China, at about the same time, 9½ million people died of starvation.

History now records our present nemesis, Biafra. As Senator Edward Kennedy noted on the Senate floor just a few days ago:

"The mercy airlift of food and medicine into Biafra has stopped. The three million people supported by the airlift face starvation and death."

Despite the persistent recurrence of famine, I cannot accept the dogmatic despair of the Malthusians. Hope springs eternal in the human breast. It has to—that is the human way.

Whatever the probabilities of disaster, we have to *at least try* to preclude its convergence with reality. There has been too much talk about hunger and too little action. If we could eat rhetoric, hunger would have vanished by now. It is time to act, and to act as if our lives depended on it—for indeed they do.

While we must energetically foster population control, we must recognize that such efforts cannot provides an immediate solution to the hunger problem. I have had some direct involvement with population control efforts. As a member of the Senate Subcommittee on Employment, Manpower and Poverty, I was a co-sponsor of former Senator Ernest Gruening's bill on population control in the last session of Congress. I am a cosponsor of Senator Joseph Tydings' bill, pending in this session of Congress, to expand and improve family planning services and population research activities. This bill has been referred to the Senate Labor and Public Welfare Committee, of which I am chairman.

From these vantage points, I have seen that population control is absolutely essential if we are to win the race between food and population. You may have noticed the full page ad in the larger newspapers throughout the United States last week. It refers to Robert McNamara's speech at the University of Notre Dame where he said:

"Providence has placed you and me—all of us—at the fulcrum point in history where a rational, responsible, moral, solution to the population problem *must be found.*"

There can be no doubt that a solution must be found and found soon. None of the medical or mechanical remedies have proven effective among those with the highest birthrate, the poor and illiterate masses of the world. More education and counseling is needed, and more research is needed. The United States spend only 116 million dollars on population control programs; this is not enough. Senator Tydings' bill calls for a substantial acceleration in spending for poulation control research, establishment of population and family planning centers, grants for public health services dealing with family planning and grants for training personnel to provide counseling on family planning. It is urgent that this bill pass the Congress of the United States. If the United States will lead legislatively, many other nations will be encouraged to cooperate.

But the population control will take time and its salutary effects will not come on the wings of the morrow. It will take at least 20 years, probably more, before even the most ambitious population control efforts can have any significant effect upon food requirements.

Thus, we must turn to the two areas where we can have a more immediate impact. I am referring to a drastic acceleration in the direct provision by the affluent nations to the developing nations of two things:

1. Emergency food and fiber;

2. Technical assistance to increase agricultural production within the developing nation.

The total food aid from all sources to the developing nations is not over 2 billion dollars. Until we can be sure that the developing nations can produce the additional 58 million metric tons of grain they will need by 1980, food aid must be increased by at least 50 percent.

Even more necessary is a dramatic upsurge in technical assistance. This involves expanded support for research in plant sciences, full development of water resources, assistance in transforming the subsistance farming of the developing nations into modern agriculture, the expansion of extension services, the provision of fertilizer, pesticides, higher quality seed, and farm equipment, the commencement of comprehensive community development schemes, and the establishment of graduate institutions of agricultural education and research. No one of these is a panacea, but a combination of all and the many other components of a modern technological society is absolutely essential if agricultural production in the developing nations is to be substantially improved.

Some say that it is impossible to significantly increase production in the underdeveloped nations through technical assistance. But they are wrong. In Mexico, for example, a cooperative venture, between the Government of Mexico and the Rockefeller Foundation, to improve agricultural production, was begun in 1940. By 1955, Mexico had closed its food gap in the production of both corn and wheat. By 1968, the national average wheat yields in Mexico exceeded 40 bushels an acre, or almost quadruple the 11.5 bushel average in 1943; and corn yields, in the same period, had doubled.

I have the faith that commensurate progress can be made in most of the developing countries of the world if we can just modernize their production techniques and show them the way to the maximum utilization of their soil. Scientists tell us that we will eventually be able to produce some of the major staple crops the year round in tropical climates. This attainment will provide the world with tremendous potential, since so many of the underdeveloped nations lie within the tropical zone.

Still, these optimistic developments should not lull us into any false sense of security.

Too often the hungry, underdeveloped country calls for an aluminum plant or a steel mill when it needs food production. Its local politicians want a big industrial mill to show off and for pay-off, and too often the developed industrial nation will build it for the profit of its own production.

The hungry nations need better agricultural technicians, the equivalent of county agricultural agents and home demonstration agents in each comparable area of the undeveloped nations. There is an unbelievable shortage and a great need for veterinarians around the world. There is a great need for game specialists in the game abundant areas of the world. Many areas of Africa can produce much more meat per square mile from wild animals, properly managed, than from domesticated animals grazing on grass alone.

The astonishing increase in wheat production in the Punjab and in some other areas of India, and the miracle rice of the Philippines, open the doors for a better future for Asia.

The advanced nations are presently providing the developing countries about 6.5 billion dollars per year in food aid, technical assistance and capital investment. George Woods, former president of the World Bank, estimated that a minimum of another 4 billion dollars per year in aid will be absolutely essential for the future. Of the annual aid recommended by Mr. Wood, the United States would be asked to furnish over half; since our gross national product is over half of the total gross national product of the advanced nations.

Hunger and malnutrition exist in the United States. Recent surveys, conducted under the sponsorship of the Senate Special Committee on Malnutrition and Hunger, have revealed widespread malnutrition and hunger. The estimates of the cost of the elimination of malnutrition and hunger in the United States range from a low of one billion dollars a year to three billion dollars a year, but the average estimate is two billion dollars.

The Administration is too timid. It has requested only 610 million dollars for the Food Stamp Program for the next fiscal year, though the Senate, just this week voted for 750 million dollars for this one food program. We also use a Food Stamp Program and a school lunch and school breakfast program, but all combined are too little. Far more must be done to eradicate hunger and malnutrition in the United States.

Worldwide, it will take billions more. We need a crash program now for agricultural experts in all needy nations, developing new seeds, new productivity in food plants, for veterinarians to grow better and more healthful food-producing animals. And for the machinery of food production—soil, enriching chemicals, and fruits and vegetables for the family table.

We in America can do our part, but we are prevented today by the drain of an unwise military venture in Southeast Asia which costs us about 36 billion dollars a year. We need to put first things first, end this needless depletion of our resources, so that we can go forth, not with the sword to cut down men, but with a scythe to harvest grain.

We need in the United States an excess war profits tax, such as we had in World War I, World War II, and the Korean Conflict to keep our economy in economic balance and our government in political balance.

We need more concern for the pain and hunger and disease in foreign countries, than for their political beliefs. Our obsession should be to become the most humane society, not the more military society.

The great difficulty in generating the thrust needed to cope with the hunger crisis is that the members of the affluent societies are too far removed from the horror of mass hunger. This accounts for the apathy and indifference of so many in the advanced nations. When will we ever learn with George Bernard Shaw that the essence of man's inhumanity to man is indifference—cold, calloused, carefree indifference?

Mankind cannot survive this indifference. We are compelled by the sheer struggle to preserve life on this planet to comprehend the truth of Donne's famous words:

No man is an island, entire of itself . . . any man's death diminishes me, because I am involved in mankind; and therefore never send to know for whom the bell tolls, it tolls for thee.

While I have been speaking to you today, the bell has tolled for 2000 people, mostly children, who have died of starvation. "As the grim reaper of hunger, with sickle keen, reaps the bearded grain at a breath, and the flowers in between," mankind is diminished with each stroke. Recognizing that every life upon earth is precious and every man, woman and child is only a "little lower than the angels," let us throw off the shackles of indifference, roll up our sleeves and be about the business of serving mankind. In so doing, we will ennoble ourselves, and the inner glow which comes from selfless aid to others will grace our lives and light fires of hope in the remotest corners of this planet.

Thank you for kindling the flames of that hope. Lead us in making this dream of mankind come true.

TRIBUTE TO THE LATE CHARLES A. WOLVERTON

Mr. CASE. Mr. President, recently Alfred J. Lippman, Consulado Honorario de Mexico, sent me a copy of Pepe Romero's newspaper column from Mexico City. The article paid tribute to the late Charles A. Wolverton, a longtime friend and esteemed colleague of mine in the House of Representatives. A member of the Committee on Interstate and Foreign Commerce, Representative Wolverton was deeply concerned about Mexico, her people and progress. In recognition of his stanch championing of the cause of Mexico, Mr. Romero suggests that Mr. Wolverton be posthumously awarded the Aztec Eagle, Mexico's highest decoration. Mr. President, I ask unanimous consent that Mr. Romero's column, entitled "Un Momento With Pepe Romero," be printed in the RECORD.

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

UN MOMENTO WITH PEPE ROMERO

A few days ago former Representative Charles A. Wolverton, who served in the House of Representatives in Washington, D.C. for thirty-two years, died in Camden's "Our Lady of Lourdes Hospital," at the age of eighty-eight. He had served a total of sixteen terms, a record for any congressman. He was a graduate of the Pennsylvania Law School, and in the twenties was alternate delegate to the Republican National Convention. In 1926 he was elected to his first of 16 consecutive terms in the U.S. Congress. He was a past master of the Ionic Lodge, F and AM—a thirty-two degree mason. His wife had passed on many years ago, so now we send his son Donnell Knox Wolverton Mexico's deepest sentiments.

In the fifties, I was present when Mexico's Foreign Minister don Manuel Tello, representing President Miguel Aleman, awarded Mr. Robert Crosser, U.S. Congressman from Ohio, and Chairman of the Committee on Interstate and Foreign Commerce, Mexico's highest decoration, the Order of the Aztec Eagle, in a reception which took place in the Chandelier Room, a jarabe-tapatio dance away from my stupendous office in the lobby of the Hotel Del Prado. Several of us who attended the ceremony were extremely disappointed because Charles A. Wolverton, Republic congressman from New Jersey, and one of Mexico's staunchest friends who had constantly championed the cause of Mexico from the floor of the United States Congress, did not also receive the Order of the Aztec Eagle on that occasion. We could not understand why, until many months later a Cabinet Minister who is my good friend explained, "The calibre of a man like Mr. Wolverton is rare. He refused to accept our country's highest award, so as not to take any of the limelight from the Chairman of the Committee. The Aztec Eagle was certainly offered to him by our Government, in recognition of valuable friendship."

When the Committee on Interstate and Foreign Commerce made its first trip to Mexico, Mr. Wolverton was its Chairman, on its second visit to further study Mexico's Oil situation, Mr. Crosser was its Chairman. But what I did in my book. "Mexican Jumping Bean," was to point out the important statement from that Committee's report to the Congress of the United States upon its return from Mexico at the time when Mr. Wolverton was its Chairman, and I quote from the Wolverton report which I published: "At a time when these world and United States Petroleum conditions prevail it is manifest that the United States has an interest to see that Mexico contributes to world oil supply." Of even more significance in the disturbed times of today are considerations of National Defense and the position of the U.S. in the event of an emergency. The Secretary of Defense in testimony before the Armed Service Committee estimated our Petroleum deficiency in the event of such an unwelcome happening as being some two million barrels per day. In view of such possibilities it appears clear that not only must we have reasonable assurance of continuation of supply from present sources available for emergency demand. As the committee has stated before it is not at all clear what reliance can be placed on the Near East as a source of supply so that dependence on Western Hemisphere sources becomes only a matter of reasonable prudence. There seems to be no disagreement whatsoever that Mexico possesses potentially large petroleum resources. The United States has had and continues to have a large interest in export surplus of Mexican petroleum, not only because it represents a way by which the large United States trade with Mexico may continue to be financed, but as also stated before, because of considerations of Hemispheric Defense."—These opinions were being expressed officially, and I had been given the green-light to publish them in letters received in 1952 from Congressman Wolverton, which I quote, "I also enclose two copies of Report of our Committee with reference to our trip last fall. You may incorporate any part of the Report into my statement." A couple of years later I received a note from him saying that he had heard that I had been in New York and then scolds. "Please do not ever come to the United States again without stopping to see me in Washington. If you do I will have to figure whether or not I should keep you on my list of friends. And in 1958, Mr. Wolverton said, "I hope our paths will cross frequently in the days and years ahead." On my stops in Washington, I always visited him and his hospitality I knew was not for me alone but for Mexico, because on these occasions he asked after mutual friends, and about my country's progress. And the reason that I was certain he had proven years before his sterling concern for Mexico, was because those were the days when, as attorney Frank Rashap had said, "Black Oil, boycott and condemnation was the attitude, after total disregard of the laws of Mexico, and one-sided view in the press of the Expropriation of the Foreign Oil companies."—And so deep sentiments not only to the Free State of New Jersey but to all of the United States on the loss of a very special patriotic son. Mexico's Aztec Eagle should be awarded to him—even though posthumously . . .

. . . Un Momento.

THE 150TH ANNIVERSARY OF ALABAMA STATEHOOD

Mr. ALLEN. Mr. President, Saturday, August 2, 1969, marked the 150th anniversary of the State of Alabama's adoption of the resolution of statehood and a State constitution by a convention assembled at Huntsville, Ala. On December 14 of that year, Alabama was admitted to the Union as the 22d State.

The late Judge Walter B. Jones, of Montgomery, Ala., son of a former Governor and for 44 years a circuit judge in Alabama, was a much beloved gentleman and scholar whose public career was marked by legal and cultural contributions to the State in the finest tradition of Alabama and the South. For a period of 33 years, Judge Jones wrote a weekly column for the Montgomery Advertiser entitled "Off the Bench." On one occasion he used his column to bring vividly to life a scene from history which took place in the office of President James Monroe upon the occasion of his receiving the resolution of Congress declaring Alabama to be one of the United States of America.

Mr. President, the Montgomery Advertiser in commemoration of the death of Judge Walter B. Jones and the birth of Alabama as a State reprinted Judge Jones's column which was written several years prior to his death. We believe that Members of the Senate and others will find the column pleasurable and instructive reading and that it might serve to remind us that all States entered the Federal Union on "equal footing" and that we depart both from the letter and spirit of our Constitution when Congress enacts punitive laws applicable to some but not to all the States. I ask unanimous consent that the column be printed in the RECORD.

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

ALABAMA'S BIRTH AS A STATE

Today is the 150th anniversary of Alabama's adoption of a resolution of statehood and a state constitution by a convention assembled at Huntsville. That was Aug. 2, 1819. On Dec. 14 of that year, Alabama was admitted to the Union.

The late Judge Walter B. Jones, who died six years ago yesterday at his home on Adams Avenue, wrote the following column for The Advertiser about the office of President James Monroe on that December day when the August resolution was received and acted on.

Judge Jones, son of a former Governor and a circuit judge for 43 years, wrote a weekly column, "OT The Bench," for The Advertiser for 33 years, from Dec. 14, 1925, to March 31, 1941 and from Dec. 1, 1947 to June 2, 1963, when his illness forced him to discontinue it. He had interrupted the column between 1941 and 1947 to write a massive legal work.

In commemoration of his death and the birth of Alabama as a state, we are reprinting his column of Dec. 17, 1962.

OFF THE BENCH

(By Judge Walter B. Jones)

December 17, 1962.—On a dreary December afternoon, 143 years ago Friday last, down on the south side of Pennsylvania Avenue in Washington City, a little town of about 13,000 population, two-thirds of whom were white, a chilly damp wind swept in from the Potomac, moaning through the trees surrounding a large white building. The building had

been burned by British troops only a few years before, and now rebuilt and painted white to hide the marks of the fire, it was the official residence of the president of the United States.

While it was cold and damp outside the building, big wood fires made the inside fairly comfortable. In a large room on an upper floor huge oak logs piled high upon the fire, blazed cheerfully on the hearth, brightening and warming the room. At an oval table a few feet back from the fireplace a tall, thin man sat looking over a bundle of official documents just handed him. Occasionally he put his signature to some of the documents.

The distinguished looking man seated at the table was Virginia-born James Monroe, fifth president of the United States, a battle-scarred hero of the Revolution and four times governor of Virginia. His grayish-blue eyes were deepset and kindly. He was six feet tall, but being stoop-shouldered and ungainly, seemed of less height. His face was delicately refined.

Monroe's eight years in the White House were known as the "Era of Good Feeling." In a message to Congress, December 1823, he stated the Monroe Doctrine that the United States would regard as an unfriendly act any attempt by a European nation to interfere in the affairs of the American countries or to increase its possessions on the American continents.

In his reelection to the presidency in 1820 he received all the votes cast in the electoral college but one cast by a New Hampshire presidential elector for John Quincy Adams in order that no one might share with Washington the honor of a unanimous election.

With the President were two of his clerks, his vice president, Daniel B. Tompkins, formerly governor of New York for 10 years; and the President's Secretary of State, John Quincy Adams, the son of the second president of the United States and in a few years to succeed Mr. Monroe in the presidential office.

As the clerk handed the papers from Congress to Secretary of State Adams, sitting at Mr. Monroe's right hand, the former read them to the President, stating to him the purpose and legislative history of the bills and resolutions.

"Now, Mr. President," said the Secretary of State, picking up a document from the table, "here's a resolution I know you'll be happy to sign."

"Yes?" inquired the President.

"It's a resolution of the Senate and House of Representatives which gives us a new state," replied Mr. Adams. "It puts into effect an act you approved last March to enable the people of the Alabama Territory to form a constitution and a state government and for the admission of the territory as a state into the Union."

"How does the resolution read, Mr. Adams?" asked the President, "and what are its chief provisions?"

"Well, it is a resolution declaring the admission of the state of Alabama into the Union," replied the Secretary of State, "and the resolution recites the fact that on Aug. 2, last, the people, by a convention called for that purpose at Huntsville formed themselves a constitution and state government. These are republican and conform to the principles of the articles of compact between the original states and the people and the states in the Northwest Territory."

"And does the resolution," inquired the president, "admit Alabama on an equal footing with the original states? Please read me the text as to this point, Mr. Secretary."

Mr. Adams read: "Resolved by the Senate and House of Representatives of the United States of America, in Congress assembled, that the state of Alabama shall be one and is hereby declared to be one, of the United States of America and admitted to the Union on an equal footing with the original states in all respects whatever."

"Very good. Let me approve the resolution," said the president.

The document was handed to Mr. Monroe, who then moved his inkhorn closer and taking the quill of a feather used in those days as a pen for writing, he wrote the words, "Approved, Dec. 14, 1819," and under them signed "James Monroe."

"Now, gentlemen," said Mr. Monroe, "the Union has a new member, Alabama has just become our 22nd state. So let us stand and salute the new state with a toast. Fill every glass up. Pour forth the cheering wine."

The President stood up beside the table facing the south, all following his example. Secretary Adams poured bright sherry from a handsome old cutglass decanter into each small wine glass. When all the glasses had been filled, the President lifted his glass, and standing his full six feet in height, said: "Let us drink in honor of our youngest state." He paused, each lifted high his glass and faced Mr. Monroe as he said:

"I drink to Alabama and her people. May God graciously smile upon the state and bless her people with all goodness, happiness and prosperity." Each glass was lifted high.

The President, the Vice President and the Secretary of State resumed their seats, a servant chunked up the fire. The President turned his attention to other official documents. The ink dried on his signature to the joint resolution. The Territory of Alabama, after a brief life of two years, had passed on into history; and come July 4 in the Union of the flag there would be another five-pointed white star in the cluster on the blue field.

That star, the 22nd, first put in the flag July 4, 1820, represents our state, Alabama and her 3,000,000 people.

U.S. ACHIEVEMENTS IN AERONAUTICAL AND SPACE SCIENCES

Mr. MAGNUSON. Mr. President, the last 2 years have seen amazing and even fantastic progress in the development of the Nation's aeronautical and space programs and it was fitting that in June many of these remarkable achievements were on display for all the world to see at the International Air Show in Paris.

The Apollo 8 spaceship, a tremendous achievement made possible by a Government-industry team and the Boeing 747, the world's largest civil air transport were truly momentous achievements over which the United States should take great pride. Despite those two great technological advances in aerospace, we cannot take much solace in the fact that the British-French Concorde supersonic transport was also a major focal point in aeronautical achievement in Paris. While the United States may be very proud of our showing there, we must also realize that in this one vital area of aerospace technology, we have not moved forward as quickly as we might have. The British and French and the Russians are moving ahead quickly with the development of supersonic transports. The U.S. SST program is still bogged down at the executive level. While the world moves on quickly around us in this vital development, the President of the United States has yet to ask the country to move ahead on our SST project. I ask the President to delay no longer because the technology gap widens with each passing day and if the United States is to maintain its worldwide superiority in civil aviation, we must proceed with quick and orderly development of the SST. Mr. President, I commend to the Senate three editorials published recently in Aviation Week & Space Technology dealing with American aerospace achievements at the International Air Show in Paris. These concise editorials explain well both the achievement about which we can be proud and the challenge that we face in the future. I ask unanimous consent that the editorials be printed in the RECORD.

There being no objection, the editorials were ordered to be printed in the RECORD, as follows:

OUR BRIGHTEST IMAGE

(By Robert Hotz)

Never in the history of its participation in the Paris air show has the U.S. projected a brighter image of its aerospace technology and international stature than it did during the 28th Salon International de l'Aeronautique et de l'Espace. It was the strongest overseas presentation of the U.S. aerospace capability that we can remember. It was also the most accurate reflection of the genuine state of this country's technological achievements that we have ever seen at a Paris air show.

It combined a glowing image of a technically competent and aggressive nation with a very hard sell indeed. This hard sell produced a substantial return in immediate sales on the specific show investment of U.S. government and industry. It paved the way for even more productive market development in the years ahead. Since aerospace exports are one of the brightest spots in helping to solve the perennial U.S. balance-of-payments problem, this is an important achievement.

The Apollo exhibit was superbly executed. It combined the realism of the charred Apollo 8 capsule, equipment carried by Astronauts Borman, Lovell and Anders on man's first voyage to the moon and actual tapes of their broadcasts from lunar orbit, with imaginative presentation of the Apollo 11 lunar landing mission.

In the dim lighting of a simulated lunar surface, the steady stream of European visitors saw an extremely realistic reproduction of what they will be seeing in actuality on television next month. A full-scale replica of the Grumman lunar module stood in the sand and rocks on the surface of a simulated Sea of Tranquility. An astronaut with full lunar exploration gear and portable life support pack demonstrated egress from the LM and initial manned operations on the lunar surface.

Full-scale models of the equipment the astronauts will deploy on the moon were shown in addition to Grumman's lunar rover that will extend surface exploration on later missions. A realistic cockpit mockup of the LM put each visitor in an astronaut's position for a simulated descent to the moon's surface while tapes of the Apollo 10 crew reports during their low-level reconnaissance lent an air of startling realism to the display.

Also extremely effective was a psychedelic montage of color movies of various Apollo missions keyed to a countdown and launch and interspersed with spectacular low-level reconnaissance film of the moon. Only the physical limitations of the traffic flow through this exhibit kept the attendance here somewhat below that of the entire show.

The hard-sell portion of the U.S. exhibit scored even beyond its great 1967 success. More than 5,000 pre-screened and specially invited potential European customers registered there. Sales will probably soar to more than double the 1967 total when finally tabulated. The spectacular arrival of the Boeing 747 giant jet and its brief exhibition cast

a long shadow of U.S. market dominance in the wide-body high-bypass-ratio turbofan transport generation.

Even more impact would have been provided by the Lockheed C–5A military transport. It was indeed a craven performance by the Department of Defense to withhold its advanced technology from the U.S. exhibit simply because some aspects of it, such as the C–5A and the F–111, were embroiled in domestic political controversy. The F–111 pioneered operational swing-wing technology, and variable geometry is now very much the vogue in new European military designs.

A prior gap in the U.S. technological image projected at Paris was filled this time by a strong metallurgical exhibit supported by 16 companies displaying state-of-the-art advances. In comparison, the Soviet metallurgical exhibit that was so spectacular in the 1967 show was placed in its proper competitive perspective. In fact, the whole Soviet technical image was greatly diminished in the 1969 show, not by any great change in its achievements but simply because the U.S., for the first time, displayed more of its technology than ever before. As we so often predicted, when faced with the full impact of the U.S. challenge, the Soviets, of necessity, soft-pedaled their own accomplishments and were resigned to seeing them placed in proper international perspective.

U.S. industry, of course, deserves ample credit for the manner in which it has developed its Paris show participation into a finely honed competitive effort in the export market. But we also think the U.S. Department of Commerce deserves special credit for its tough and lonely fight within the government bureaucracy to keep the U.S. participation at the show at an effective level, both as national image projection and as a hard-sales effort.

Department of Defense has an understandable budget problem in supporting a military flying display at Paris since former French President Charles de Gaulle withdrew logistic support of French bases for U.S. NATO forces. But there has been too much weight given to pique of minor defense officials in determining Paris policy and not enough to the overall national goals that could be reached.

Without the dogged persistence of the Commerce Department in the long between-show, behind-the-scenes struggles in the Washington bureaucracy, the U.S. image would not have shone as brightly as it did during the 10 days of the 28th Paris air show at Le Bourget. This is a lesson that should be remembered well when planning for the 1971 exercise begins this fall. The U.S. has a lot to gain from a strong, well coordinated projection in this international market-place and a lot to lose from a sloppy or indifferent approach.

Challenge of the 1970's

(By Robert Hotz)

The major aerospace companies of the world are gathered this week on the historic tarmac of Le Bourget airport near Paris for the opening salvos in the toughest technical sales campaign this industry has ever experienced. The occasion is the 28th Salon International de l'Aeronautique et de l'Espace, known more colloquially as the Paris air show.

Never has the aerospace industry faced such rosy prospects for such a burgeoning market for its hardware across the entire technical spectrum it encompasses. Never has the aerospace industry faced such challenges in technology, management and politics as the next decade will impose upon it. The challenge of the 1970s to the aerospace industry and its customers lies primarily in the new patterns they must develop to compete successfully in what is fast changing into a basically new global environment.

Perhaps the fastest growing and most profitable market for the 1970s will lie in the commercial area. The rapid growth of the commercial aerospace market has already become a dominant trend of the fading 1960s. The message is clear that no major aerospace complex can hope to survive without carving a lucrative slice from the expanding civil markets of the 1970s. Only a decade ago the aerospace industry was 90% military and 10% commercial. Already the commercial market has grown to about 40% of the total, and some of the largest U.S. corporations are gaining more than half of their sales from commercial products.

But even while the commercial market is expanding its percentage of the total market, the military market will continue to grow far beyond its present dimensions. A whole generation of flight hardware will have to be replaced on a global scale during the 1970s.

Each geographic area of the aerospace world is also facing new challenges imposed by the inexorable march of technology and international politics.

The United States is pressing its international competitors hard in the air transport market. There it already has developed some basic new patterns of management and technology to produce the new family of wide-bodied transports powered by high-bypass ratio turbofans that will dominate the airline market of the 1970s. But it faces a difficult task in maintaining or expanding its military export market.

The lost generation of aircraft research and development has left the U.S. with little new technology to sell in the 1970s. Lack of the built-in boost of a military aid program, combined with restrictive credit policies, also will make U.S. military export campaigns vulnerable to foreign competition.

Europe faces the problem of how to organize its aerospace resources into effective combinations that can compete successfully for both military and commercial programs. The government-level consortiums that have produced the Concorde supersonic transport program, the Jaguar strike fighter and the airbus fiasco cannot meet the challenge of the 1970s in advanced technology, development costs and production time scales.

Private industry needs more opportunity to exert technical leadership and generate initiative for program organization to eliminate this built-in bureaucratic drag. Governments must sacrifice some of their chauvinistic prerogatives to allow a more sensible flow of the technical tides. Without a new and more effective method of multi-nation program organization, Europe will find difficulty in competing outside its own national markets.

Smaller nations of Europe, the Middle East, Africa and Asia face the problem of avoiding the tactical vulnerability imposed by their current dependence on buying aerospace hardware from the major powers. Foreign policy shifts, such as the French export ban on Israel and the U.S. and British restrictions on South African purchases, have emphasized the need to develop indigenous aerospace production bases.

Soviet Union is finding that its desire to push aerospace exports as a means of alleviating its hard currency deficits, promoting its political penetration and polishing its international technical image requires new patterns that don't exist in the Soviet system. Recent slumps in Soviet aerospace exports are forcing radical changes that reach back through the production system into the design bureaus.

There is no doubt that the expanding markets of the 1970s will develop. In addition to the growth of the commercial aircraft market and expansion of the military replacement market in aircraft and missiles, there will be a major rise in the opportunities for sales of space technology hardware. The space business is just about to burst the relatively restrictive bonds of a strictly research and development phase into operational space system hardware on a global basis for communications, weather, navigation and earth resources satellite systems.

But the name of the aerospace game certainly will change. The stakes are growing enormous. The rewards can set new peaks in profitability. The penalties for failure will be disastrous. The overture to this epic drama of the next decade is now being played beneath the caparisoned chalets, flapping house flags and popping champagne corks of the 28th Paris air show. The main events will unfold in succession during the next 10 years.

Report From Paris

(By Robert Hotz)

Not since Austerlitz has French pride soared so high as it escalated every time the Concorde supersonic transport flew at the Paris air show. The first time this graceful gull soared over Le Bourget airport the French crowds broke the barrier fences and swarmed over exhibition aircraft and chalets in a mad charge to get closer to their pride and joy as it taxied up the runway. French police had to use fire hoses to drive the crowd back to the airport perimeter, and the Concorde stood immobilized for 15 min. until the crowd was driven from its path and brought under control.

Every time it was flown, there was a wave of emotional agitation that swept through the crowds that was hard to describe. When Chief Test Pilot Andre Turcat descended from the Concorde cockpit and took the short walk to the Sud Aviation chalet, he was besieged by camera-clicking Frenchmen, women and children snapping his picture as if he were a movie star.

Perhaps never before in history has a commercial aircraft developed into such a strong symbol of national pride as the Concorde is now to the French. Even to the melange of international visitors, it was a beautiful sight when it took to the air. There can be no doubt that it was the brightest star in the flying display at the 28th Salon International de L'Aeronautique et de L'Espace, known around the the world as the Paris air show.

As the Concorde started in the air, so did the U.S. Apollo provide the strongest magnet on the ground. For the first time in many Paris air shows, the U.S. space exhibit overshadowed the Russian contribution. Crowds poured into the main entrance of Le Bourget flowed into the U.S. Apollo exhibit like country fair crowds into the dancing girls' side show.

The giant boat-tail mockup of the Boeing S–1C stage of the Saturn 5 with its cluster of 1.5 million lb. thrust North American Rockwell rocket engines dwarfed the complete Russian Vostok booster exhibited at the last show. The charred Apollo 8 command module that made man's first voyage to the moon exuded a mystique hard to describe as it sat on the gravel at Le Bourget, canted in the same attitude that it splashed into the Pacific after its half-million-mile roundtrip to the moon last December.

The other portion of the United States exhibit featuring hard-sell component manufacturers also drew well to stimulate a brisk business in export products.

In addition, the Boeing 747's graceful bulk added solid achievement to the United States image, overshadowing the Soviet Antonov An–22 by the same dimensions Apollo outshone Vostok. Boeing's giant jet made an impressive entry to Le Bourget, boring through low cloud and mist for an initial pass after a 5,000-mi. nonstop over the arctic flight from Seattle. The weather was so bad that the crowd couldn't see its landing on the farthest runway, but its great bulk

loomed out of the mist on taxiing to the flight line in awesome spectacle.

The Soviets obviously conceded honors for this Paris air show to the Anglo-French Concorde in the aircraft field and the U.S. Apollo in space. The Soviet's space exhibit was drastically curtailed from what they originally planned. The giant hole dug to display the Soyuz manned spacecraft was filled in and covered over. Their space exhibit was both smaller and far less spectacular than the last two shows. The Russian aircraft display was substantial and had many interesting marks of progress. But it was strictly playing second or third fiddle in the international spectrum at Le Bourget.

As always, there was a large quantity of new technology on display although perhaps not quite as much as in the vintage year of 1967. The pace of technical progress in the aerospace field is such that it is difficult to follow the brilliant years with a steady stream of equally significant technology. The surprising element of this Paris air show was that it came so close to the astounding display two years ago in new technology across the entire spectrum from space through airliners, military aircraft and business jets. The business flying portion of this show has been growing by leaps and bounds. The 1969 effort was a varied and lively one. Probably more solid sales were being transacted in this area than in any other spectrum.

Another major trend evident this year was the strong thrust of the German aerospace industry to regain a major role in the international markets. Most of the new European projects on display had a strong German flavor.

Whether the German industry will be successful in its bid to carve a new role for itself is still a moot point. But there can be no doubt that it is now making its move in earnest.

While Le Bourget provided many of the answers to the technical questions of the contemporary aerospace scene, it also posed some questions that are obviously unanswered. Perhaps the most significant is whether the European aerospace industry can develop an effective technical and management pattern to enable it to become a major competitive force in the really lucrative areas of the international aerospace markets of the 1970s. The various patterns that have been tried during the last decade all leave much to be desired in meeting the challenge of the future. This observer at Le Bourget feels that Europe is still groping toward a solution.

But the only real progress achieved to date may lie in the realization that the patterns of the past hold no promise for the future. If the European aerospace industry cannot muster its considerable engineering, production and managerial resources into a more effective competitive pattern, it may have to reconcile itself to a future that holds nothing better than subcontracting and licensed production of designs developed elsewhere.

RATIFICATION OF CBW PROTOCOL CONSISTENT WITH U.S. POLICY

Mr. PROXMIRE. Mr. President, on September 3, 1959, Congressman ROBERT KASTENMEIER, of Wisconsin, introduced a resolution—House Concurrent Resolution 433—that called for reaffirmation of "the longstanding policy of the United States that in the event of war the United States shall under no circumstances resort to the use of biological weapons or the use of poisonous or obnoxious gases unless they are first used by our enemies."

Congressman KASTENMEIER argued for the passage of a no-first-use agreement—such as the Geneva Protocol of 1925—to make absolutely clear the position of the United States and to forestall Soviet propaganda about our failure to ratify such a declaration.

This resolution encountered considerable opposition, most forcibly from the Departments of State and Defense, which sent letters advising against adoption of the resolution. The arguments presented in these letters are common ones and seem to have carried much weight at the time. Yet they are unacceptable and even dangerous misrepresentations of the basic issues involved and should not be allowed to influence our policy on this vital matter.

The Defense Department stated:

Similar declarations (to the Geneva Protocol) might apply with equal pertinency across the entire weapons spectrum, and no reason is perceived why biological and chemical weapons should be singled out for this special declaration. Whether the use of any major type of weapons should be initiated is a matter to be decided at the highest levels of Government in the light of the Nation's longstanding policies and principles, its international obligations and the emergent situations it will confront.

If indeed we are to determine our policy with respect to chemical and biological weapons in the light of "longstanding policies and principles" then certainly this calls for ratification of this treaty as it has always been our policy to refrain from first-use of C and B weapons. Since the time the Senate unanimously ratified the Washington Treaty of 1922, our policy has been consistently to refrain from the use of C and B weapons unless first attacked with them. President Roosevelt reaffirmed this policy during World War II, and it has remained unchanged to the present.

Ratification of the Geneva Protocol would not, moreover, single out C and B weapons for this sort of treatment, for it has been our equally consistent policy never to use nuclear weapons unless first attacked with them. Indeed, in a broader sense, the principle of no-first-use has been a cornerstone of our foreign policy, and thus applying it to C and B weapons is nothing more than making our policy consistent across the entire weapons spectrum.

The State Department said:

Of course, we must recognize our responsibilities toward our own and the free world's security. These responsibilities involve, among other things, the maintenance of an adequate defensive posture across the entire weapons spectrum.

But there is nothing defensive about the first-use of C and B weapons, and thus there can be nothing destructive to an adequate defensive posture in a no-first-use agreement. In fact, as I argued yesterday, such an agreement would actually strengthen our defensive position by making absolutely clear our intentions and thereby making more credible our retaliatory capacity.

Mr. President, I am happy to say that this week Senator HARTKE introduced a resolution—of which I am a cosponsor—calling on the President to resubmit the Geneva Protocol to the Senate for advise and consent to its ratification. I urge the Senate not to accord to the inaccurate arguments of the Departments of State and Defense and to ratify the 1925 Geneva Protocol.

EVERGLADES

Mr. NELSON. Mr. President, I am heartened by the rapidly increasing public concern and attention to the very difficult problems faced by Everglades National Park in southern Florida. The latest evidence of this attention is an excellent article by Mr. Paul Brooks in the July issue of Audubon, the magazine of the National Audubon Society.

I ask unanimous consent that this article be printed in the CONGRESSIONAL RECORD at this point.

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

EVERGLADES NATIONAL PARK

(By Paul Brooks)

"Human history," wrote H. G. Wells, "more and more becomes a race between education and catastrophe." A precise illustration of his thesis, in terms of land use, is the huge jetport about to be built (unless someone stops it) in the heart of the Florida Everglades. Promoted by the Dade County (Miami) Port Authority, backed by four major airlines, by the Federal Aviation Administration, by local boosters and land speculators, it threatens the very existence of that unique subtropical wildlife paradise, Everglades National Park. Thirty-nine square miles in extent, it will be big enough to contain the Los Angeles, San Francisco, Washington's Dulles, and New York's Kennedy airports with room to spare. The land has been condemned and work already begun on training runways at the intended location only six miles north of the park boundary. "A new city is going to rise up in the middle of Florida," said Alan C. Stewart, director of the Dade County Port Authority, recently. "You are going to have one whether you like it or not." If he is right, the impact on the surrounding country will be devastating. Local speculators will get rich; but Everglades National Park, which belongs to all the people will be doomed.

To understand the seriousness of the threat, one must be aware of the special conditions in southern Florida. Socially, politically, and geographically it is a region of extremes. Population is exploding; by the year 2000, Florida will probably be the third largest state in the union. Real estate development is booming; traffic by road and air is increasing at a fantastic rate. Pressures on the land and water are at a maximum; zoning for their protection at a minimum. The politicians and promoters (often indistinguishable) are everywhere calling the tune. The physical environment, on the other hand, is extraordinarily fragile and vulnerable to misuse. In short, the greatest alteration of the landscape anywhere in the United States is being imposed on the area perhaps least prepared to withstand it.

Where does the proposed jetport fit into this picture? Unfortunately, in dead center. Looking at the Florida peninsula as a finger extending into the sea, the vast expanse of Lake Okeechobee lies roughly at the final joint; the Everglades run south down the center of the peninsula from there to Cape Sable and Florida Bay. West and north lies the Big Cypress Swamp. To the east, like a long curving fingernail, extends the rim of rock that forms the Atlantic coastline, protecting the freshwater of the Everglades from the saltwater of the ocean. Here are concentrated the seaside resorts and burgeoning cities. Here, dominating all, is Miami.

As anyone knows who has visited or read

about Everglades National Park, the Everglades consist of a vast, shallow, slow-moving river: *Pa-hay-okee,* or "Grassy Water" as the Indians called it—reminding New Englanders of the Indian name of *Musketaquid,* or Grass-Ground River, for Henry Thoreau's beloved Concord. Freshwater moves south and southwestward from the region of Lake Okeechobee, reaching the boundary of the park some seventy miles to the south where U.S. 41, the Tamiami Trail, runs due west from Miami. When left to its own devices, the water flows under the highway and on through the park to empty eventually into the Gulf of Mexico. On this seasonal flow (southern Florida, through technically north of the Tropics, has the Tropical pattern of wet and dry seasons), the entire character and life of the park depends.

The fight for the use of this water, that is to say for the existence of the park, has recently received national publicity. Directly north of the Tamiami Trail lies Water Conservation Area 3-A, managed by the Central and Southern Florida Flood Control District and the U.S. Army Corps of Engineers. As the president of the National Parks Association pointed out, these conservation areas, like the park, "serve as a habitat for a teeming plant and animal life, subtropical in character, of immeasurable scientific, esthetic, ecologic, scenic, and human value, which can be found nowhere else in the United States."

During the severe drought of the early 1960's, the floodgates along the highway were closed; the local farmers got water for irrigation, while the park dried up. When Lake Okeechobee was full again, water desperately needed for the park was diverted directly to the sea. Endless negotiations with the Army Engineers and state authorities still have not resulted in a firm agreement to allow Everglades National Park its share of water. Even if an agreement is reached, the victory may be short-lived. Only six miles north of the park, in the southeast corner of the Big Cypress Swamp and bordering the Conservation Area, lies the projected site of the new jetport. Two of its runways will be six miles long, to accommodate the supersonic transports and other flying monsters of the future. A corridor to Miami, 50 miles long and perhaps a quarter of a mile wide, will bring fuel by pipeline, supplies by road and rail, and passengers in transit (estimated at 50 million per year) by some as yet undetermined speed device (lest they spend more time between city and airport than they spend jetting halfway around the world). Landings and takeoffs will eventually average one every 30 seconds around the clock.

To service this frenetic activity, and to make sure that some of the golden rain it will generate falls on southern Florida, developments of every sort will arise from the surrounding saw grass and cypress. Indeed they are being greedily anticipated and prices are skyrocketing; speculators are already organizing drainage districts to "improve" the land between the jetport and the park. "I'll make you a bet," said Alan Stewart last fall, "that five years from now the hotels will be there." He is delighted at the prospect. "Let's do something big enough for a change."

What will this mean, in terms of the region as a whole? "Slow death," says Park Superintendent John C. Raftery succinctly. "Portions of the park literally face ruination." It is shocking but true that there has been no coordinated attempt to determine scientifically the impact of the airport, much less the surrounding development, on the total environment. Yet one needs only a rudimentary knowledge of ecology to realize the consequences of such a concentration of men and machines on a vast man-made island in the heart of a swamp. Can an area of perhaps 150 square miles be drained for urban and industrial subdivision without affecting the quantity and quality of water flowing through the Everglades? Pollution is inevitable. How much and how deadly cannot be estimated, but enough is known to make one shudder. For example, on takeoff a jet plane discharges about a gallon of unburned fuel into the air: two gallons a minute, ten years from now, will rain down on the water and vegetation of the Conservation Area that lies just beyond the runway. Add to this all the chemical wastes associated with any large maintenance and servicing operation. Worst of all, visualize the effluent, domestic as well as industrial, produced by a city whose eventual population may reach over a million—along with the pesticides that will be used to keep down the mosquitoes, the herbicides that will be sprayed along the roadways, the fertilizers that will run off in Florida's torrential rains.

Nor can the results be confined to the neighborhood of the city. The entire environment "downstream"—which is to say all of central-southern Florida—will be subject to creeping death. It will not always be obvious to the casual visitor, since the little known forms of life at the base of the ecosystem—the algae, the plants, the insects—are the ones affected first; by the time the more spectacular birds and animals at the top of the pyramid begin to crash, it will be too late. This is not just horrid fantasy; serious effects have already been observed. Replacement of one type of algae by another is already taking place, and pesticide levels found in the tissue of fish taken from the park are already alarmingly high. Concerned with "the far-reaching effect on the entire environment of south Florida" of the jetport and satellite developments, state and federal conservation agencies and private conservation groups addressed over a hundred questions about environmental control to the Dade County Port Authority. The answers added up to a litany of evasion: "This is under study," "Cannot be answered at this time," "Study in progress at this time," "No study of this type has presently been started." "No such studies have been conducted . . ."

The slow poisoning of the air and the water may escape attention, but evolution has not yet produced a human being insensitive to the roar of jet engines, much less to a sonic boom. The Port Authority, aware of complaints from residents near the existing Miami International Airport, has the effrontery to designate Everglades National Park a "sound screen." "The park and Conservation Area 3 are sound barriers in that no human habitation in these areas is anticipated." Spokesmen for the aviation industry are even franker: "Favorable noise environment of the 39-square-mile site is indicated by large undeveloped areas, with Indian reservations, Everglades National Park, and state water conservation areas serving as buffers . . ." A training field already being built, and known to some airline officials as the "Green Corn Dance Airport" from the Indian ceremonies associated with the area, is expected to permit 24-hour training operations because of the "absence of neighbors to complain about the noise." Though the flight plan calls for planes to gain altitude (when they are at their noisiest) directly over the park, the Federal Aviation Administration's Miami area manager is not concerned. "Nobody will be close enough to complain—except, possibly, alligators." Except, possibly, the Indians who have lived there for generations, and the one million annual visitors to the park, whose chance for a wilderness experience will have gone forever.

Unlike other Port Authority officials, the director is brutally frank. If the wilderness and wildlife are to be protected, "the conservationists had better start saving up their pennies around the country and buy the land." As he well knows, the conservationists don't have that many pennies. Neither does the National Park Service, which ideally should have acquired the land at the time the park was established. The Port Authority's pennies, however, are safely invested. Another comment by Mr. Stewart is even more revealing: "If the airport doesn't develop the way we think it will, we'll have twenty square miles of real estate we can sell off. It will still be a good deal."

What then is to be done? Has ecological disaster again won the race against education? Not quite. The boosters and speculators are far in the lead, but they still face the hurdle of public opinion. If the people haven't raised their voices, it is because they haven't known what is at stake—or have been baffled into silence by a churned-up political scene as obscure to the outsider as a squirming alligator hole in the dry season.

The proposed jetport site lies at the juncture of Collier, Monroe, and Dade counties. Collier county has one city, Naples; most of the rest is cypress swamp, already spawning the worst type of "development," from poachers' shacks to colossal real estate ventures. Here Gulf American Corporation is "building new worlds for a better tomorrow" on a 100-square-mile tract christened "Golden Gate Estates." "The wilderness has been pushed aside," the promoters boast, 'with calipers and slide rules . . . draglines and dynamite rigs . . . we are literally changing the face of Florida." Monroe County, less fortunately blessed, consists only of the Florida Keys and a bit of land north of the park. This leaves Dade County—which is to say Miami—at the controls. Up to now the Dade County Port Authority has been flying high, but flying by the seat of its pants—without ecological studies, without even a master plan for the area. Through arrangement with the other counties, Dade will control the jetport area. For the rest it will take no responsibility, and neither will anyone else.

The land for the jetport has already been condemned, and construction begun on that training airport with a $500,000 grant from the Department of Transportation. From a low-flying plane it looks like a festering wound on the wilderness. As a biologist at the University of Miami pointed out, "the environment has already been drastically changed." "The engineers who are engaged in construction are not concerned with environment planning," states the Port Authority. The authority says it is "in negotiation with an entirely independent Overview Group to provide advice on preservation of the existing environment." Flight operations are scheduled to start long before these studies have been completed; they will, in fact, be post-mortems. Yet, by admission of the authority itself, sites for the training port have been under consideration since 1957. Even now, when planning consultants are finally being hired, their work is "limited only to the training port as part of the airport."

"Facts," wrote Winston Churchill, "are better than dreams." Not in Dade County they aren't. Shooting words are safer. Richard H. Judy, deputy director of the Port Authority (and formerly comptroller of the State Road Department), assures conservationists that their interests will be protected. He doesn't say how. By discussing the problem piecemeal with the various agencies involved—the Flood Control District, the Game and Fresh Water Fish Commission, the Federal Aviation Administration (no trouble there!), the State Board of Conservation, etc.—he has built up a fine file of letters of consent, each being concerned only with the "jurisdictional areas for which this agency is responsible." (Mr. Judy did slip up once when he apparently sponsored a highway to Miami straight through the holdings of the Flood Control District. This was too much. "I am extremely sorry," he wrote to its chairman, "that one of the suggested 1–75 corridors that runs through the middle of Conserva-

tion Area 3 was even located on the map which I used as an exhibit in my presentation to you." "Jurisdiction" is the key word here. Without some overall control, Mr. Judy's lullaby leads only to nightmares. "Dade County Port Authority has no responsibility or jurisdiction for off-airport areas . . . this will depend on controls by other appropriate agencies." What agencies? "If the affected agencies are involved in coordination with the Port Authority," wrote a representative of the Federal Bureau of Outdoor Recreation as late as last October, "they are quite unaware of it."

The Port Authority's objective is the economic development of southern Florida. In the deputy director's own words (alas for consistency) it is not confined to the airport area. In a letter to Arnold Ramos, district engineer of the Florida State Road Department on November 8, 1968, Judy urged "that we move with great speed" in planning the transportation corridor. (Secretary John A. Volpe's Department of Transportation has since made a grant of $200,000 for this purpose.) He goes on to say that "four of the world's major airlines are standing by to help implement the final engineering concepts . . . If we can establish this schedule we can promote new air industries to locate in Dade and Collier counties." Where but in "off-airport" areas, for which "we" have no responsibility? Meanwhile the Miami office of the Federal Aviation Administration, while doing lip service to "compatibility with park interests," cannot contain its enthusiasm. "The start of this airport is a great event for southern Florida. When you think of what New York, Chicago, New Orleans, or Los Angeles would give for such an opportunity . . ."

The local interests know what they want and they are determined to get it; the fate of a national park is not their concern. But where has the federal government been all this time—specifically, the Department of the Interior and its agency, the National Park Service? The Park Service has stated that the Port Authority's search for a jet training site first came to its attention "early in 1967" (ten years after the search, according to Mr. Judy, had begun), and that "subsequently, the plans were enlarged to include regular commercial operations, including SST's." Deeply involved in the apparently endless struggle to assure water for the Everglades, park officials were slow in recognizing the new menace to the jetport, and accepted at face value the assurances that park values would be protected. "Don't be concerned," was the line taken by the Port Authority, "we'll consult you before we pick a site."

The site was actually chosen for all practical purposes in the late fall of 1967, when Dade County got the right to acquire land in Collier County; there had been no approval from the National Park Service. On December 20, 1968, the superintendent of Everglades National Park wrote as follows to the director of the Port Authority (showing that the Park Service, like the rest of us, only knows what it reads in the papers): "A recent news column by Mr. Clark Ashe of the *Miami News* states that the Port Authority has demonstrated it has been clearing its moves wtih the Flood Control District, Everglades National Park, and other conservation-minded agencies for many months. I was aware of and pleased by the series of meetings initiated by your design firm to develop the problem areas resulting from the jetport development. The initial development at the jetport site is now proceeding rapidly, yet, to my knowledge, we have not been advised how the Authority proposes to resolve any of those matters of concern that evolved from the meetings. Since the jetport has the potential for a significant and perhaps disastrous effect on Everglades National Park, I am concerned that we have not been included in further planning or advised regarding your proposed solution to the very serious questions that have been raised."

Another tragic example of too little and too late? The layman who is accustomed to think of the United States Government as a fairly powerful protector of the nation's heritage gets quite a jolt when he reads the account of a meeting that took place on February 27, 1969 (high time!), in Miami between representatives of the Interior Department, the Central and Southern Florida Flood Control District, the Sierra Club, and the National Audubon Society to determine, among other things, what position the department should take at the public hearings the following day. It was decided that "strong arguments should be avoided" and that the presentation of "the facts concerning the federal government's interest and involvement would only show the weakness that the government has in achieving proper planning and control measures for the preservation of the Everglades area." Whatever the "weakness" of Interior's position (we shall come to this shortly), the shocking fact remains that no formal statement concerning the jetport had been made up to this time to the Dade County Port Authority by the U.S. Government.

Are the people of the United States powerless in the face of a determined local pressure group? Not, in this case, if the Secretaries of Transportation and Interior are willing to act. Section 4(f) of the Department of Transportation Act requires the Secretary of Transportation to cooperate and consult with the Secretary of the Interior in developing any transportation project. Furthermore "the Secretary [of Transportation] shall not approve any project or program that requires the use of any publicly owned land from a public park, recreation area, or wildlife and waterfowl refuge" unless there is no feasible and prudent alternative and unless such a program includes all possible planning to minimize harm to such a park. By the Port Authority's own admission, Everglades National Park is to be used as a climb-out area and as a sound buffer. The harm to the park is obvious. The state conservation and recreation area will also be used as a sound buffer, and for surface transportation to Miami. No one can claim with a straight face that there has been "all possible planning to minimize harm," either from intolerable noise or from pollution, or that all feasible and prudent alternatives have been explored.

On April 23rd (shortly after the president of the National Audubon Society had called four other major conservation organizations to a strategy session, where a nationwide coalition was planned to carry the fight straight to Washington) a meeting which represented "practically the entire conservation and environmental movement in the United States" addressed a letter to the Secretary of Transportation pointing out the damage that a jetport on the projected site would cause to the national park and state conservation area, and stating the belief that the Secretary "is in a position to settle this question" without need for any legislative action. Then in early June, Senator Henry M. Jackson of Washington, chairman of the Senate Committee on Interior and Insular Affairs, held hearings on what he termed a "classic case history of" the impact of modern technology on the environment. The purpose was "to review the process of federal decisionmaking which has contributed to the conflicting patterns of federal, state, and local land use which presently threatens the Everglades National Park"—and, by extension, to demonstrate the need for the legislation he has introduced to establish a national environmental policy.

Under questioning from the committee, there emerged an amazing pattern of confusion and frustration in high places: confusion because each branch of the government had been acting (or failing to act) independently; frustration because the federal government, lacking either an environmental policy or the police power for enforcement, finds itself at the mercy of state governments whose machinery is even more archaic, and who are therefore in turn thwarted by local authorities whose single goal is economic development, and who can proceed on their own as long as they can raise the money. It soon became clear that no high-level discussions had ever taken place between the Interior Department, the Department of Transportation, and the State of Florida before the jetport site was chosen; that the Port Authority and the Federal Aviation Administration had not even seriously attempted to bring state or federal conservation agencies into the making of the decision. Other sites with less of an ecological impact could have been, and still can be found. As an ultimate absurdity, one such site was rejected because the counties involved could not agree on the allocation of landing fees.

As now located, the Everglades jetport is an abortive offspring of the unholy wedlock of the booster and the engineer. It represents the same philosophy that allows industry to pollute air and water to the brink of disaster, agriculture to use poisons like DDT long after the hazards are known, the Army Engineers to dam rivers and dig canals with no concern for the total environment. The peak of such folly was almost achieved, not surprisingly, in the Everglades country, when the Corps of Engineers decided to "pull the plug" in Canal III to see whether the result would be as disastrous as ecologists claimed. Fortunately the latter were alert. A frantic weekend of calculations with a computer showed that the whole area would be covered with two feet of saltwater. The plug is still in place. But the philosophy endures: you are an alarmist until you can be proved dead. The Corps of Engineers, for example, while recognizing the enormous water requirements of a future city of a million people, does not want to "make an issue" of park water needs "until the situation gets tight." The Corps claims that it has no legal right to establish regulations to provide the park with water. The Department of the Interior disagrees. The Undersecretary, Russell E. Train, believes that regulations should be set up now; the plan of the Corps is "to invite growth, and then struggle with the results later."

The present priorities of the Corps and of the state are clear: people first, agriculture second, Everglades National Park third—if there is any water left over. "You can grow as long as you can steal water from the park," remarked Senator Gaylord Nelson of Wisconsin, pointing out that we are producing with federal money far more water than the park is asking for. "We don't have to sit here and be clobbered by the State of Florida." Turning specifically to the problem of the jetport, he concluded that we have only two alternatives. Either we stop it at the present site, "or we publicly admit that we are going to destroy the park." As a matter of fact, many state and local political leaders share his concern.

Can it be stopped? A "task force" has finally been appointed to make technical studies that should have been started long ago, before any site was selected. Ecologists are being asked for immediate answers to problems that take years to solve, while the promoters and engineers go blithely ahead, a procedure which has been well described as a "built-in system for errors." There is lots of time, says the Port Authority; we don't expect to start construction of the commercial jetport till 1975. Yet at this very moment they are completing the first training runway and are pressing for decisions on highway location that will lock in the commercial site beyond any hope of future change. The Department

of Transportation admits that transportation programs are on a collision course with environmental management. Interior promises to "do everything in its power" to stop the jetport if it is satisfied that either the training field or the commercial airport will destroy the park. On April 30, 1969, James L. Hamilton, special assistant to Secretary of the Interior Walter J. Hickel, wrote to Robert Wenkam, chairman of the Hawaii chapter of the Sierra Club: "As regards other Park System problems, I can only say that no single problem approaches in seriousness the threat posed to Everglades National Park by the proposed Miami jetport. We are in the process of arranging studies to determine what adverse effects will occur and what measures are realistically available to reduce these effects to tolerable levels. The studies may reveal, however, that the park and the jetport will not be compatible, in which case relocation of the proposed jetport will be the only solution. And as we face this problem, we must yet bear in mind that the ultimate solution of the park's water problem, while now in the offing, remains unobtained."

A meeting between Secretaries Hickel and Volpe took place, we are told, the day before the Jackson Committee hearings opened. The final decision may rest, after all, not with the Dade County Park Authority, but with the President of the United States and his Cabinet. The jetport issue "will be the first crunching test" (in Senator Nelson's words) of the President's newly appointed Environmental Quality Council. Moving it to another site "will cause one hell of an uproar, but it can be done."

It can. If we care enough, it will.

EXTENSION OF THE SURTAX

Mr. WILLIAMS of Delaware. Mr. President, last week the Senate rejected the administration's request for a 1-year extension of the surtax on the phased-out basis—6 months at 10 percent and 6 months at 5 percent—and also rejected the repeal of the 7-percent investment tax credit.

During and since the consideration of that tax measure considerable comments have been made and some misunderstanding has developed as to the highly irregular procedure followed toward obtaining a vote in the Senate. To keep the record straight the following is a brief chronology.

On June 30, 1969, the House passed H.R. 12290, which extended the surtax on a phased-out basis for a full year and repealed the investment tax credit retroactively effective April 18, 1969. The bill also contained two other sections—one extending the excise taxes on telephones and automobiles for an additional year, from January 1, 1970, through December 31, 1970, and the other section substantially reducing or eliminating the tax liability of those taxpayers in the lower brackets.

The Committee on Finance held 5 days of hearings on the measure as passed by the House. The hearings were held on July 8, 9, 11, 14, and 15.

On the last day of the hearings, July 15, the Democratic policy committee forwarded to the Committee on Finance a resolution which informed the Finance Committee of the terms under which the bill could be considered by the full Senate. The Finance Committee was advised that the Senate Democratic policy committee would permit consideration of the proposal to extend the income tax surcharge only with the understanding that it be considered simultaneously with their recommendations on tax reform and that during the interval it would only permit an extension of the income tax withholding rate for one quarter, or from June 30 to September 30.

I ask unanimous consent that at this point the resolution of the Democratic policy committee, as forwarded to the Finance Committee on July 15, be printed in the RECORD.

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

Whereas, the Senate Majority Policy Committee, having met and considered the matter of the extension of the income tax surcharge, hereby resolves:

That meaningful tax reform should be adopted as a means or achieving an equitable national income tax policy, and further resolves,

That any proposal to extend the income tax surcharge be considered simultaneously with recommendations on meaningful tax reform and further resolves,

That the present income tax withholding rates be continued after June 30, 1969 for a period of one quarter to permit full consideration and disposition of the reform and extension of the surtax.

Mr. WILLIAMS of Delaware. Mr. President, 2 days later, July 17, the Finance Committee met in executive session and by a vote of 9 to 8 rejected the right of the Democratic policy committee to dictate to it the amendments or bills that it could or could not report to the Senate. Instead, the committee ordered H.R. 12290 reported in exactly the same form in which it had passed the House.

Thus, on Friday, July 18, the bill H.R. 12290, was placed on the Senate Calendar and was ready for Senate consideration.

On July 23 the Democratic policy committee meeting again in executive session, delivered to the chairman of the Finance Committee the terms of an agreement which it insisted must be entered into prior to any Senate consideration being given to the approval or disapproval of the tax bill.

In the letter, the chairman of the committee was advised that the Democratic policy committee had decided that no consideration would be given to any sections of H.R. 12290 except the proposal to extend the surtax, but this time they would agree to extend the surtax—not simply the withholding authority—for 4 months, or until October 31.

I ask unanimous consent that the letter of instructions from the Democratic policy committee, as forwarded to the chairman of the Finance Committee, be printed in the RECORD.

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

U.S. SENATE,
DEMOCRATIC POLICY COMMITTEE,
July 23, 1969.

HON. RUSSELL B. LONG,
Chairman, Finance Committee, U.S. Senate, Washington, D.C.

DEAR RUSSELL: On July 22, the Majority Policy Committee met and considered further the floor scheduling of legislation on the surtax extension and tax reform. In doing so the Committee was responding both to your earlier efforts to resolve this difficulty and also to the Administration's views as advanced at the recent White House meeting.

The Committee is persuaded that a permanent extension of the surtax must remain wedded to tax reform, not only in words but in scheduling procedures lest there be a continuance of the burden of the surtax on wage-earners and salaried employees without a bona fide opportunity to bring about in legislation, corrections in the inequities of the present tax structure.

The Committee is appreciative of the Administration's desire to provide prompt reassurance to the business community and to foreign governments with respect to the surtax. By unanimous vote, therefore, it was resolved that I bring to the attention of the Finance Committee and the Administration certain suggestions. If acceptable on all sides, the Committee would consider communicating these suggestions to the Senate as the position of the Policy Committee.

(1) If the Finance Committee reports out on the vehicle of any minor House bill now in Committee, an extension of the surtax (not simply the withholding authority) until October 31, the Senate willing, the bill would be brought up for consideration without delay. It would be understood that this bill as it comes from Committee would carry nothing else except the surtax extension. If promptly passed in that form by the Senate and approved by the House, the measure would provide assurance of a continuance of the surtax until October 31.

(2) When the promised tax reform bill arrives at the Senate from the House, it would be stopped at the door and referred to the Committee on Finance by the Senate with instructions to report back with or without amendment by no later than October 15.

(3) Consideration of the continuance of the surtax beyond October 31 could then be considered in juxtaposition to the tax reform bill which the Finance Committee will have reported by instruction of the Senate no later than October 15.

The Policy Committee will be glad to have any reactions from the Finance Committee to this suggestion as to possible procedures for scheduling. In any event please be assured, Russell, of my personal appreciation and the appreciation of the Policy Committee for your efforts to bring about reforms in the tax structure in tandem with surtax extension.

With best personal wishes, I am
Sincerely yours,

MIKE MANSFIELD.

Mr. WILLIAMS of Delaware. Mr. President, a day or so later, apparently after a series of meetings between the Democratic policy committee and the Democratic members of the Finance Committee, a further proposal was made.

This time the Democratic policy committee's proposal provided for an extension of the surtax for 5 months, or until November 30, 1969, and was coupled with the promise of the Democratic members of the Finance Committee that they would report the tax reform package to the full Senate no later than October 31, 1969. This agreement was contingent upon advance Senate agreement to consider only the extension of the surtax on a 5-month basis, and it was emphasized that before this measure would be brought before the Senate the Democratic policy committee must have complete assurance that no additional amendments dealing with the extension of the surtax for the full year or for the repeal of the investment credit would be offered or attached thereto.

I ask unanimous consent that the July

24 memorandum of instructions by the Democratic policy committee to the chairman of the Finance Committee be printed in the RECORD.

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

The Democratic Policy Committee and the Democratic members of the Finance Committee have agreed upon the following understanding:

1. Support an extension of the surtax until November 30, 1969. This will be accomplished by attaching this temporary extension to a separate House-passed bill. The House-passed surtax extension, containing the investment credit repeal, the extension of the excise taxes and the change of the standard deduction will remain on the Senate Calendar until the tax reform bill is reported by the Senate Finance Committee.

2. The Chairman of the Finance Committee and the Democratic members of that Committee have given their assurance that the tax reform package will be reported to the full Senate not later than October 31, 1969.

3. The Democratice Policy Committee has endorsed the position of the Finance Committee that the date of the investment tax credit repeal will be identical to that date in the House-passed bill (April 18, 1969). The endorsement was at the specific request of the Democratic Finance Committee members to assure all that the investment credit repeal is endorsed and the date is specified as contained in the bill on the Senate Calendar.

Pursuit of this understanding in the Senate is contingent upon its acceptance by the Administration and the Republican leadership which has been pressing in the Finance Committee and on the Senate floor for the extension of the surtax. May I say that many of the members present today went along with this understanding notwithstanding grave reservations about the usefulness of the continuance of the surtax as an anti-inflationary measure. The approach is offered as an accommodation to the Administration. If it is not acceptable, the Majority Policy Committee is compelled to stand on its previous resolution.

Mr. WILLIAMS of Delaware. Mr. President, it should be pointed out that at no point during any of the negotiations between the Democratic members of the Finance Committee and the members of the Democratic policy committee were the minority members being consulted; however, these instructions were being relayed to the chairman of the Finance Committee, and sometime later became known to the minority members of the committee and the administration. The minority members of the committee made it clear that we would not be a part of any such prearranged agreement but that we would insist upon the right of the full Senate to consider and vote as to whether or not the surtax was to be extended for a limited period or for the full year, and that at the same time the Senate must have the right to vote upon the question of repeal of the investment tax credit.

On July 30 the House of Representatives, recognizing the apparent deadlock in the Senate, reported and passed H.R. 13080, the purpose of which was to provide a further 15-day extension of the withholding rates.

The day before, on July 29, the Democratic policy committee had met again with the Democratic members of the Finance Committee and released a statement to the effect that they had agreed that they would: First, reject the 15-day extension of the withholding rates; and second, renew the previous offer to support an extension of the surtax until November 30, 1969, with an understanding, with the Democratic members of the Finance Committee, that the major tax reform measure would be reported to the Senate by October 31. This offer to extend for 5 months the surtax was contingent, however, upon an agreement by the administration and the minority members of the Finance Committee that no amendments to the tax bill would be considered after it had been brought before the Senate other than the one proposal; namely, the 5-month extension of the surtax.

I ask unanimous consent that the memorandum released by the Democratic policy committee, dated July 29, 1969, be printed at this point in the RECORD.

There being no objection, the letter and memorandum were ordered to be printed in the RECORD, as follows:

U.S. SENATE, OFFICE OF THE MAJORITY LEADER,
Washington, D.C., July 29, 1969.

Hon. EVERETT M. DIRKSEN,
Minority Leader,
U.S. Senate,
Washington, D.C.

DEAR EV: In an attempt to carry out my promise at our meeting this morning in the Vice President's office, I am sending this statement to you, the Vice President, and Senator Williams so that, if you desire, you can discuss it with your colleagues.

I have been instructed by the Policy-Finance Committee to make a public statement on this situation today. I will not do so, however, until you have completed your discussion and are on the floor.

With best personal wishes, I am.

Sincerely yours,

MIKE MANSFIELD.

STATEMENT OF SENATOR MIKE MANSFIELD

The Democratic Policy Committee met with the Democratic members of the Finance Committee today. The joint membership agreed unanimously that a further 15-day extension of the withholding rates would not meet the problem of surtax-extension. Rather it would serve only to postpone a decision and create an unnecessary pall of uncertainty.

The group agreed further that the previous offer to the minority to support an extension of the surtax until November 30, 1969 on a separate House-passed bill—with the understanding that the general tax reform measure would be reported by October 31—should be renewed as offering the best prospect of passing a surtax-extension and still meeting the public demand for the removal of the inequities in the present tax structure.

The Democratic Policy Committee-Finance Committee group agreed unanimously to renew the effort to secure a five-months extension of the surtax provided, of course, that the approach receives the accord of the Administration and the minority leadership. This endorsement seems necessary to preclude the offering of extraneous amendments to the House-passed bill which would be used as a vehicle for effecting the extension of the surtax until November 30.

If the Administration and the Minority Leadership give the word on the acceptability of the compromise, the Leadership is prepared to move without delay—it is prepared to move today—in an effort to bring the surtax extension before the Senate for prompt disposition. I would hope for the assistance of the distinguished Minority Leader and the ranking Republican member of the Finance Committee on this urgent and difficult matter.

The House-passed bill, H.R. 9951, which is on the calendar would provide the vehicle. The controversial amendment in this bill dealing with foundations would be removed—as per the earlier offer of Senator Williams—since this matter is being considered in the general tax reform package. The extension of the surtax—and nothing more—would be offered as a substitute for that committee amendment.

Without clearance all round, it is difficult to say how an extension of the surtax can be brought about at this time.

Mr. WILLIAMS of Delaware. Mr. President, this offer was likewise rejected by the minority members of the committee on the basis that: First, to enter into any such advance agreement would be denying the Senate its historical right to make its own decision as to whether it would or would not approve a bill as reported by the committee; and second, many of us were of the firm opinion that the failure of Congress to make a prompt decision as to whether it would or would not extend the excise taxes and if so at what rates and for what period, and whether it would or would not repeal the investment tax credit and if so the effective date of such action, and to what extent if any certain industries would be exempt, was creating an unnecessary disturbance in the financial communities both at home and abroad.

This unwarranted delay by Congress in making its final decision on these top measures was adding fuel to the fires of inflation, and we feared that unless the decisions were made promptly this period of indecision could precipitate a recession. For this reason many of us insisted that we would enter into no agreement that did not provide for the Senate an opportunity to vote on the question of the full-year's extension and also to vote as to whether or not Congress wanted to repeal the investment tax credit.

Finally, on July 30, an agreement was reached with the majority leader wherein the Senate on the following day, July 31, was to be given the opportunity to work its will and vote on both the question of the extension of the surtax and the question of repealing the investment tax credit.

At this point I ask unanimous consent that the consent agreement as entered into on that date be printed at this point in the RECORD.

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

UNANIMOUS-CONSENT AGREEMENT

Mr. MANSFIELD. Mr. President, I send to the desk a unanimous-consent request and ask for its immediate consideration.

The ACTING PRESIDENT pro tempore. The unanimous-consent request will be stated.

The bill clerk read as follows:

"*Ordered,* That, effective immediately H.R. 9951 be made the pending business and that during its further consideration, debate on any amendment, motion, or appeal, except a motion to lay on the table, shall be limited to one hour, to be equally divided and controlled by the mover of any such amendment or motion and the Chairman of the Com-

mittee: *Provided*, That in the event the Chairman is in favor of any such amendment or motion, the time in opposition thereto shall be controlled by the minority leader or some Senator designated by him: *Provided further*, That no amendment that is not germane to the provisions of any amendment dealing exclusively with the extension of the surtax or the repeal of the investment tax credit shall be received.

"*Ordered further*, That on the question of the final passage of the said bill debate shall be limited to two hours, to be equally divided and controlled, respectively, by the majority and minority leaders: *Provided*, That the said leaders, or either of them, may, from the time under their control on the passage of the said bill, allot additional time to any Senator during the consideration of any amendment, motion, or appeal."

Mr. WILLIAMS of Delaware. Mr. President, Friday, July 31, on a rollcall vote of 51 to 48, the Senate approved the 6 months rather than accept the full-year extension as recommended by the administration and as had previously been agreed upon by both the House of Representatives and a majority of the Finance Committee.

The Senate likewise, on the same day, by a rollcall vote of 66 to 34, rejected the amendment which would have repealed the investment tax credit.

The Senate had at last had an opportunity to vote on both the question of the extension of the surtax and the repeal of the investment tax credit and I accept its decision; however, in my opinion Congress has made a mistake in only acting on a temporary basis. The investment tax credit, which represents a $3 billion annual subsidy for industrial plant expansion, in a period of high employment and runaway inflation cannot be justified, and likewise failure to extend the surtax for the full year and thereby remove this continued uncertainty is inflationary and will only result in continued uncertainty and speculation as to what action Congress may ultimately take.

With interest rates at the highest level in the history of our country and with our Government now operating at a deficit averaging over $600 million per month the time is long past when Congress can postpone these hard decisions. Congress should take more affirmative steps both toward controlling Government expenditures and in providing sufficient revenue to restore some degree of sanity to our financial picture.

The extension of the surcharge for 6 months was but a faltering step in the right direction, and I regret that the Congress did not face up to its responsibility and make a real effort to check this inflation.

Nothing is to be gained by a further discussion of the unusual if not highly arbitrary procedure that prevailed before getting this tax bill to a Senate vote, but I will add that I hope that never again will the political arm of either political party try to dictate how a Senate committee or the U.S. Senate must vote on any bill as a condition to having a bill considered.

As evidence that others considered the Senate's action inadequate at this time of inflationary psychology, I ask unanimous consent that a series of editorials appearing in the August 1 issues of the Evening Star and the Daily News of Washington, D.C., the Evening Journal of Wilmington, Del., also of August 1, and the August 4 issue of the Wall Street Journal, all commenting upon this proposal, be printed at this point in the RECORD.

There being no objection, the items were ordered to be printed in the RECORD, as follows:

[From the Washington (D.C.) Evening Star, Aug. 1, 1969]

HALF A LOAF

The outcome yesterday on the surtax was very much the product of the Senate's Democratic majority under Mike Mansfield's leadership. In line with their continued insistence on delaying a full-year extension of the surtax until passage of a tax reform package is assured, the Democrats defeated an amendment to extend the surtax for a full year. They reversed field, however, and voted through a six-month extension of the surtax in a transparent effort to avoid being saddled with the blame for letting the surtax go off the books altogether.

How is one to view this half a loaf of surtax now with the implied promise of the rest later if tax reform is approved this session? Obviously, as the saying goes, half a loaf is better than none. This surely is so, for the lapse of the surtax would probably doom the administration's efforts to curb inflation as well as raise serious doubts about the stability of the dollar in the world's money markets.

On the other hand, the uncertainty engendered about the chances for a full year of the surtax is bound to feed the prevailing inflationary psychology of buy and borrow now because it may cost more later on. And this at a time when the economy is truly in perilous straits; real economic growth has slowed markedly but prices continue their inexorable rise. Without doubt, we are skating on the edge of a bust, with its predictably high social costs in out-of-work teen-agers and blacks.

Perhaps by the first of the year, the inflationary steam will bit by bit have gone out of the economy. The point is, however, that there is on present form absolutely no assurance whatsoever of such a slowdown. Make no mistake about it, by failing to act now to extend the surtax for a full year, we are running a dangerous risk with the future of the economy. It should be clearly understood, moreover, that this is a risk which the Senate's Democratic leadership is forcing upon the nation.

What's more, there is a paradox in the Democrats' holding out for tax reform as the price of a full-year extension of the surtax that also should be clearly understood by all. It is not the Nixon administration that is dragging its feet on tax reform. The administration, after all, has sent its tax reform proposals to the Hill and is on record as favoring tax reform on general principle.

Rather, the fate of tax reform rests ultimately with the Democrats who control both houses of Congress. So if anyone is to blame for not moving faster on tax reform, it is the Democrats themselves. Moreover, the plain fact of their ultimate responsibility in this matter is evidenced by the deal between Majority Leader Mansfield and Russell Long, Democratic chairman of the Senate tax-writing committee, which paved the way for yesterday's vote on the surtax.

The grand strategy of the Democrats in tying a full-year extension of the surtax to tax reform doubtless has a certain high liberal tone to it, but it could backfire badly. While it is still not too late, Mansfield and company should pause and reconsider what harm they may inflict upon the country, not to mention damage to the Democratic party in the 1970 elections.

[From the Washington (D.C.) Daily News, Aug. 1, 1969]

RECKLESS POLITICS IN THE SENATE

It was a last-minute "compromise" and it smelled of third-rate politics and a complete lack of responsible understanding of the government's financial plight and the inroads of inflation.

The Senate, voted to extend the surcharge on the income tax for only six months. (The keyvote was only 51 to 48.)

In doing this, the Senate ignored the rest of the tax bill already passed by the House. Left out of the Senate's measure is repeal of the seven per cent investment tax credit plan, which is highly inflationary in these times. And left out were extensions of the auto and phone taxes.

So as it stands, the government faces the loss of $5 billion or $6 billion in revenue. Which is enough to wipe out the surplus President Nixon had planned for this fiscal year.

Sen. Mansfield, the Democratic leader, indicates these other tax issues can be brought up in the Senate later. But in the light of the senator's recent zigs and zags, who knows?

Anyway, this is a preposterous way of doing business.

Taxes are paid by the people and the businesses of the country. And they are entitled to reasonable notice of what is expected of them. The surtax expired June 30, and a month later the Senate voted to extend it, retroactively, for six months; leaving until later in the year the question of another six-month extension.

The auto and phone taxes expired June 30, and it would be hard to say what the Senate may do with them now.

The investment tax credit law was enacted when President Kennedy was trying to "get the country moving." It gives any business a tax deduction for spending money on capital improvements.

But huge expenditures for capital improvements are exactly what the government has been trying to discourage, because they fuel inflation. And they help boost interest rates, which many of the same Senate Democrats have been wailing about.

Moreover, Sen. Mansfield and his fellow Democrats ignored a plan in the House-passed bill which would have relieved some 12 million of the nation's poorest taxpayers of paying anything at all. They are the same Democrats who have been clamoring for "tax reform."

The only possible explanation of this blundering conduct by the Senate Democrats is that, with a Republican in the White House, they think they are playing cute politics. But we see nothing cute about jeopardizing the Federal budget, or adding more push to inflation, or repudiating a tax reform the Democrats long have been demanding.

The House next week will try to salvage something from the mess. But the performance of the Democratic Senate, in short, is stupid.

[From the Wilmington (Del.) Evening Journal, Aug. 1, 1969]

SURPRISE, THE SURTAX LIVES

The Senate consideration of the surtax extension was as excitingly uncertain as the rescue of Pauline from any of the perils Hollywood contrived for her. Pauline was invariably rescued in the nick of time, even though she wasn't safe forever. The Senate voted to extend the surtax only hours before it was due to expire but that extension won't last forever; it won't even last the 12 months President Nixon insisted it should.

As a result of the prolonged struggle over

the surtax, the extension approved by the Senate would be at the current 10-percent rate for six months. That was the price demanded by Senate Democrats, led by Sen. Mike Mansfield, D-Mont., for the extension. Any more, they insisted, would leave them with no leverage to bring about necessary tax reforms.

Their position still seems unnecessary and it ignores some immediate reforms that were included in the House version of the surtax extension. Not only did the House provide for a one-year renewal of the surtax, six months at 10 percent and the remaining six at 5 percent, but its version included repeal of the 7-percent investment tax credit and reduction or elimination of income taxes for millions of the nation's lower income citizens.

The same House Ways and Means Committee that reported that measure to the floor yesterday approved the promised tax reform bill. The committee chairman is Rep. Wilbur D. Mills of Arkansas, a Democrat like the senators who insisted they need a bargaining counter for tax reform.

There never has been any genuine doubt that the Administration, which has proposed some significant tax reforms, and m- ibers of Congress were serious about pledges to act on the issue. How necessary additional muscle is to the Democrats is indicated by the fact that they have agreed now to a simple six-month extension when only days ago Sen. Mansfield rejected any extension unless tax reforms were available for consideration too.

The issue of the surtax had been debated originally before its passage last year. Aside from the question of the need for an extension there was no reason to delay a vote, certainly not for the time that tax reform debate deserves and should get.

Despite the differences between the House and Senate-passed extensions, the question at least has been answered before the withholding procedure had to be interrupted and then re-established. What everyone knew was going to be necessary has been done but was all the excitement necessary?

AN UNSEEMLY SPECTACLE

Congress and the Administration are expected to tie up the loose ends on the surtax extension today, but even barring further mishaps their handling of the issue has been an unseemly spectacle. Obviously they have not begun to work out the problems of running the nation while one political party controls the White House and the other holds Capitol Hill.

As matters now stand, the surtax argument will be resolved by an uneasy compromise. The Administration will not get the full 12-month extension it sought, but neither will the Senate Democrats succeed in passing tax reform before the surtax is extended. The ironic thing is that leaders in both parties professed to support both measures. Their differences about which should be passed first arose over who gets credit or blame for what, and the argument had all the grace of a spat between two secretaries over who will put her party on the telephone first.

In some ultimate sense, we suppose, the greater responsibility for this lies with the Administration. For better or worse, the Executive Branch is today expected to furnish national leadership, giving form and direction to national policy and selling its ideas to Congress and the people. When its proposals do not pass, it has not met this expectation. Evidently Administrtaion nose-counters were belated in realizing their political difficulties. When the difficulties became apparent to all, the Administration seemed unwilling to compromise with the Senate Democrats, but unwilling to fight them vigorously either.

In an immediate sense, though, the surtax hassle was mostly the handiwork of the Senate Democratic leadership. A line of too-clever partisanship ran through its maneuvers. It seemed for a time the Democrats could have it both ways. If the surtax failed, the Democratic Congress would get credit for cutting taxes. And if inflation then continued, the Republican Administration would inevitably tend to get the blame for not doing anything much about it. Or if the Administration retained its budget control by slashing expenses severely (which strikes us as not a bad idea), the Democrats could make electoral hay over Republican "insensitivity" to this and that.

Tax reform, meanwhile, loomed as a political plus for anyone who could claim credit for it. Since the Administration had announced that inflation control was its number-one priority, it obviously would resist any attempt to subordinate the surtax to anything else. So using the extension as hostage for tax reform was a neat gambit to pit the Republicans against tax reform, to claim for the Democrats any political credit for it.

The obvious Republican counterplot would have been to blame any economic difficulties on the Democrats' refusal to cooperate with the President. Thus the situation came very near to one where both parties were willing to see the nation suffer so they could blame the ills on their partisan opponents. Not until the last moment did both sides start to recognize that partisan effects would cut both ways, and that partisanship should not be allowed to get too far out of control. Then they framed a compromise which, whatever its substantive merits, at least got both sides off the hook.

Well, politicians will be politicians. In the long run, indeed, partisan interplay does make for sounder public policy. But in the short run, a partisan split between the President and Congress raises the danger that the nation will be cut loose to drift amid partisan maneuvering. Even if no further disagreement breaks out on the surtax, the wrangle will stand as a warning of this danger.

As the Eisenhower years demonstrated, it's altogether possible to achieve the necessary cooperation between a President of one party and a Congress controlled by the other. But in such circumstances, constructive government does require a certain suppression of partisan urges, and a certain determination to work out the problems that inevitably arise.

These qualities have been conspicuous by their absence in the surtax episode, and unless both the White House and the Senate draw the appropriate lessons, this spectacle may be only a taste of others to come.

WILLIAM PROXMIRE: TRIBUTE WELL DESERVED

Mr. CHURCH. Mr. President, the most recent edition of Parade magazine, included in the Washington Post for August 3, contains a feature article on the efforts of the distinguished Senator from Wisconsin (Mr. PROXMIRE) to repair and restructure our national priorities.

The article states of Senator PROXMIRE:

He knows that since the end of World War II we have spent one trillion, five hundred billion dollars on defense needs. And the demand for more military programs of every type continues to mount. But still our cities fester. Our air is fouled. Our water is polluted. Our minorities riot. Many of our people go hungry. Our children clamor for educational reforms. Our old people ask for just a little better life.

The article continues:

Proxmire realizes that it costs more and more money to run the nation. But he believes the budgetary pie must be sliced differently, "that the federal government is spending too much money on military programs," and that "any analysis of national priorities must look to that budget first."

He puts the question: "How can we balance our military needs and expenditures with our domestic problems and needs?"

This is perhaps the most pertinent question of the day. It is a question that can no longer be ignored or shunted aside. We are, indeed, in need of a thorough reexamination of our national priorities.

I commend this article to every Senator and ask unanimous consent that it be printed in the RECORD.

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

GUNS OR BUTTER? WHICH COMES FIRST? SENATOR PROXMIRE SEEKS TO REVERSE NATION'S PRIORITIES

(By Derek Norcross)

WASHINGTON, D.C.—Sen. William Proxmire, at 53 a trim balding Democrat from Wisconsin, has a strong sense of priorities, both personal and national.

Each weekday he snaps out of bed at 6:30, performs a half hour of brisk calisthenics. He downs a high-protein breakfast, kisses Ellen, his equally trim wife, goodbye. Then, clad in shorts, he jogs to his office at the Capital—a four-mile run.

One of Washington's early-morning tourist attractions, Proxmire completes the stint in 35 minutes. He showers in the Senate gym, changes into a single-breasted tropical, slides onto his desk chair. By 8 a.m. he is refreshed and ready for a hard day's work.

Proxmire's prime concern is with the priorities of the nation. Like many men, in and out of government, he wonders and worries whether we have become "a militaristic nation . . . a militaristic society . . . a national security state."

He knows that since the end of World War II we have spent one trillion, five hundred billion dollars on defense needs. And the demand for more military programs of every type continues to mount. But still our cities fester. Our air is fouled. Our water is polluted. Our minorities riot. Many of our people go hungry. Our children clamor for educational reforms. Our old people ask for just a little better life.

IT'S ONLY MONEY

Proxmire realizes that it costs more and more money to run the nation. But he believes the budgetary pie must be sliced differently, "that the federal government is spending too much money on military programs [approximately $80 billion this year—about half the federal budget]" and that "any analysis of national priorities must look to that budget first."

He puts the question: "How can we balance our military needs and expenditures with our domestic problems and needs?"

Few men in the U.S. Senate or elsewhere are as well qualified as Bill Proxmire to conduct an inquiry into the basic economic orientation of this country.

The son of an Illinois doctor, Proxmire was educated at Hill, a prep school in Pottstown, Pa., was graduated from Yale, was awarded two Master's degrees at Harvard, one in public administration, the other in business administration.

FROM WALL STREET TO SENATE

He worked for J. P. Morgan & Co. on Wall Street and volunteered for the Army nine

months before Pearl Harbor. After four years in the Counter-Intelligence Corps and postwar graduate work in economics, he moved to Wisconsin. There, he worked as a reporter on the *Madison Capital Times* and entered politics. Having married a Rockefeller heiress, he found himself socially and financially secure. But the alliance did not help him politically. He ran for Governor of Wisconsin three times, and three times lost.

In 1957, however, he was the best-known Democrat in the State. When Wisconsin's controversial Senator, Joe McCarthy, died, Proxmire won the special election to fill McCarthy's seat.

Shortly before this victory, Proxmire, by then divorced, met and married Ellen Hodges Sawall, executive secretary of the Wisconsin Democratic Party. She, too, had been previously married. Her first husband was Warren Sawall, now a public relations man for Wisconsin's other Senator, Gaylord Nelson.

AUTHOR, BUSINESSWOMAN

At 46, Ellen Proxmire—she was voted the most beautiful girl in her 1942 class at Woodrow Wilson High School in Washington, D.C.—knows a good deal about budgets, economics, and priorities. Two years ago she and a pair of other Washington wives, Mrs. Raymond Poston and Mrs. Thomas Boggs, daughter-in-law of Louisiana Congressman Hale Boggs, organized Wonderful Weddings Inc., which stages complete weddings so that parents of the bride can enjoy the festivities, too. "Last year," reports Mrs. Proxmire, "we ran at a loss. But this year we'll be in the black."

Ellen Proxmire is also the author of a successful book, *One Foot in Washington*, in which she describes the life of a Senator's wife. Politically hip, she knows and appreciates that as chairman of the Subcommittee on Government Economy, her husband in the past few months has become one of the most publicized members of the U.S. Senate. Also one of the most shrewd, studious, industrious, and intelligent members in that sometimes illustrious body.

After more than 11 years in the Senate, nine of which he spent as a sort of institutional maverick fighting valiantly for seemingly hopeless causes, Bill Proxmire knows how to handle himself in clinch and crunch. He does his homework and tries to be scrupulously fair. For example, when he invited witnesses to testify on military spending at his Government Economy hearings, he not only called a proper mixture of hawks and doves—such highly qualified big names as Harvard professor John Kenneth Galbraith, Senators Barry Goldwater and William Fulbright, labor leader Walter Reuther and former Secretary of State Dean Acheson—he also invited the chief executives of five of the nation's leading defense contractors: Lockheed, Boeing, General Dynamics, North American Rockwell, and Litton Industries.

OUTSIDE OUR PROVINCE

The executives, some of whom serve as trustees for our most distinguished universities, refused to appear at the Proxmire hearings. Questions concerning overcharging the government, negligence, and downright incompetency were described by them as "outside our province."

Their refusal angered much of the nation. "How in all good conscience," Proxmire asked, "can these men who are so intimately involved in the decisions which affect our national security and our $80 billion military budget, be so sanctimonious and uncooperative?"

Even without the cooperation of the defense executives, Proxmire proceeded to extract testimony which revealed all too clearly shocking deficiencies in the entire defense spending program. A few cases in point:

1. The Air Force ordered the C–5A, world's largest cargo plane from Lockheed at a cost of $3.4 billion for 120 planes. Not only did the cost soar by about $2 billion, but the Air Force was reluctant to admit it to Congress.

2. The Defense Department ordered deep-diving rescue submarines for the Navy at $30 million each. The cost is now $80 million each. And the subs may be unnecessary to boot.

3. Minuteman II missiles, ordered at $3 billion, cost $7 billion.

Proxmire believes: "Defense spending is out of control. The system is top-heavy. The military-industrial complex writes its own budgetary ticket . . . after World War II, we over-reacted with respect to contracts for weapons systems. Nothing was too good for the military . . . the military has had a blank check. It could be said that we have had over two decades of *carte blanche* for defense."

The Senator wants control of "the blank check" restored to a more inquiring, careful, scrutinizing Congress.

He does not blame the military for the immense size of the defense budget. He sees no conspiracy between collusive forces. He knows that it was the nations civilian policymakers who were paramount in setting national priorities which grant billions to defense and thousands to domestic needs.

It was a preacher's son from Wall Street, John Foster Dulles, who spent much of his time building military alliances with more than 40 nations. It was an investment banker, James Forrestal, the first Defense Secretary, who created the National Security Industrial Association to insure defense contractors a close relationship with the government. And it was Robert McNamara of the Ford Company, the so-called "business schools' idea of God," who used advanced systems development techniques to concentrate great power in the office of the Secretary of Defense. It was the no-nonsense McNamara who centralized the operations of the Pentagon, an institution which has more than $200 billion in assets including real estate holdings almost the size of New York State. This year the Pentagon will spend $21 billion in procurement, displaying an economic potency that makes General Motors look like small potatoes.

INEFFICIENCY PAYS

What most Americans do not realize but what Senator Proxmire does is that 90 percent of all defense industry contracts are negotiated with the government, and not won by competitive bidding. The government also provides free to defense firms more than $15 billion worth of government property, including land, buildings, and equipment facilities for private production. According to Richard Stubblings, an examiner for the Budget Bureau, the highest profits sometimes accrue to the most inefficient companies.

Supposedly the Bureau of the Budget is responsible for scrutinizing government spending. But only 50 of the 500 persons in the Bureau are assigned to check defense spending. "I think it is fair to say, therefore," Proxmire declares, "that the Budget Bureau makes no adequate review of the military budget."

THE PRICE OF VIGILANCE

Worse yet, when employees inside the Defense Department try to expose waste they have been ignored or chastised. Take the case of A. E. Fitzgerald, a deputy for management systems in the office of the Assistant Secretary of the Air Force. Fitzgerald revealed at a Proxmire hearing that the cost-overruns on the Lockheed C–5A cargo plane were staggering. The Air Force thereupon rewarded his vigilance by assigning him to check bowling alleys in Thailand.

"Here was a man," an indignant Proxmire points out, "who testified at our request. He testified with the permission of the Air Force. He was right. There is a $2 billion cost-overrun on the C–5A aircraft. But because of what he said, the department tried to fire him. His duties were circumscribed. They treated him as if he had typhus or was radioactive."

What bugs Proxmire and many other legislators is that the American people are devoting more of their resources to defense needs than is spent by all agencies of the federal, state, and local governments on health and hospitals, education, old age and retirement benefits, public assistance and relief, housing and community development and agriculture.

After all this Gargantuan spending is the nation more secure? Is it possible in this nuclear age to buy our way to safety?

Says one Defense Department official who prefers to remain nameless lest he be sent to Greenland to roll Red Cross bandages: "We can destroy the Russians tenfold and they can destroy us. No one is really safe any longer. Our only defense is peace."

INFLATION CAUSES

Senator Proxmire is fearful that in the pursuit of national security, the country may very well be depleting itself. "The bloated military budget and the excessive prices paid in military procurement . . . are the single biggest causes of the present inflation. We should cut wasteful defense spending to stop inflation instead of relying upon sky-high increases in interest rates which squeeze funds out of the home buyer, small businessman and farmer."

Recognizing the problem, President Nixon a few weeks ago named a blue ribbon panel to study the Defense Department. Subsequently, *The Wall Street Journal*, in an editorial headed "No Whitewash Wanted," commented:

". . . It is responsibly asserted that $10 billion or more a year could be cut from the military budget without impairing national security. Costly mistakes have been made in planning, execution and contracting."

What, if anything, can be done to reverse American priorities? Says Proxmire: "Congress must do a far better job in scrutinizing and appraising the military budget and procurement contractor practices." Sen. Stuart Symington believes the U.S. must re-think its worldwide commitments and stop being the world's policeman. A recent Congressional conference on national priorities suggested that Congress set up a defense review office to examine military budget requests and that another committee draw up a list of domestic priorities to be checked against a list of military priorities.

Citizens in their own communities can also play a vital role by organizing their own priority committees and asking their Congressmen a list of pertinent questions.

Just for starters, Proxmire suggests the following:

(A) Do we really need a new nuclear task force at a cost of $1.8 billion when carriers are sitting ducks for missiles or modern submarines?

(B) In an age of sophisticated missiles, do we need a new manned bomber to be delivered a decade from now at a cost of $12 billion or more?

(C) Are we really strengthened when there are ten supply troops for every man in a combat unit?

(D) Do we really need more than 400 military and naval overseas bases?

(E) Is this country strengthened when our military aid props up potentates or dictators?

(F) What about priorities for houses, schools, and jobs? With the extra $2 billion for the C–5A cargo plane, this country could house 3.3 million poor families or 12 million poor people for an entire year. Which has the higher priority?

Says Senator Proxmire: "Luxury military budgets weaken this country. Freedom is stifled when we ignore human needs. Let us get our priorities straight."

THE PESTICIDE PERIL—XXXVIII

Mr. NELSON. Mr. President, the current international controversy over the continued use of persistent, toxic pesticides is thoroughly reviewed in the July issue of Audubon, the magazine of the National Audubon Society.

The society recently announced an all-out campaign to inform the public of the threat to our environment and to human health from DDT and related pesticides. Recently, I placed in the RECORD, an editorial, published in the society's magazine, citing the failure of the National Academy of Sciences to recommend a ban on DDT after its 2-year study of persistent pesticides.

I ask unanimous consent that the article by George Laycock, entitled, "The Beginning of the End for DDT," published in the same July issue of Audubon, be printed in the RECORD.

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

THE BEGINNING OF THE END FOR DDT

(By George Laycock)

On the day of its April meeting this past spring, the Michigan Agriculture Commission attempted to conduct its business behind closed doors and thereby draw a screen over its discussion of the most troublesome question it had faced for many years. The commissioners had a hot potato to juggle, and they hoped in vain that they could dispose of it quietly. But the decision to be made that day was perhaps the biggest news of the year on the conservation front.

Shortly after the meeting there came an announcement: "The Commission of Agriculture today took action to initiate cancellation of all DDT registrations in Michigan . . ." When fully effective this order would be the death knell for DDT use in this major agricultural state.

By this one order, admittedly much too late in coming, Michigan took the lead in the mounting effort to halt the spraying of DDT. Some months earlier, Arizona—concerned because much of its milk production was unsalable due to excessive DDT content—had prohibited use of DDT for agriculture purposes. Overseas, Sweden—alarmed by growing evidence of an environment contaminated by DDT—placed a two-year moratorium on use of the insecticide the same month Michigan was moved to forbid its sale. And in Wisconsin, a lengthy legal hearing aimed at classifying DDT as a pollutant and hence outlawing its use—was concluded in May, though no official decision is expected for several months. So there, and in every other state, the spreading of DDT continues unhampered by law or regulation.

Nor was the fall of DDT in Michigan easy. The campaign was long and hard, and the resistance stubborn. And elements of the story should help conservation forces everywhere understand why millions of pounds of DDT are still being manufactured every year.

For several months Michigan newspapers had carried accounts of a running battle between the state's Departments of Agriculture and Natural Resources. This governmental family fuss over the "hard" pesticides—the chlorinated hydrocarbons—sometimes spilled over into the governor's office, distressing the state's chief executive.

The issue was clearly drawn. Michigan Director of Agriculture B. Dale Ball held that society should not abandon its servant, DDT. His counterpart in the Department of Natural Resources, Dr. Ralph A. MacMullan, insisted that "Michigan has come to a point in its history when it must completely outlaw the use of certain highly destructive pesticides such as DDT, dieldrin, aldrin, heptachlor, endrin, lindane, chlordane, and other 'hard' or persistent chemical compounds used to kill insects." These are the chlorinated hydrocarbons, sometimes referred to as "the dirty seven," although toxaphene and benzene hexachloride also belong on the list.

Michigan's agricultural community might have guessed as far back as 1964 that Dr. MacMullan was going to rock the boat. That year he was given the post of director of the Department of Conservation, since renamed the Department of Natural Resources. "The Conservation Commission told me to run the thing, and I expect to run it," he announced. In those first days he reviewed the challenges which he would have to meet. Prominent among them was the pesticide problem; he was convinced that DDT and its relatives were making devastating inroads on Michigan's wildlife populations.

There was no shortage of evidence against these killers. DDT came to this country as a war baby from Switzerland, where the insecticidal properties of dichloro-diphenyl-trichloro-ethane were discovered in 1939—a breakthrough for which a Nobel Prize was awarded. (The chemical had been synthesized in Germany in 1874.) DDT came with good credentials and glowing promise, and insect suffers everywhere hailed the compound as the greatest invention since the flyswatter. It was easily and cheaply produced, and deadly to a wide variety of pests.

But it gradually became apparent that DDT possessed serious shortcomings. Refusing to stay where it was put, it filtered and flowed into streams, lakes, and ocean currents—where it still retained its toxic properties. It is known to ride not only the waters but the winds of the Earth. Particles of DDT fall as dust and in rain, far from the lands where originally applied.

Also disturbing is the fact that, while chlorinated hydrocarbons go everywhere, they do not go away. Instead of breaking down in the environment, they are cursed with a half-life variously estimated at four to sixteen years, depending on soil or water conditions. They may still pollute land and water a quarter of a century after application. All major river basins in the United States, according to the U.S. Public Health Service, are now contaminated with dieldrin, endrin, and DDT and its derivatives. "We don't know how long it will take for Lake Michigan to lose its DDT even after we stop using it," says Dr. MacMullan. "Estimates run from ten to thirty years, but I'm hopeful it will be less than thirty years."

Speaking at a symposium sponsored by Rockefeller University and The New York Botanical Garden, Dr. George M. Woodwell, chief ecologist at the Atomic Energy Commission's Brookhaven National Laboratory on Long Island, said that DDT and similar pesticides constitute the world's worst pollution problem. He estimated that one billion pounds of DDT and its derivatives are now circulating through the world's water and air. Dr. Woodwell added that, in the last decade, about 200 million pounds of DDT have been used annually worldwide.

In addition, because DDT is fat soluble, it is stored in living tissue, accumulated by animals in natural food chains and increasingly concentrated toward the top of such ecosystems.

Researchers now know that DDT and dieldrin in mammals, man included, pass from mother to unborn offspring through the placenta. And human babies are fed 0.1 to 0.2 parts per million of DDT residues with their mothers' milk. (The U.S. Food and Drug Administration has set a DDT tolerance level of 0.05 ppm for milk in interstate commerce. Since 1964, the U.S. Department of Agriculture—which encourages the use of DDT—has paid out more than $1,000,000 to reimburse farmers who have been forced to dump milk because of its DDT content.)

As long ago as 1946, U.S. Fish and Wildlife Service biologists warned that DDT dosages recommended for control of Dutch elm disease would prove fatal to birds. There has been ample proof in the years since—robins virtually annihilated on a university campus, dead warblers on another college town's lawns, songbird populations reduced by as much as 98 percent in heavily sprayed communities.

The birds of prey have been hit especially hard by DDT. Eagles and peregrine falcons—at the top of their respective food pyramids—have suffered spectacular reductions in nesting success. Instead of the 44 pairs of bald eagles nesting around Lake Michigan in 1945, there remains today a single pair—which has not raised young successfully since 1964. Until recent times pairs of peregrine falcons made their nests on New York skyscrapers, but no longer is there a breeding pair to be found in the United States east of the Rocky Mountains. Dr. Tom J. Cade of the Laboratory of Orinthology at Cornell University has studied peregrines along Alaska's Colville River in the Brooks Range, where production of young peregrines in that wilderness fell from 2.5 young per pair prior to 1960 to one fledgling per pair in 1968, and unhatched eggs carry high pesticide concentrations. Extinction stalks the magnificent peregrine.

Chemical industry apologists have long insisted such evidence is circumstantial, that "there is no scientific proof" that chlorinated hydrocarbons are responsible for catastrophic losses of wildlife. But recently a U.S. fish and Wildlife Service team at the Patuxent Wildlife Research Center in Maryland substantiated the relationship between DDT and reduced reproductive success. They were investigating whether there did indeed exist a link between DDT and a phenomenon which has fascinated and frightened naturalists in recent years—the "thin shell syndrome."

That pesticides are a factor in the frequency of abnormally thin eggshells had first been suggested in Scotland by research ornithologist D. A. Ratcliffe. Ratcliffe studied records of 109 duck hawk nests visited by British falconers between 1904 and 1950. In only three had falconers found broken eggs. But from 1960 to 1966, when 68 nests were studied, 47 contained broken eggs. Ratcliffe also knew that European sparrow hawks (an accipiter) and eagles were suffering from widespread egg breakage. "The introduction of DDT into general use (about 1945-46)," wrote Ratcliffe, "coincided closely with the onset of the eggshell change."

Next, Ratcliffe invaded the dark recesses of museums where he began measuring the shell thickness of more than 1,600 blown eggs and weighing them. Significantly, he learned that both weight and shell thickness had decreased sharply after 1946

By measuring and weighing thousands of eggs of a wide variety of species in American museums, a University of Wisconsin team found that Ratcliffe's discovery applied to this continent as well. Recent eggshells were thinner and thus more easily broken. Some scientists have also suggested that birds carrying heavy loads of DDT residues are more subject to nervous stress, and that this restlessness further contributes to egg breakage.

At Patuxent, biologists installed thirty-six pairs of sparrow hawks in flight pens and divided the birds into three groups of twelve pairs each. Food supplied to one-third of the sparrow hawks contained DDT, plus dieldrin, at a level considered high—but not high enough to kill the raptors. The second group was fed moderate dosages similar to those they might obtain in a wild environment. The more fortunate third group was fed no insecticide.

Those sparrow hawks on an insecticide-free diet hatched 84 percent of the eggs produced. Those on the modest dosages of DDT similar to what they might encounter out-of-doors hatched 61 percent, and the third group hatched 59 percent. Here was firm experimental evidence, for the first time, that there exists a positive correlation between ingestion of chlorinated hydrocarbons and nesting failure. Further, diets containing 3 ppm of DDT have caused thin eggshells and reduced reproduction in malliards.

Does the thin shell syndrome extend to other families of birds? Dr. Robert W. Risebrough, molecular biologist at the University of California at Berkeley, says that the brown pelican faces extinction along the coast of his state. DDT, he adds, is responsible for their abnormally thin shells, which break instead of hatch.

Could a wild bird's functions be so drastically upset that it might lay eggs with no shell at all? Until recently, such a condition was unknown in nature. But in April 1969, on the shore of Lake Superior in northern Michigan, investigators found a bald eagle nest containing remains of an egg *without a shell.* Meanwhile, eggs without shells were being found for the first time in colonies of brown pelicans along the Gulf of California. "There is absolutely no question," says Sandy Sprunt, research director of the National Audubon Society, "that pesticides are responsible for thin shells."

Yet despite such evidence, DDT still has many defenders. On the floor of Congress, one of its major champions is Representative Jamie L. Whitten of Mississippi. In 1968 he told Congress that the record showed no injury to wildlife from DDT except by improper use, a statement that prompted one observer to note that the Congressman's speech was made on April Fools' Day.

Even entomologists are changing their thinking on DDT. Dr. Robert van den Bosch of the Department of Entomology at the University of California testified recently in Wisconsin that although he had recommended spraying of DDT for many years, he no longer approved its use. "We had created a monster," he said, "it's a lesson for all of us to learn."

There was nothing new in Dr. MacMullan's theme that it is time to stop spreading DDT and its relatives. It was the President's Science Advisory Committee which said in 1963 that "Elimination of the use of persistent toxic pesticides should be the goal." But the chemical companies and the agricultural establishment still call most of the shots six years later, arrogantly fighting every effort to halt the contamination of the environment with their products.

Faced with such economic power, politicians too often take refuge in silence, perhaps hoping the problem will go away. But it will not, for the half-life of DDT is greater than the half-life of the average governor. And the governor willing to come to grips with this issue is rare. In Michigan, however, with two departments in his own administration feuding, Governor William H. Milliken has had little choice.

Two separate developments helped bring the DDT story to a climax in Michigan. In the spring of 1966, under the leadership of Dr. Howard Tanner, Michigan began releasing four- to six-inch coho salmon in tributaries of Lake Michigan. With visions of fifteen- or twenty-pound game fish dancing before their eyes, Michigan anglers and tourism promotors were paying close attention to every phase of Dr. Tanner's highly publicized coho experiment.

As they gorged on the lake's heavy population of alewives, the coho grew at fantastic rates. By the spring of 1967 the salmon weighed two to four pounds, and they continued to prosper until fish as heavy as twenty-two pounds were taken. Fishermen flocked to Lake Michigan in pursuit of these grand new trophies. The fishing tackle industry, outboard motor merchants, marinas, motels, restaurants, and all the other beneficiaries of a flourishing tourist industry prospered. Long traffic jams snarled movement on Michigan highways near fishing spots and boat launching ramps as the first coho seasons opened.

But Michigan's fisheries specialists were already worried about DDT. Lake Michigan flushes slowly and may take thirty years for a complete change of water. Some biologists, including Dr. Charles F. Wurster, Jr., of the Environmental Defense Fund, made dire predictions that the salmon program would run into trouble at the hatcheries when the fry were in those critical first days during which they draw on their own egg yolk for sustenance. Then early in 1968, salmon fry being carefully tended at the Wolf Lake State Fish Hatchery began to darken in color and die. At first 160,000 perished. Soon the losses had climbed to 700,000.

Affected fry were checked for viral disease—and pesticide content. Studies at Michigan State University made it plain that "DDT is the most likely suspect." Michigan-raised coho eggs carried loads of DDT residues ranging from 1.5 to 3 parts per million, levels believed to be high enough to cause substantial losses at the critical "button-up" stage in the salmon's reproductive cycle. New York State had already experienced similar losses in its lake trout hatchery program at Lake George, where 2.95 ppm of DDT caused the death of trout fry at the same stage.

This development should not have been particularly surprising. Practically every fatty fish checked from Lake Michigan waters carries substantial dosages of DDT, so much so that, as one conservation worker in Lansing assured me, "If pork or beef were as heavily loaded with DDT as most Lake Michigan fish, it would be taken off the market."

Michigan fisheries biologists fell short of their coho stocking aims, and had to increase their hatchery production. But this was only a stopgap measure. "The real answer," said fisheries biologist Thomas B. Durling, "is that pesticide levels be reduced and eventually eliminated."

An earlier development, precipitating Michigan's fight over DDT, was the appearance of the Environmental Defense Fund in the state. EDF can trace its birth to the National Audubon Society's 1967 convention in Atlantic City, to which Attorney Victor J. Yannacone, Jr., came to report on his lawsuit against the Suffolk County Mosquito Control Commission on Long Island.

Yannacone saw his county's spraying of DDT for mosquito control as both a degradation of the environment and a breach of constitutional rights. In 1966 he had filed a suit in behalf of his wife Carol to bring a halt to twenty years of DDT pollution. The courts, he reasoned, were the only bodies left to settle such issues. He explained to the Audubon convention that both legislative and administrative arms of government had failed their responsibilities in not protecting the people from insecticide contamination. The courts would offer a fair and impartial forum, said Yannacone, urging conservation-minded citizens to take environmental polluters to court.

After Long Island newspapers carried the story of the unusual court action, the Yannacones soon learned that numerous other people were equally concerned over the misuse of pesticides. Yannacone met Dr. Wurster, assistant professor of biology at the State University of New York at Stony Brook, and Dr. Woodwell of the Brookhaven Laboratory. Both testified for Yannacone, and a temporary injunction was issued against Suffolk County Mosquito Control Commission.

At the Audubon convention, where he reported on this pioneering court case, the exuberant Yannacone went a step further. Also present were Dr. Wurster, and Dr. H. Lewis Batts, Jr., who once taught Yannacone ecology and other biological sciences at Kalamazoo College in Michigan. Dr. Batts is director of the Kalamazoo Nature Center and past president of the Michigan Audubon Society. Together the three drew up a resolution suggesting formation of an Environmental Defense Fund, to take environmental pollution cases into courts.

The resolution passed, but its impatient sponsors saw little evidence that it was going to be acted upon rapidly. So ten persons, most of them scientists, later assembled and incorporated the Environmental Defense Fund under the laws of New York State.

In Dr. Batts' state there was precisely the kind of case EDF had in mind. In Berrien County, the Michigan and U.S. Departments of Agriculture, by late 1967, were planning a massive dieldrin attack against a recurring "infestation" of Japanese beetles. The plan called for spraying 2,800 acres of small watersheds draining into Lake Michigan. Dr. Batts raised funds for the initial court action, asked for and obtained the help of the National Audubon Society, and Yannacone won a temporary injunction from the State Court of Appeals in Grand Rapids. Among the witnesses lined up to testify against the hard pesticides were Dr. MacMullan and his pesticides advisor, Dr. C. T. Black.

Michigan's legal community scarcely knew what to do with EDF and its determined attorney. The case was refused in a federal court in Grand Rapids on the grounds that those bringing the suit were from another state. The Michigan Court of Appeals agreed to hear the testimony, but after several hours the case was dismissed on a technicality.

But before the drama was played out, the state attorney general's office came in for a little act of its own. There were assistant attorneys general supposedly defending both the Michigan Department of Agriculture and the Department of Natural Resources. Under subpoena, the Department of Natural Resources had joined the case against its sister agency. The attorney general stopped the whole show by forbidding his assistant working with the Department of Natural Resources from even speaking in the courtroom.

"You want me to get my own lawyer?" Dr. MacMullan asked. "You can't do that either," the attorney general told him. Having declared the scientific affidavits from Natural Resources inadmissible, the Court of Appeals ruled that the Department of Agriculture was immune from suit.

By this time, however, the fight between Agriculture and Natural Resources and its accompanying newspaper coverage had brought then Governor George W. Romney into the fray. Romney summoned directors of the feuding departments to his office. To help them resolve the issue, the governor named a three-man factfinding panel, both directors agreeing to abide by its findings.

The three men chosen included two with close ties to agriculture. And the panel ruled that if allowed to go untreated, the Japanese beetles would require heavier chemical treatment later. So three crop-dusting planes went aloft on October 21st and 23rd, 1968, and spread two pounds per acre of dieldrin over 3,000 acres and ten pounds of chlordane per acre over another 1,600 acres. To Dr. MacMullan this was a "bitter pill."

The Environmental Defense Fund, meanwhile, had also brought court action against the use of DDT for Dutch elm disease control by local governments. In the face of possible court decisions against DDT, these suits, coupled with mounting public opinion, led 56 Michigan cities to announce, one after the other, that they would no longer

spray elms with DDT. Soon the list of court orders held by EDF included all of the offending cities except Detroit, which finally capitulated this past May.

The EDF action in Michigan made the conflict between the two state departments a public issue, and set in motion a continuing campaign by the Department of Natural Resources against DDT. Dr. MacMullan held regular staff meetings within his department to plan a concerted campaign against DDT. The strategy was to strike hard and repeatedly until DDT was banned. Conservationists, augmented by a newly formed citizens' group, the Michigan Pesticides Council, took their message to the people. First came an article "The Case Against Hard Pesticides," by Dr. MacMullan in Michigan Conservation, the department's magazine. Other articles followed at regular intervals, and the message was spread through radio and television programs, public speeches, and a barrage of newspaper articles. Conservationists soon knew that people throughout the state and across the nation shared their concern over the continued degradation of the environment by these long-lasting poisons. "The Case Against Hard Pesticides," as one example, has been reprinted a half-million times.

But the chemical industry had no intention of yielding ground gracefully. The manufacturers reacted through the National Agricultural Chemicals Association, their well-financed lobbying and propaganda arm which goes to great expense to convince the public that DDT is the servant of man, that it carries no serious threat to the ecosystem, fighting any government actions that might curb pesticides use, and laboring constantly to undercut the mounting evidence against DDT.

The association frequently sends to 3,500 newspaper editors easily reproduced cartoon panels titled "The World Around Us." These punchy cartoons hammer away at the theme that man has risen to his current exalted state because of pesticides. But they lump all pesticides together and ignore the fact that conservationists are fighting only that small list of long-lasting, broad-spectrum killers, the chlorinated hydrocarbon insecticides.

The association recently supplied its members with a "briefing paper" said to introduce "facts" ignored by those calling for the banning of DDT. This propaganda claims that DDT benefits wildlife through control of disease and parasites and by killing insects that destroy wildlife cover.

"DDT is a low cost item, wholesaling at 17–18 cents a pound," states the briefing sheet, and adds, "Almost any alternative pesticide would bring a greater return to the manufacturer." What then makes the chemical industry fight so desperately in behalf of DDT? The public, incredulously, is asked to believe that the agricultural chemical industry is interested less in profit from its annual $20 million production of DDT than in serving mankind.

We are then assured that 70 percent of the DDT produced in this country goes to foreign lands. This is less comforting than the manufacturers would like it to be, since it is common knowledge that DDT sent out into the world can boomerang and return home on the elements.

Insisting that DDT is valuable because it lasts so long, the association then claims that nonetheless it degrades into harmless products. "All species of animals, insects, fish, amphibians, birds, and mammals that have been studied," says the briefing sheet, "are able to degrade and excrete DDT residues they have acquired in their fat." Of course, wilflife may perish in the process, or suffer serious sublethal effects.

The association also claims the half-life of DDT to be only "as long as one to three years," which it may be under some conditions, but independent research has computed DDT's half-life at periods up to 16 years. And in one test in Maryland, 31 percent of the dieldrin originally applied was still present in the soil after 17 years, while 39 percent of the DDT remained.

Chemical industry propagandists often repeat the claim of worldwide malaria control as a result of the multimillion-dollar DDT export business. This was a major argument presented again in the letters department of the May 4, 1969, *New York Times*. The writer, Samuel Rotrosen, president of Montrose Chemical Corporation, manufacturers of DDT, and chairman of the Industry Task Force for DDT, must have known at the time about a story carried in the same paper five weeks earlier. Authorities in India, the story reported, are worried because mosquitoes there have developed resistance to DDT. Malaria cases have been increasing rapidly in India in recent years despite DDT treatments. And the World Health Organization has announced it would review its entire malaria eradication program because of this spreading mosquito resistance to DDT.

As for human health, and whether DDT and the other chlorinated hydrocarbons pose a threat to man, merely asking such a question makes chemical industry spokesmen shout "foul." Apparently, different organisms can tolerate varying levels of DDT in the body tissues. Man, we are told, normally does not build up concentration beyond 12 ppm of DDT and its derivatives.

This may or may not be a harmful level, although some scientists suspect the prolonged existence of such a level will affect humans. "Frankly," says Dr. MacMullen, "no one knows what 12 parts per million in human fatty tissue means. But we know it is going to stay there and that DDT in far smaller concentrations has awesome consequences for many small or simple forms of animal life." Currently the level of DDT in the "average" American man, woman, and babe is said by the Public Health Service to be between 8 and 10 ppm.

But despite the reassurances that all is well, even though each of us carries a quantity of DDT, there are disturbing signals that should not be ignored. It was the December 1968 issue of "Occupational Safety and Health Abstracts," published by the International Occupational Safety and Health Information Center in Geneva, Switzerland, that reported: "Soviet workers occupationally exposed to DDT and other organochlorine pesticides have shown disturbances of stomach and liver functions after ten years of contact with the pest destroyers." Scientists checked seventy workers. They found, in those with less than a decade of exposure, an increased acid and pepsin secretion in the stomach, along with disturbed liver functions. But those with more than ten years exposure were found to have decreased secretion of acids and pepsin and resulting disturbances of liver function. And DDT is also under suspicion as a potential cause of cancer in warm-blooded animals. Still, the president of one DDT manufacturing firm recently quoted to me the comforting 1967 statement of the U.S. Public Health Service that "there is no well-described case of fatal, uncomplicated DDT poisoning."

With public pressure already bearing heavily on DDT, the coho salmon came back into the Michigan picture early in February 1969. Commercially caught Michigan coho were being advertised and sold. The Food and Drug Administration collected samples of frozen Michigan coho shipped to Minnesota and Wisconsin and ran tests for DDT and dieldrin. The fish averaged a DDT content of 16 ppm. Although the FDA had not then established tolerance levels for DDT in fish, it seized fourteen tons of frozen Michigan coho in Wisconsin. The tolerance level for meat is 7 ppm in the fat alone, equal to about 1 ppm in the whole cut.

This announcement cast a pall over the entire Michigan coho program. The state had 2,500,000 smolts ready for release into Lake Michigan tributaries. The tourist industry envisioned its summer business cut back severely. Sport fisherman were asking what to do with the salmon they caught.

In New York, the secretary of that state's Pesticide Control Board wrote that some consideration was given to closing lakes to fishing there because of the problem of chlorinated hydrocarbons in fish, "but the idea that prevailed was that the greatest pleasure in fishing was catching the fish and that there is probably no real danger to man even from eating the fish, although the fish may not taste entirely as expected. With these considerations, a warning to the public was considered sufficient."

Actually, the high level of DDT in Lake Michigan coho has been known for several years. John Carr, who directs a pesticide monitoring program for the Great Lakes from his U.S. Bureau of Commercial Fisheries office in Ann Arbor, had begun testing several species of fish for pesticides in 1965. He found that the levels did not change much from year to year. He also found that the fatty tissues of fish carry far heavier loads of chlorinated hydrocarbons than are found in the rest of the fish. His tests revealed DDT levels in the fat of coho as high as 105 ppm.

The FDA, meanwhile, having long neglected this problem, was pondering where to set the DDT tolerance level for fish to be sold commercially throughout the country. On April 22nd the limit was set at 5 ppm, which threatened the commercial fishing industry with a lost of $2.5 million annually in Michigan alone and would place commercial fish products throughout the country under inspection for the first time.

This federal action put still more pressure on DDT peddlers to meet the growing public concern. But there exists between the chemical manufacturers, extension services, departments of agriculture, and schools of agriculture and entomology in the land grant colleges a strong bond of mutual protection. And when any one of their spraying recommendations is challenged, there is a solid defense front, and the "official" position within the agricultural community is maintained with an arrogance that seems to have more than the economic welfare of the chemical manufacturers behind it.

Within the agricultural community of Michigan one hears now that the ban on DDT was an orderly and expected development growing out of accumulated research at Michigan State University's Agricultural Experiment Station and the longtime desire of agricultural leaders themselves to bring an end to the use of DDT. They insist that DDT would have been banned just as soon without pressure from conservationists or the exposure to public opinion. Indeed, on the day before a legislative committee hearing which would have established a state pesticide control committee with strong representation by conservation interests, DDT was removed from the list of chemicals approved for mosquito control. This action by the Michigan Agriculture Commission was merely considered as a coincidence. But it would take a lot of selling in Michigan to convince people that Dr. MacMullan's Department of Natural Resources and the Environmental Defense Fund had nothing to do with speeding up the demise of DDT there.

Quite likely, the action of the Agriculture Commission in banning the sale of DDT in Michigan was prompted partly by fear that the state legislature would pass a law even more restrictive. "They decided," as one conservationist said, "to toss MacMullan a bone." They should not, however, assume that Dr. MacMullan and other conservationists see the job as complete. Next on the schedule is dieldrin. And once it has followed DDT

into limbo, the rest of the persistent pesticides will gain attention. Dr. MacMullan is convinced all must go.

The Michigan regulation is by no means perfect. It did not go into effect until June 27th, and any DDT on dealers' shelves or in warehouses up to that date can still be sold. "It will take at least five years before present stocks are disposed of," Dr. Black predicted. Nor is the purchase of DDT in another state for use in Michigan prohibited, although legislation to forbid DDT use is certain to be introduced in Lansing. Meanwhile, one major DDT manufacturer has hinted it will challenge the legality of the Agriculture Commission's ruling (which has since been amended to permit use of DDT indoors for control of bats, mice, and body lice).

Recently Governor Milliken took an important step in protecting the environment when he created a fifteen-member Council for Environmental Quality. "I have big hopes for this council," says Dr. MacMullan. The Michigan Department of Natural Resources has now instituted a ten-point program to advance the continuing fight against "hard" pesticides.

What has happened in Michigan is significant because it is a dent in the incredible armor of the agricultural combine. Viewed nationwide it may seem a small victory. But the chemical industry must sense that the implications reach far beyond Michigan.

Several states in the Great Lakes drainage, meanwhile, are reappraising their stands on DDT. Ohio, whose natural resources leaders are unlikely to show Michigan's strength, scheduled a conference of top officials to discuss the pesticide issue following the Michigan ban. At least half a dozen states are considering legislation that would ban DDT. In Washington, Senator Gaylord Nelson of Wisconsin introduced a bill aimed at federal control of DDT by prohibiting its sale in interstate commerce. In the last session of Congress, a similar bill was quickly killed by the Senate Committee on Agriculture and Forestry.

So Michigan has finally come to grips with the world's most dangerous environmental pollutant. But other states drag along, permitting agricultural interests to blindly add more tonnages of DDT to the environment year after year. All the blame, however, cannot be placed on agriculture. Municipalities strive to control mosquitoes, Dutch elm disease, and other pests with DDT. Woolen mills use pesticides to moth-proof their products, then run their wastes into rivers. Foresters and even wildlife managers have used persistent pesticides. Homeowners, gardeners, and outdoorsmen continue to buy millions of small spray cans containing chlorinated hydrocarbons—when they should instead be reading the labels and refusing such products. But with the connivance of the U.S. Department of Agriculture, manufacturers have stacked the cards against such public intelligence, using jaw-breaking technical names, instead of simple generic terms on their labels.

What is needed is more than a simple phasing out of DDT state by state, with each state repeating the research of the others on its own farms and experiment stations while DDT peddlers buy time. This procedure, if effective at all, could only lead to a nationwide hodgepodge of laws and rulings. And farmers forced to turn to more costly insecticides would be at an economic disadvantage with their competitors using DDT in neighboring states.

Chlorinated hydrocarbons in the air and water do not pause at state lines or national borders. The threat of DDT and other "hard" pesticides in the environment is at the very least a national problem calling for federal laws. Such laws, say conservationists, should do nothing less than rule out the use of all such pesticides, except in cases of dire public emergency where no substitute exists, and then by prescription only.

SCOTT BILL SPURS ACTION IN CALIFORNIA

Mr. SCOTT. Mr. President, my bill, S. 114, to establish a Commission on Afro-American History and Culture, is pending before the Subcommittee on Arts and Humanities of the Committee on Labor and Public Welfare. I am delighted to report that the California Senate has passed a bill—California Senate bill 114—to establish a commission on minority history and culture which was based upon my legislation. I hope the U.S. Senate will act as promptly and as affirmatively on this matter as did the California Legislature.

I ask unanimous consent that the letter informing me of the action in California be printed in the RECORD.

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

CALIFORNIA SENATE,
July 28, 1969.

Hon. HUGH SCOTT,
Old Senate Office Building,
Washington, D.C.

DEAR SENATOR SCOTT: Enclosed is a copy of Senate Bill 114. This legislation originated from your bill introduced in the United States Senate.

Senate Bill 114 passed the California Senate yesterday and will be heard by the State Assembly next week.

It is my feeling that this commission will provide a much needed service. I am grateful for your assistance.

Sincerely,

MERVYN M. DYMALLY.

MORE FUNDS FOR AUTO SAFETY

Mr. NELSON. Mr. President, in 1966 Congress initiated a broad attack on auto safety with the passage of the National Traffic and Motor Vehicle Safety Act. Certainly no consumer program has been launched with more fanfare and promise than this effort to make a meaningful reduction in the number of deaths and injuries from automobile accidents.

But the program has been severely crippled from the very beginning because of lack of funds. Neither the administration nor the Congress has been willng to back up its commitment of the 1966 act with the necessary funds to do the job.

In a very good article entitled "Congress Ordains Safety but Won't Put Gas in Tank," and published in Sunday's Washington Post, Morton Mintz reviews the program's funding problems. In the last 3 years, the vehicle safety program has received only $33.9 million—or just one-half of its $66.3 million authorization.

A new 2-year authorization is now before the House Committee on Interstate and Foreign Commerce. The total request for 2 years is $58 million. As Mr. Mintz points out, "this total is $20.4 million less than the cost of financing the war for 1 day.

It is time we put the auto safety crisis in our list of national priorities—and time we put all of our energy and resources behind those priorities.

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:

CONGRESS ORDAINS SAFETY BUT WON'T PUT GAS IN TANK

(By Morton Mintz)

A common complaint on Capitol Hill is that on a whole range of health, safety, consumer and environmental problems, the White House and Congress don't put our money where their mouths are.

It's a complaint that Sen. Abraham A. Ribicoff (D-Conn.) has made about auto safety, that Sen. Vance Hartke (D-Ind.) has made about pipeline safety and that Sen. Philip A. Hart (D-Mich.) has made about truth-in-packaging, to name a few specific complainants.

The legislators say that the Government has said the right things about such matters and has even passed the right laws—sometimes by unanimous votes—but then has denied the money that the enforcement agencies need to make the laws live up to the rhetoric. The auto safety law, signed by President Johnson almost three years ago, is a classic case.

BATTLEFIELD ANALOGIES

The groundwork for the law was laid in 1965 with hearings by Sen. Ribicoff, Ralph Nader's book "Unsafe at Any Speed" and attacks on unsafe tires by Sen. Gaylord Nelson (D-Wis.). In 1966, President Johnson developed into an ardent advocate. He repeatedly put the need for a strong bill in the context of the Vietnam war.

In February, for example, Mr. Johnson said that the highway toll was "the gravest problem before this Nation next to war in Vietnam." On June 3, he told the National Governors Conference, "Since the automobile was first invented, we have had 1½ million deaths from automobile accidents. That is three times as many as our enemies have ever been able to kill in all of our wars.

"Between 1961 and the end of last year, motor vehicles killed many more times as many of our servicemen as the Vietcong were able to kill in Vietnam."

At the signing of the auto safety bill on Sept. 9, 1966, Mr. Johnson returned to the theme. He noted that over the recent Labor Day weekend, 29 American servicemen had died in Vietnam while 614 Americans had been killed on the highways.

Less than five weeks after the bill signing, the President's words boomeranged in a letter from Sen. Warren G. Magnuson (D-Wash.), chairman of the Senate Commerce Committee and a prime mover behind the legislation.

Reminding Mr. Johnson that he had ranked auto and highway safety second only to the war, Magnuson expressed "deep concern" and "near disbelief" that the Administration's requests for auto and traffic safety in fiscal 1967 were "less than 30 per cent of the amount Congress considered adequate." The Administration said that some of the cuts merely reflected realistic appraisals of what could be spent efficiently.

The auto safety law created the National Highway Safety Bureau, which has been put under the Federal Highway Administration in the Department of Transportation. (Ribicoff and other legislators want the Bureau spun off because they feel that the FHA is so strongly oriented toward road building that it tends to neglect the safety of the vehicles on the roads.)

The Bureau's first and only director, Dr. William Haddon Jr., resigned in mid-February, less than a month after President Nixon took office. Mr. Nixon meanwhile, has said nothing or almost nothing about auto safety. And more than six months after Haddon's departure, he has not named a replacement.

The man in charge is Robert Brenner, who was Haddon's deputy. Brenner has a staff of

500 rather than the 2000 originally envisioned for 1969. He has one person to deal with all aspects of school bus safety.

Haddon had started a program for crash-testing various makes and models of car to get a real reading on safety. Tests were made with the Subaru minicar, a Japanese import that, because it weighs less than 1000 pounds, is administratively exempt from safety standards, and the Volkswagen.

Now the tests have been halted by Francis C. Turner, head of the Highway Administration. Turner has said that he wants to see if there isn't a cheaper way to get the same kind of data.

Brenner is operating without an authorization—let alone an appropriation—for the fiscal year that began July 1. The authorization bill has gotten only as far as the House Commerce Committee, which has approved $23 million for work on vehicle safety for fiscal 1970 and $35 million for fiscal 1971. The two-year total is $20.4 million less than the cost of financing the war for one day.

In an interview, Brenner talked about some issues and developments in auto safety. Speaking of grilles that come at pedestrians like the cutting edge of a meat cleaver, and of other sharp surfaces and protrusions, he called the manufacturers involved "irresponsible." He named none.

Similarly, Brenner feels that "fastback" sedans, because they reduce rear visibility, are a trend "absolutely in the wrong direction." He said that styling and safety are "completely compatible," and cited instrument panels on 1969 cars as "gorgeous" evidence of this.

Brenner gives "top priority" to getting a facility for testing vehicles and components, including tires, to see if those certified by their producers as meeting safety standards actually do. The authorization bill originally contained a $10 million item for design and planning of such a center, including a proving ground. The House committee allowed $100,000 for preliminary planning and asked for a new presentation after that is done.

Despite the law's emphasis on setting safety standards, Breener hopes to accomplish a good deal by persuading Detroit to adopt features that could be required only after a long legal process. He hopes, for instance, that General Motors will apply its side rail protection—against side collisions—to all of its cars, and that Ford will extend its no-skid braking feature to all of its models.

SMALL CAR EQUALIZER

Under Haddon, Bureau policy was not to let research contracts to auto manufacturers, not only because of possible conflict of interest but also because of a desire to build an independent expertise in the Bureau.

Brenner, however, said that "I don't think there has to be" a conflict of interest in contracts with Detroit's Big Four, and that, "where there is none, or is not even the appearance of one," he would not hesitate to let a contract for urgent work that otherwise would not be done or would be seriously delayed.

Brenner looks on the air bag restraint device as "the big equalizer" between big cars and little ones in crash survival. The device inflates in front of the occupants in the first milliseconds of a crash and puts a big plastic cushion between them and hard surfaces. Brenner estimates that it will be standard equipment on the 1971 models at the earliest.

OUTER CONTINENTAL SHELF SUBCOMMITTEE

Mr. JACKSON. Mr. President, discussions now underway in the executive branch concerning the development of the resources of the seabeds are of vital importance to all Americans, both present and future. Proposals that would have far-reaching effects on this development, and our relations with other nations, are being pushed vigorously in the United Nations, and the Departments of State, Defense, and Interior are endeavoring to arrive at a unified position for the United States with respect to these proposals. Some of the ideas that have been advanced would place the seabeds relatively close to our shores under an international regime. It readily can be seen what problems with respect to control of pollution, for example, such a proposed system would involve for us.

Recently the Committee on Interior and Insular Affairs held comprehensive public hearings on a measure sponsored by the distinguished senior Senator from Colorado (Mr. ALLOTT) to establish a national mining and minerals policy. At these hearings, the need of our country for new sources of supply for nonfuel minerals was established beyond dispute; our requirements for additional sources of energy fuels, primarily oil and gas, long have been self-evident.

Exploration of the Continental Shelf adjacent to our shores has shown it to contain tremendous reserves of oil and gas, which are susceptible to immediate production under known, existing technologies. The shelf also has been shown to have resources of other minerals, notably manganese, and gold and silver. Technology for development of these reserves is progressing to the point of economic feasibility.

Mr. President, these facts, namely, our Nation's need for the mineral resources of the seabeds and the proposals to place the development of these resources adjacent to our coasts under international control, call for most careful and most full policy considerations. Accordingly, I am appointing a special subcommittee of the Interior Committee to assist the executive branch in every way possible in arriving at a policy position that is in our country's best interests.

The Interior Committee is the unit of the Senate to which was referred the bill that Public Law 212, 83d Congress, which is the Outer Continental Shelf Lands Act of 1953. This statute was the first, and is the only, legislative assertion of the sovereignty of the United States over the mineral resources of the Continental Shelf adjacent to our shores. The 83d Congress did not attempt to define the outer limits, or seaward boundary of this sovereignty.

Rather, the boundary provided by the Outer Shelf Act is the limit of our ability to develop the resources of the subsoil. This statutory concept was carried over into the Geneva Convention of 1958 on the Continental Shelf. The convention defines the limits of national sovereignty as being at depths out to 200 meters—600 feet—or as far as the exploitation of the resources of the adjacent seabed lands permits.

In view of the legislative history of the Submerged Lands and Outer Continental Shelf Acts, and its overall legislative jurisdiction over development of the mineral resources of the United States, the Interior Committee has clear-cut responsibility for legislation affecting the Outer Shelf. In fulfillment of this responsibility, I have named Senators METCALF, MOSS, and GRAVEL to serve with me on the majority side, and, on the recommendation of the ranking minority member of the Interior Committee (Mr. ALLOTT), Senators BELLMON, HATFIELD, and STEVENS on the minority side, to compose the Subcommittee on the Outer Continental Shelf of the Interior Committee. I am happy to announce that the Senator from Montana (Mr. METCALF) has agreed to be the chairman of this important subcommittee.

The Interior Committee shares its jurisdiction over the outer shelf with other units of the Senate, including, of course, the Foreign Relations Committee and the Commerce Committee. I am informed that my colleague from Washington (Mr. MAGNUSON), chairman of the Committee on Commerce, also has a Special Committee on Seabed Problems. The Outer Shelf Subcommittee will work closely with this and all other units of the Congress concerned, as well as with the several agencies of the executive branch.

OPEN LETTER TO MEMBERS OF CONGRESS FROM POW WIFE UNDERSCORES NEED FOR RELENTLESS PRESSURE ON HANOI

Mr. MONTOYA. Mr. President, there is a particular urgency to speak up anew on behalf of American prisoners of war in North Vietnam and their families. Mrs. Dottie Hughes, wife of Lt. Col. James Lindberg Hughes of the U.S. Air Force, recently wrote an open letter to Members of Congress calling attention to the special plight of Americans held captive by the Vietcong, and asking each of us for help. Her own husband has been a prisoner of the Hanoi government for more than 2 years. Dottie and her two children—Darrya 12, and Peter 9—live in Santa Fe, N. Mex., having moved there 3 years ago before Jim went overseas.

Dottie Hughes' letter has been written with that special poignancy and sentiment that a wife and mother feels for families undergoing the same heartbreaking circumstances she and her children are experiencing, and expresses the cruel and gnawing feeling that their loved ones are being neglected and treated with indifference by the American Government. I ask unanimous consent that her letter be printed in the RECORD at the conclusion of my remarks, and urge that it be given special attention by all Members of Congress.

Mr. President, the faith of Dottie Hughes and other families of American prisoners of war must not be shaken. I hope that we, not only as Members of Congress but as a nation, will not ever forget that these fine men in the U.S. armed services who have served us so well are being needlessly held captive under unknown circumstances, and that they are desperately needed at home. I believe Mrs. Hughes' letter will serve to remind each of us that we must renew our efforts to use whatever powers of persuasion we have to urge the President, our State Department, the South Vietnamese Government, the United Nations,

and others in the field of diplomatic and foreign affairs, to continue to pursue more vigorously than ever efforts to gain release of these men.

Mr. President, the inhumanity of North Vietnam's lack of response to our pleas and efforts in attempting to secure release of American prisoners of war is obvious and deserves the condemnation of all humane peoples and nations alike. The Hanoi government has even refused to provide us with a list of names of American POW's, causing needless anxiety and uncertainty for the wives, children, and parents of these men. As of this writing, there are some 1,400 American servicemen "missing in action" in Southeast Asia, about 340 of whom are known or presumed to be prisoners of war. The Saigon government, in turn, is holding approximately 25,000 POW's in South Vietnam.

Worthy of still further condemnation is Hanoi's persistent refusal to honor and abide by the provisions of the 1949 Geneva Convention. As a signatory to that document, the Hanoi government is bound by its provisions, which call for: First, release of names of prisoners held; second, immediate release of sick and wounded prisoners; third, impartial inspections of POW facilities; fourth, proper treatment of all prisoners; and fifth, regular flow of mail.

The North Vietnamese have refused to respect these requirements of the Geneva Convention despite our repeated urgings. On the other hand, the 25,000 prisoners held in South Vietnamese POW camps are treated in accord with the Geneva Convention. Their names are provided to Hanoi through the International Red Cross; they are allowed to correspond; they are given food, medical attention, treated well, and periodic inspection of South Vietnam's POW facilities takes place. It is hard to believe, Mr. President, that, in the face of this, the North Vietnam regime still refuses to be stimulated or impressed by this policy of humanitarianism under the rule of law, and that it callously and coldbloodedly continues its own policy of failing to respond to any such example set. It is difficult to believe that we are still unable to get from them even so basic a civilized requirement as a list of our prisoners, and we have not been successful in getting our men out.

During the past year and a half, some 2,000 Communist POW's and civilian detainees in South Vietnam have been released by the Saigon government, with our cooperation, and North Vietnam knows only too well that large numbers of their men are still being held prisoner. During the same period, they have released to us but six of our servicemen in 1968; and Hanoi announced on July 3, 1969, that three additional U.S. prisoners would be released, but no further action has been forthcoming.

Mr. President, as a humanitarian issue which transcends all politics and political motives, this matter is of direct personal concern to Americans, to the United Nations membership, and to civilized mankind as a whole.

While we may have succeeded in making our position clear to the Hanoi government—both at the Paris talks and through enlisting the intervention of other governments—nevertheless, I believe we must explore and open up every possible avenue of approach with Hanoi on a renewed and intensified basis.

Mr. President, I cannot believe that there is not some means available to us for securing the release of our U.S. prisoners of war—even if it means releasing all 25,000 prisoners held in South Vietnam, or, as suggested by Mrs. Hughes, possibly organizing an effort permitting the wives of these men to journey to Asia, if this would help persuade the North Vietnamese Government that they must respond on purely humanitarian grounds.

The Hughes family, and families of other American captives wait, hope, and pray for word of and the rapid and safe return of these fine men who have answered the call of their country. So let us all intensify our support for them by demanding renewed and immediate action on the part of the Nixon administration, the State Department, and the United Nations, in putting relentless pressure on Hanoi for their release. We must do everything we can to get the Saigon government to lean over backward in their willingness to go more than halfway—indeed, all of the way—to release prisoners in exchange for American prisoners of war. We must also demand continuous public accounting of what action has been and is being taken to secure their release, and what can be done to insure that this sort of thing does not happen again.

As Members of Congress, we cannot any longer take this important matter on faith, and I urge every Senator to join me in getting not only some results but also more light from the Nixon administration and the Saigon government on the subject.

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

OPEN LETTER TO MEMBERS OF CONGRESS FROM MRS. JAMES LINDBERG HUGHES, WIFE OF AMERICAN PRISONER-OF-WAR

The unawareness of the citizens of the United States and the seeming indifference of countries all over the world to the special plight of the prisoner-of-war being held captive in Vietnam is heartbreaking. This is especially compounded for families who have children growing without fatherly guidance.

These forgotten men in Vietnam who fought loyally for their country have become trapped in a tragic diplomatic crossfire. They can't be helped by our country—and, they won't be helped by North Vietnam. There is no free flow of mail between families. It has been four years for some families who only 'now the cryptic words, 'missing in action.' There are no available lists of prisoners and very little contact with the outside world.

All that the families can do is to wait—patiently—which we have done in our case for more than two years—waiting for something to happen. But, nothing has, and we have come to a point where we feel that the world must be alerted and asked to participate in this problem. Help must come from neutral sources and impartial groups for these neglected Americans. People with hearts—outside the sphere of this political conflict—must come forth to offer assistance. These men, most of them pilots, are but innocent victims of a bad situation.

I implore that some neutral country intercede in behalf of the wives and families of the prisoners. People with sympathy in their hearts can accomplish miracles, and I truly feel that there are people such as this all over our world who are not aware of the plight of these men and the anguish caused their families by the insensitivity surrounding the problem. I am prepared to journey to Hanoi tomorrow as a wife and mother if this were allowed by the North Vietnamese and permitted by our own government.

I believe sincerely that even the people in North Vietnam realize that family ties are the same the world over, and I cannot feel they would ask less for their own people. If they were approached by an impartial nation, in behalf of the American families, they could not help but allow things they would want for their own people . . . the release of sick and wounded prisoners, free flow of mail between families, acknowledgment of lists and status of prisoners, and ultimate release of all prisoners on purely humanitarian grounds.

I would hope that the Congress of the United States would accept the challenge of this request and work along the lines I have suggested in hopes that it would evoke a favorable response from a sympathetic nation who might peruse the facts with the thought that "but for the grace of God, this could be me."

CONCLUSION OF MORNING BUSINESS

The PRESIDENT pro tempore. Morning business is closed and, under the order heretofore entered, the Chair recognizes the Senator from Mississippi (Mr. STENNIS) for 40 minutes.

S. 2762—INTRODUCTION OF BILL TO AMEND THE CIVIL RIGHTS ACT OF 1964 RELATING TO SCHOOL GUIDELINES

Mr. STENNIS. Mr. President, my purpose is to do everything that I possibly can to help save the public school system for all areas of the Nation. I am convinced that a demanding and hasty application of the extreme guidelines as to school integration will destroy the public schools in many areas of the country, including my own State, and in other areas of the country outside the South, when and if the application of these guidelines in such extreme form is ever actually put into operation there. Further, I am satisfied—and I am familiar with this subject—that the primary purpose of the present school guidelines and their application is merely to enforce racial integration through the schools rather than to improve educational standards.

These guidelines have not been applied, however, except in relatively few cases, outside the South, even though the Civil Rights Commission has repeatedly pointed out, as I shall develop in details later, the conditions of racial segregation in schools outside the South as equal to that found in the South.

It is abundantly clear to me that substantial moderation in the content and application of these guidelines would be brought about if they were applied uniformly throughout the Nation, thus including schools outside the South.

Accordingly, I am today introducing a bill that will provide that school guidelines shall be applied uniformly throughout the Nation.

There is no use to repeat all the facts here, but after years of effort by several of us along this line, even though promises have been made, and intentions have been stated, very, very little effort to apply these guidelines to schools outside the South has ever been shown and virtually no result has been shown.

A sense of common fairness should give wide support in the Senate to this measure. Further, for the first time, it will bring to a test the question of how far the people outside the South want to go in the application of these guidelines to their own schools.

I am further satisfied, Mr. President, that the uniform and extensive application of school guidelines will not be made outside the South unless they are required by law.

Further—I repeat—I am fully satisfied, from my experience with this problem, that this uniform application will result in substantial modification of the terms and application of the school guidelines. If enforced nationwide on an impartial basis, I believe the neighborhood school will be saved and a reasonable form of freedom of choice would thereby be saved.

Before I pass to the main portion of my remarks, I mention a few facts as to what is happening. I am deeply interested in education for all children, and have kept in close touch with the problem through school trustees, school administrators, and faculty members.

I have learned that when school funds are withheld for "noncompliance" it causes more Negro students than white students to be penalized. This is because there are more Negro schoolchildren in many of the school districts than there are white, and this is especially true in the lower grades.

I have learned that Federal loans to Negro students in colleges outnumber the Federal loans to white students in colleges in my State. I find that if these funds should be cut off and denied, the Negro students would thus lose more than would the white students.

I find that withholding of funds is happening at a time when the educational opportunities for Negroes are greater in the entire South than in any time in history, and at a time when the educational opportunities are growing faster than ever before.

The school guidelines being insisted on by the courts, the Justice Department, and HEW are so severe and demanding, timewise, that the school system in some instances will be closed, and in other instances so weakened that the opportunities for both white and Negro children will be destroyed or certainly greatly lessened. A public school cannot continue unless it has some positive local support. Taxes have to be voted. Support has to be given to the faculty in the community. Someone has to serve in the sometimes thankless job of school trustee. Many times there is little or no compensation, nor even money available to reimburse the expenses of members of the local school board.

Now, back to the main points of my presentation today and the background of facts pertaining thereto.

When the civil rights bill was passed, it was argued that segregation is wrong because it denies the Negro an equal opportunity to obtain an education.

If that is true, thousands of Negroes in the North are being denied an equal opportunity for an education.

If that is true, the Justice Department and HEW are grossly derelict in fulfilling their duty to remove injustice in the North and West, and to right the wrong in the North and West.

Let us look at the facts. As early as 1959, the U.S. Commission on Civil Rights reported:

> Concentration of colored Americans in restricted areas of most major cities produces a high degree of school segregation even in communities accepting the Supreme Court's decision. With the migration of Negroes and Puerto Ricans to the North and the West, and an influx of Mexicans into the West and Southwest, the whole country is now sharing the problem and the responsibilities . . .

In 1961, the Civil Rights Commission said:

> This migration has continued. The 1960 Census lists five cities in the North and West, each with more Negro residents than any southern city where separate public schools for white and Negro children were required by law in 1954. Indeed, only 9 of the 25 largest cities in the United States in 1960 lie in the South and 3 of them have completely desegregated their school systems since 1954.
>
> Public schools enrolling Negroes almost exclusively in some cases, and whites almost exclusively in others, are found in many cities throughout the North and West . . .

In 1966 the U.S. Office of Education stated:

> When measured by that yardstick (segregation), American public education remains largely unequal in most regions of the country, including all those where Negroes form any significant proportion of the population.
>
> The great majority of American children attend schools that are largely segregated—that is, almost all of their fellow students are of the same racial background as they are . . .

In 1967, the Civil Rights Commission reported that racial isolation or segregation in the North had increased, not decreased.

The Commission stated flatly:

> The extent of racial isolation in Northern school systems does not differ markedly from that in the South."

In 1967, the Civil Rights Commission report stated these facts:

> The Cleveland city schools were 47 percent nonwhite in 1960. By 1969, they were more than 50 percent nonwhite . . . In 1960, the Philadelphia city schools were 48 percent Negro. By 1965, they were almost 60 percent Negro. This pattern of racial concentration is typical of major metropolitan areas.
>
> . . . The high degree of racial separation in the schools shown by these national figures is found in the North as well as in Southern and border states. In Buffalo, New York, for example, 77 percent of the Negro elementary school children attend schools that are more than 90 percent Negro, while 81 percent of the whites are in nearly all-white schools (90 percent or more white). In Gary, Indiana, the figures are 90 percent and 76 percent, respectively. Again, in the North, the proportion of Negro children in majority-Negro schools often equals or exceeds the national average. In Flint, Michigan, 86 percent of the Negro elementary schoolchildren are in majority-Negro schools; in Milwaukee, 87 percent; in Chicago, 97 percent.
>
> A high degree of racial separation of Negro students frequently prevails regardless of the size of the school system. Examples from Northern and border state school systems are illustrative. Kansas City, Missouri has an elementary school enrollment twice as large as Fort Wayne, Indiana, yet in each city more than 60 percent of the Negro children are in nearly all-Negro schools. Detroit, Michigan has an elementary school enrollment almost four times as large as Newark, New Jersey, yet in each city more than 90 percent of the Negro children are in majority-Negro schools.
>
> Nor does the pattern necessarily vary according to the proportion of Negroes enrolled in the school system. For example, Negroes are 26 percent of the elementary school enrollment in Milwaukee, Wisconsin, and almost 60 percent of the enrollment in Philadelphia, Pennsylvania, yet in both cities almost three of every four Negro children attend nearly all-Negro schools. Negroes are only 19 percent of the elementary school enrollment in Omaha, Nebraska, and almost 70 percent of the enrollment in Chester, Pennsylvania, yet in both cities at least 80 percent of the Negro children are enrolled in majority-Negro schools . . .
>
> Racial isolaion in the schools, then, is intense whether the cities are large or small, whether the proportion of Negro enrollment is large or small, whether they are located North or South.

Despite the fact racial segregation in schools is as extensive in the North as in the South, HEW has done little to correct it in the North while concentrating a strong effort in the South.

The March 1, 1969, report of the Secretary of Health, Education, and Welfare admitted that almost nothing is being done in the North, while a crash enforcement program is underway in the South.

Mr. President, that report came in, as I recall, because of one of the mandates of an amendment that we put on the HEW appropriation bill here last year, which required a larger percentage of the money than therefore be spent toward enforcement in the North, and also that a report of the action taken be made to Congress.

I quote now from the report of March 1, 1969:

> During 1968, for example, there were Title VI compliance reviews in more than 400 Southern school districts as compared to only 40 Northern district reviews in thirteen Northern and Western states. In October of 1968, there were 67 Title VI staff members assigned to the South and only 32 persons covered the Northern and Western states.

That was after we agreed to that amendment offered by the Senator from Georgia, who has worked on this matter for years, and has had some mighty strong promises made to him in previous years by HEW.

(At this point Mr. ALLEN assumed the chair as Presiding Officer.)

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

Mr. STENNIS. I am happy to yield to the Senator from Georgia.

Mr. RUSSELL. I am happy that the Senator from Mississippi has introduced this bill. I do not know how far he will be able to get with it, but I am glad it has been introduced, and I am glad he is making this speech.

I do not think we can talk about this matter too much. There has undoubtedly been more sanctimonious hypocrisy in the administration of this law than there has ever been in the administration of any other law in the entire history of this Republic.

The Senator has read from the reports of the Civil Rights Commission—a Commission established by the Congress of the United States to investigate and make these reports. These statements reveal that there is as high a degree of segregation in such cities as Chicago, New York, and other Northern cities, as there has ever been in the South even before the passage of the 1964 bill.

Mr. STENNIS. Yes.

Mr. RUSSELL. No one has taken any steps whatever to correct it. The only visible gesture that has been made is one relating to the teachers in Chicago. No one has had the forthrightness to move into the schools themselves.

We have had a little taste of this hypocrisy here. Senators who have had segregated conditions in their own States, secure in the knowledge that the Department of Health, Education, and Welfare has no intention of invading their States, vote for more and more restrictive provisions to be applied solely in the Southern States, where they are now not only enforcing the law, but undertaking to enforce guidelines written in that Department which go far beyond the law.

Indeed, they have adopted guidelines that were specifically disavowed here on the floor of the Senate by the former Senator from Minnesota and former Vice President of the United States, Mr. Humphrey, the Senator from Rhode Island, and others who were in charge of the bill.

The situation has cried out to high heaven for justice and rectification; but I have about given up hope of getting any sense of fairness and relief from the Department of Health, Education, and Welfare. I thought at one time that perhaps, on getting a new Secretary, we might somewhere, sometime, run into some man who had a sense of fairness. I have all but abandoned that hope now; but we can continue to appeal to the sense of fairness of our colleagues in this body and in Congress generally, and to plead that if this infringement on not only the rights of States but the rights of the local school districts of the States is to contitnue, it be made general throughout the United States.

If the people of other sections experience what we have encountered in dealing with a group of fanatical bureaucrats who have gone about this very delicate matter in about as high-handed a fashion as it was possible to do, the attitudes of some Senators will surely change.

Mr. STENNIS. Mr. President, I thank the Senator for summing up in such a clear-cut and splendid fashion the facts as they have existed and the practices that have been going on. I have shared with the Senator from Georgia a long time the hope for bringing about some equality and some moderation in the application of these guidelines; perhaps the answer would be a national application. But, with him, I have just about given up. I do not see how anyone who is an advocate of these requirements could fail to support a bill of this kind. I believe in it so strongly that I am willing for it to be applied in my own State. If the Senator is willing to listen for 1 minute more here, I have before me, from the proceedings of the House of Representatives in the CONGRESSIONAL RECORD for July 31, 1969, a speech made there by Representative GREEN of Oregon. I intend to put much of it in the RECORD later, if permitted to do so, but I shall read only quite briefly at this point.

She said:

I am as committed to an integrated society as fully—as completely as any person in this Chamber. I always will be committed to an integrated society. I think that is the only way we can live on our little corner of this planet.

But also I have serious questions about a society that places the major responsibility for our social ills on one insitution in our society. That is what we are doing. We are placing the major responsibility for integration on one institution. I think this ought to be examined by the most ardent supporters of civil rights. Also, I think it is very difficult for any society to cross two social barriers at one time, and this is what we are trying to do.

Representative GREEN went on to support the Whitten amendment that was designed to bring at least some semblance of freedom of choice and to help preserve the neighborhood schools.

She was a very ardent supporter of that amendment and gave examples of her own close friends who came to Washington with high-minded ideas about school integration and bringing order into the schools, but in the course of years gave up and went to Maryland.

Mr. RUSSELL. Mr. President, I read the speech of the distinguished Representative. I can only wish that the same courage and forthrightness that characterizes her remarks would become instilled in the minds of all Senators and Representatives. If it did, this could be rectified within a very short period of time.

Mr. STENNIS. The Senator is correct. I was confident that he had read the remarks.

Mr. President, I ask unanimous consent that the remarks of Representative GREEN be printed in the RECORD for the information of all Senators and for additional circulation.

There being no objection, the remarks were ordered to be printed in the RECORD, as follows:

Mrs. GREEN of Oregon. Mr. Chairman, I move to strike out the last word.

Mr. Chairman, I agree with the gentleman from Michigan (Mr. RIEGLE), who spoke a few moments ago. I would say it certainly is wrong to have any black children continue to have less spent on them in school than other children.

It is wrong to have any black children—or any other children—continue to go to rundown and dilapidated and overcrowded schools. It is wrong to have black children—or any children—neglected by a society that professes to care.

If this happens any place in the United States, it will not be just these children who will suffer, but it will be future generations that will suffer, because an irresponsible Government did not give yet another generation the education that was rightfully theirs.

Mr. Chairman, I have voted for every Civil Rights Act that has been before this House of Representatives. I favor the Civil Rights Act.

I have no quarrel with the gentleman from Illinois in terms of the Civil Rights law, but I do quarrel with the way the Civil Rights Act is being administered.

Two or 3 years ago on the floor of the House, I put into the RECORD some memorandums which were sent by HEW officials and were signed by them when they visited for a few days in various school districts. They said in those memorandums which were written and signed by them:

"In "X" school you are to have a black teacher. In "Y" school you are to have a white librarian, etc., etc."

Where is this to be found in the Civil Rights Act?

If anybody on the floor says that the enforcement division of the Civil Rights Act does not require busing, in my judgment he is blind to what is taking place.

When the civil rights enforcement people say that in a school 5 miles away you must have a certain racial mix and then you are not requiring busing—what are we doing? Requiring youngsters to walk 5 miles? Is that what we are asking?

I am not going to argue from the legal standpoint, because I am not a lawyer. But I am going to describe what I think is happening. I think we are witnessing in this country the deterioration of our public school system. I think certain national policies are contribtuing to this deterioration.

All that I would ask is for the House of Representatives in a levelheaded way to examine what is actually happening and what is the result of certain national policies in our school system? Then on the basis of the evidence, make a judgment.

The gentleman from California a moment ago asked the rhetorical question: "How do you enforce civil rights if you do not cut off funds?"

Well, a moment ago we were arguing on another matter and it was suggested another law might be enforced by the cutting off of funds to individuals who abuse the law and he was very much opposed to that.

May I suggest that we are obliged not only to write laws but to see how those laws are enforced and how they are working. I really am not fully persuaded that we have found the absolutely correct solution by cutting off funds to enforce civil rights. It may be that it is true, but I would like to see evidence and I would like to see this question brought out to the stage of "visible discussion"—and not just in private conversations or in the cloakroom.

Recently there was a situation in the State of Mississippi where funds were cut off and the first thing that happened was that 80 Negro teachers were fired.

I think it is a legitimate question to ask: Are we really hurting the very people we want to help? What happened to the black children in this case? I would like to see title VI requirements reexamined by the most ardent supporters of civil rights. Who is being helped? Who is being hurt? How has the cutoff affected the quality of educational opportunity?

Is there another way—a better way to enforce the provisions of the Civil Rights Act against discrimination in any form?

I am as committed to an integrated society as fully—as completely as any person in this Chamber. I always will be committed to an integrated society. I think that is the only way we can live on our little corner of this planet.

But also I have serious questions about a society that places the major responsibility for our social ills on one institution in our society. That is what we are doing. We are

placing the major responsibility for integration on one institution. I think this ought to be examined by the most ardent supporters of civil rights. Also, I think it is very difficult for any society to cross two social barriers at one time, and this is what we are trying to do.

We are trying as a society to cross the racial barrier and the class barrier all at the same time—and, if I may say so, I think the latter is probably creating greater problems, greater disruption—yet we hear very little about it. We have never examined this closely when we talk about civil rights.

I should like to talk informally about a situation of which I know. Again, I do not discuss it from a legal standpoint, but it is what is happening, and I think this case can be multiplied by hundreds of thousands of cases across the country.

The CHAIRMAN. The time of the gentlewoman from Oregon has expired.

Mrs. GREEN of Oregon. Mr. Chairman, 8 years ago one of my close friends came to Washington with the Kennedy administration. This gentleman was and is committed to an integrated society. He had always supported civil rights legislation at the State level as well as the national. This family—and I am going to discuss them in personal terms, but not use their name. I think he would not object. This family is a Catholic family. They are also committed to the public schools. This family, because of income, could probably have moved into almost any area they wanted to in the District of Columbia. This family chose, because of their commitment, to move into an integrated neighborhood. They have three daughters. They placed all three daughters in the public school system.

About 2 years ago or 3 years ago they starting busing 90 youngsters from Anacostia—and I am extremely critical of the deplorable situation of the District of Columbia schools. That is why I am pleased when we voted more funds for vital education programs—funds for the District of Columbia—and all other school districts. I may have different priorities on the programs that we ought to support, and had I had my druthers—I would have increased vocational education funds more and impact aid less. But we must improve the quality of education, and equality of educational opportunity for all. But let me get back to this particular family and their series of problems.

Two years ago their youngest daughter became one out of three white children in an all-black classroom. Ninety youngsters were bused from Anacostia. It was not a "random sample" who were bused—and I do not blame any principal in Anacostia—already overburdened with problems—short of space in the classroom. But discipline problems emotionally disturbed youngsters, were the ones to be bused out. At 8:15 in the morning the small buses came and picked up children of white families in this neighborhood, who had the money to send their children to private schools, and at a quarter to 9 the big buses came from Anacostia and put the black children in the schools to occupy the spaces that the white children had just vacated.

I agree with the gentleman who spoke—and I have forgotten who it was—a moment ago about the questionable benefits to be gained from busing. It is the disadvantaged home, the disadvantaged neighborhood which must be improved equally as much as the school. Will 30 or 35 hours in another school offset the other 120 or 130 hours a week spent in deprivation? Can we continue to ask miracles of a teacher during 5 hours a day in class? If we rely on busing to correct social ills, are we not obliged to ask what is at the end of that bus line? Emphasis on integration and busing unaccompanied by a demand for academic excellence is worthless. This is what we ought to be concerned about—the quality of the programs. But the busing from Anacostia continued and the quality deteriorated.

Last year, this youngster would have been the only white child in an all-black classroom. This family had to face the problem, "Is my first responsibility to provide the best education I can for my daughter, or is my responsibility to maintain my commitment to an integrated class?"

And they decided, as hundreds of thousands of parents across this land are deciding, "My first responsibility is to provide the best education I can for my own child."

So this year they took all three of their children out of the public schools. The oldest daughter had also encountered major problems and threats of physical safety. All three of the daughters were taken out of the public schools and placed in private schools. This friend said—and he laughed—embarrassed as he said it—

"Edith, for the first time in my life—and I am ashamed to admit it—I have a serious question whether I am going to support tax levies and bond issues. I'm now paying for tuition for all three daughters in private schools."

About a month ago this family, because the neighborhood was changing and because of the situation of their three daughters, this family sold their home in the integrated neighborhood and they moved out to Maryland.

Now, what are we accomplishing? What are we accomplishing in terms of improving education? I believe the situation I described has been duplicated thousands and thousands of times all across the Nation.

I want to say that what is happening in terms of national policy affects Oregon. We do not have the problems in Portland that we have in the District of Columbia, but in Oregon this year 126 tax levies for schools were defeated—an all-time high. More and more people become dissatisfied, they are going to refuse to support the public schools. You see it in every State of the Nation.

If this happens, we have another step in this vicious cycle and a further deterioration of the public school system. So I make the plea for the Members who are lawyers and who say the Civil Rights Act is working out as they intended, and that busing is not occurring, take another look, examine the results—really inquire as to whether it is being enforced the way it ought to be enforced, and let us not let the eager beavers in the enforcement division of HEW enforce it the way they want to enforce it irregardless of the law—but require them—if they want to rewrite the Civil Rights Act, to present their proposals to the Congress; let us argue the issues on their merit, and write the laws and decide the issues by a majority vote.

It seems to me these are policies we must consider if we are really concerned about quality education, and we must not continue to let people outside the Government or let those in the executive branch enforce their version of what they think a civil rights law should require.

Mr. STENNIS. Mr. President, I will finish reading now the quotation I was reading from the report of March 1, 1969, and to bring it all together, I will re-read about three or four lines. It reads:

During 1968, for example, there were Title VI compliance reviews in more than 400 Southern school districts as compared to only 40 Northern district reviews in thirteen Northern and Western states. In October of 1968, there were 67 Title VI staff members assigned to the South and only 32 persons covered the Northern and Western states. While significant steps have been taken in hundreds of urban and rural school districts in the South, the large and sprawling urban centers of the North remain relatively untouched.

Mr. President, where is the sincerity, where is the fairness, where is the crusading spirit of those who pass laws and insist on urgent and demanding formulas being carried out and carried out now? Where is the sincerity, that should go along with the application of such a rule when that rule does not apply to one's own State?

The Department of Health, Education, and Welfare has been asked, they have been begged, they have been told, and they have promised over and over again that they would do something about this very matter. And they hardly turned a hand until finally we included a provision in last year's appropriation bill under which they had to make some kind of move.

Mr. President, I refer back now to the address in the House of Representatives by Representative GREEN of Oregon, as it appears on pages 21660 and 21661 of the CONGRESSIONAL RECORD of July 31, 1969. I refer particularly to the paragraph on page 21660 which begins:

Recently there was a situation in the State of Mississippi where funds were cut off and the first thing that happened was that 80 Negro teachers were fired.

That illustrates the course of action I refer to in the first part of my speech with reference to the cutoff of these funds hurting the Negro children, since these teachers were those employed especially in the particular special program supported by Federal funds.

Mr. President, I ask unanimous consent that, beginning there at that page of the address of Representative GREEN of Oregon, the remainder of her address be printed at this point in the RECORD.

There being no objection, the remarks were ordered to be printed in the RECORD, as follows:

Mrs. GREEN of Oregon. Recently there was a situation in the State of Mississippi where funds were cut off and the first thing that happened was that 80 Negro teachers were fired.

I think it is a legitimate question to ask: Are we really hurting the very people we want to help? What happened to the black children in this case? I would like to see title VI requirements reexamined by the most ardent supporters of civil rights. Who is being helped? Who is being hurt? How has the cutoff affected the quality of educational opportunity?

Is there another way—a better way to enforce the provisions of the Civil Rights Act against discrimination in any form?

I am as committed to an integrated society as fully—as completely as any person in this Chamber. I always will be committed to an integrated society. I think that is the only way we can live on our little corner of this planet.

But also I have serious questions about a society that places the major responsibility for our social ills on one institution in our society. That is what we are doing. We are placing the major responsibility for integration on one institution. I think this ought to be examined by the most ardent supporters of civil rights. Also, I think it is very difficult for any society to cross two social barriers at one time, and this is what we are trying to do.

We are trying as a society to cross the racial barrier and the class barrier all at the same time—and, if I may say so, I think the latter is probably creating greater problems, greater disruption—yet we hear very little about it. We have never examined this closely when we talk about civil rights.

I should like to talk informally about a situation of which I know. Again, I do not discuss it from a legal standpoint, but it is what is happening, and I think this case can be multiplied by hundreds of thousands of cases across the country.

The CHAIRMAN. The time of the gentlewoman from Oregon has expired.

(By unanimous consent, Mrs. GREEN of Oregon was allowed to proceed for 5 additional minutes.)

Mrs. GREEN of Oregon. Mr. Chairman, 8 years ago one of my close friends came to Washington with the Kennedy administration. This gentleman was and is committed to an integrated society. He had always supported civil rights legislation at the State level as well as the national. This family—and I am going to discuss them in personal terms, but not use their name. I think he would not object. This family is a Catholic family. They are also committed to the public schools. This family, because of income, could probably have moved into almost any area they wanted to in the District of Columbia. This family chose, because of their commitment, to move into an integrated neighborhood. They have three daughters. They placed all three daughters in the public school system.

About 2 years ago or 3 years ago they started busing 90 youngsters from Anacostia—and I am extremely critical of the deplorable situation of the District of Columbia schools. That is why I am pleased when we voted more funds for vital education programs—funds for the District of Columbia—and all other school districts. I may have different priorities on the programs that we ought to support, and had I had my druthers—I would have increased vocational education funds more and impact aid less. But we must improve the quality of education, and equality of educational opportunity for all. But let me get back to this particular family and their series of problems.

Two years ago their youngest daughter became one out of three white children in an all-black classroom. Ninety youngsters were bused from Anacostia. It was not a "random sample" who were bused—and I do not blame any principal in Anacostia—already overburdened with problems—short of space in the classroom. But discipline problems emotionally disturbed youngsters, were the ones to be bused out. At 8:15 in the morning the small buses came and picked up children of white families in this neighborhood, who had the money to send their children to private schools, and at a quarter to 9 the big buses came from Anacostia and put the black children in the schools to occupy the spaces that the white children had just vacated.

I agree with the gentleman who spoke—and I have forgotten who it was—a moment ago about the questionable benefits to be gained from busing. It is the disadvantaged home, the disadvantaged neighborhood which must be improved equally as much as the school. Will 30 or 35 hours in another school offset the other 120 or 130 hours a week spent in deprivation? Can we continue to ask miracles of a teacher during 5 hours a day in class? If we rely on busing to correct social ills, are we not obliged to ask what is at the end of that bus line? Emphasis on integration and busing unaccompanied by a demand for academic excellence is worthless. This is what we ought to be concerned about—the quality of the programs. But the busing from Anacostia continued and the quality deteriorated.

Last year, this youngster would have been the only white child in an all-black classroom. This family had to face the problem, "Is my first responsibility to provide the best education I can for my daughter, or is my responsibility to maintain my commitment to an integrated class?"

And they decided, as hundreds of thousands of parents across this land are deciding, "My first responsibility is to provide the best education I can for my own child."

So this year they took all three of their children out of the public schools. The oldest daughter had also encountered major problems and threats of physical safety. All three of the daughters were taken out of the public schools and placed in private schools. This friend said—and he laughted—embarrassed as he said it—

"Edith, for the first time in my life—and I am ashamed to admit it—I have a serious question whether I am going to support tax levies and bond issues. I'm now paying for tuition for all three daughters in private schools."

About a month ago this family, because the neighborhood was changing and because of the situation of their three daughters, this family sold their home in the integrated neighborhood and they moved out to Maryland.

Now, what are we accomplishing? What are we accomplishing in terms of improving education? I believe the situation I described has been duplicated thousands and thousands of times all across the Nation.

I want to say that what is happening in terms of national policy affects Oregon. We do not have the problems in Portland that we have in the District of Columbia, but in Oregon this year 126 tax levies for schools were defeated—an all-time high. More and more people become dissatisfied, they are going to refuse to support the public schools. You see it in every State of the Nation.

If this happens, we have another step in this vicious cycle and a further deterioration of the public school system. So I make the plea for the Members who are lawyers and who say the Civil Rights Act is working out as they intended, and that busing is not occurring, take another look, examine the results—really inquire as to whether it is being enforced the way it ought to be enforced, and let us not let the eager beavers in the enforcement division of HEW enforce it the way they want to enforce it irregardless of the law—but require them—if they want to rewrite the Civil Rights Act, to present their proposals to the Congress; let us argue the issues on their merit, and write the laws and decide the issues by a majority vote.

It seems to me these are policies we must consider if we are really concerned about quality education, and we must not continue to let people outside the Government or let those in the executive branch enforce their version of what they think a civil rights law should require.

Mr. STENNIS. Mr. President, the courts must also share some responsibility for the confusion and difficulty that confront our educators, school trustees, and the communities involved.

In some instances the courts have rushed hearings on appeals to the extent of denying the basic principles of due process of law.

And I carefully chose my words there. I know that this is a serious business, and these are serious remarks that I am making.

I cite here the facts relative to a hearing in New Orleans involving the consolidated cases of 33 school districts in south Mississippi.

And I speak with all deference in a personal way to all the members of that court in New Orleans, including the three-judge panel that I will refer to later.

I am not attacking them in any personal way at all, but I am pointing out, as a Member of the Senate, what I consider to be a flagrant case of the denial of due process of law in a case involving hundreds and hundreds, and literally thousands, of litigants.

A three-judge U.S. District Court of the Southern District of Mississippi handed down a judgment favorable to the school districts, authorizing the continuation for this year of their desegregation plan based on freedom of choice, primarily on the grounds there was not sufficient time from the date of the order until the beginning of the school term to complete and implement and put into operation new school integration plans—additional school plans—for the year 1969–70. The United States and other plaintiffs appealed. The case was heard before a panel of judges of the U.S. Court of Appeals of the Fifth Circuit at New Orleans—three members of that court.

On June 25, 1969, the clerk of the U.S. Court of Appeals for the Fifth Circuit addressed a letter to counsel of record in all cases, including those in which there were private plaintiffs and those in which the plaintiff was the United States of America, to the effect that the court would hear oral argument on all of these cases "on the motion for summary reversal and the merits in all of the cases both private plaintiffs and those of the United States." This letter further advised that the argument would be held in New Orleans beginning at 9:30 a.m., July 2, 1969, and any memorandums or responses would have to be filed in the office of the clerk by noon, July 1, 1969. In this letter, it was recited that the court had taken notice of the district court's order with respect to the record but that since appeal was being expedited on the original record, the U.S. attorney should make arrangements with the district clerk to transmit to the clerk of the court of appeals the entire record of the district court so that same would be available to the court if needed during the argument and summation. It was further stated that the court recognizes that "this is a huge record involving a large number of parties and matters of great public interest and importance."

I recite that matter here to show that the court knew this was of the utmost importance and of the greatest public interest to many people.

The letter was dated June 25, 1969, and was received by some of the counsel of record on June 26, and by others on June 27.

That meant that in this vast number of cases, with a record that I understand composed of five large boxes that were in the courtroom, but never used—not during the argument—counsel had at best Friday, June 27, Saturday, June 28, Sunday, June 29, and Monday, June 30, to prepare any response, since it had to be filed July 1, 1969. That is a total of 4 days, with a Saturday and a Sunday intervening—Friday, Saturday, Sunday, and Monday. Only two of those were what might be called workdays by staffs, stenographers, and secretaries.

Briefs filed by the United States of America as appellant were received by

some of the counsel for defendant school districts on Monday, June 30, 1969, and by others on Tuesday, July 1, 1969. In addition, supplements to the brief were delivered to counsel on the morning of the hearing, July 2, 1969. The case was heard that day. Thus, counsel was afforded no opportunity whatsoever to examine or inspect the supplements to the brief in order to reply thereto either in writing or orally. They did have these 4 days, but only 2 were ordinary working days, to apply to the appellant's main brief.

The proposed opinion and decree as submitted by the private plaintiffs and the United States of America—this thing came to a head there on July 2, and they already had a decree prepared; the United States of America and the private plaintiffs had a decree already prepared—not submitted to nor seen by counsel for the school districts until the morning of the hearings, July 2. Accordingly, there was no opportunity to examine same or make any meaningful comments in regard thereto.

These facts within themselves, I submit to my colleagues in the Senate, obviously show a denial of due process of law to the litigants, in that there was not sufficient notice and time for the school districts to respond to the appeal and the proposed decree, nor to prepare for the hearing. This hearing lasted only 1 day, and a decree was handed down by the panel the next day, July 3, 1969.

I understand that when attorneys for the Government got there, they already had the decree written out. I understand that attorneys for the school districts were told they could bring along a decree written out in their favor. But who was so foolish as to think that a part of this little 4 days of time to prepare should be used in writing up a decree in their favor? I submit that the question answers itself.

This curtailment, which amounted to a denial of due process of law, cut off the right to be heard of literally thousands and thousands of people throughout the 33 school districts which cover all or the most of 33 counties. It cuts off the rights of hundreds of school trustees, administrators, superintendents, and other officials who had labored long and faithfully in their efforts to perform their duties in their official capacity. I know something about what a job it is to go through those long, long hours of tortuous proceedings. Few of them receive any pay for it. They barely receive some of their expenses. I understand they do not receive their expenses for coming to meetings.

This happened at a time when most of the courts are greatly extending, rather than curtailing, the rights of litigants, including those charged with crime, and extending the requirements of what is called due process of law. All persons charged with rape, murder, treason, theft, or other felony are having extended to them rights and privileges far beyond what has heretofore been known as due process of law, and are rendered actually untouchable in many instances.

I refer to matters such as the Miranda case. The great history of this trend was brought forth in debates on the floor of the Senate last fall. At a time when all these extensions were afforded to everybody, even those charged with the most heinous crimes, when due process of law is being extended with more and more liberality, these school trustees, laboring with this problem to which Representative GREEN refers, were cut off—I say on my responsibility as a Member of this body—without being given due process of law in this instance.

I speak with deference to the judges on this panel, but conclude that this set of facts clearly shows a lack of due process of law having been accorded these litigants at this appellate level. In fact the school districts were denied appellate consideration of their case.

Thus, harm has not only been done to the judicial process but if this case is pursued to conclusion in this fashion it will also do harm to the cause of public education.

But, after all, the ills are measured in the field of education, but the blight on the judiciary for its failure to afford due process of law to the thousands of people involved here will remain. The indelible stain will not be erased.

In view of all the foregoing facts, I think the Department of Justice should in its discretion—I hope that it will, and I ask to—withhold any further prosecution of these cases until all of the cases can be reviewed by competent advisors—competent educators—who have time and a chance to make a fair, painstaking study of the problem and a chance to consider alternative plans on their merits and from the standpoint of educational achievements.

I am now talking about the advisers to the school trustees and the courts. They are people who are employees of the Department of Health, Education, and Welfare. I have nothing personal to say about them. But every informed person knows that they are aggressive and vigorous. They openly say, and have said to me, "We will use every line, every sentence, every phrase, and every bit of the argument on the floor of the Senate or the House, bring in the reports, everything in the law, any loose language, and anything else, to try to carry our point and rush this thing through to completion." I am talking about total integration of the schools. They have told me that many times. At the same time, though, limping and lame, they just could not get around to applying their own doctrine anywhere, with slight exceptions, except in the South.

Incidentally, the original Court decree apparently was so severe in its language that it cut off the rights of the school trustees to propose an alternative plan. But I am glad they did modify the language and finally made it clear that the school trustees, after all, would have a chance to propose an alternative plan. That was clearly set forth in the cases from the Supreme Court of the United States.

Mr. President, I do not think any of these advisers have any business representing the Department there and being used by the Court as advisers. These advisers should not be connected with the Government or any department of the Government; nor should they be responsible to any department of the Government, but should report their proposals to the local boards of the school districts in litigation.

I am sure some of these HEW people are very fine, but they are working for Mr. Finch, and they are going to have a plan there of which Mr. Finch approves, or he well reject it.

I am not attacking him personally. He has one of the worst jobs in the whole Government and I make nothing except complimentary remarks with respect to him personally. My point is that these advisers should not be working for anyone. They should be independent.

Instead we now have investigators from HEW hastily trying to devise integration plans for 33 school districts.

I know these investigators have been doing that in my State. They are a nice group of men as far as I know, but it has been directly reported to me by a gentleman I have known all of my life, and I know he is telling the truth, that one of these investigators said, "We have a job to do here, and we have a little over a week to do it when we should have 4 months." That proves my point. This is a shotgun action and a shotgun method, which is contrary to all reason.

Under direct decree from this three-judge panel, these HEW investigators are being given only about 15 days to study all the conditions and educational problems in the 33 districts and only a few more days more than that to devise plans to submit to the trustees. I learned of the modified decree of the fifth circuit panel wherein they would permit the trustees to propose an alternative. They did modify it so that the trustees could have an alternative proposal. The districts are to have only 10 days to file objections to the HEW plan or to file alternative plans.

As I said, one of these gentlemen stated that they have only a week or 10 days to devise plans when they need 4 months to do the job.

I hope in some way, and there are ways it can be done, that that court will yet give these trustees an opportunity to present their case on appeal and if they still reverse the lower court, that at least they will give them a reasonable opportunity and give the investigators—I hope they are independent investigators, but if not, independent from the HEW—a reasonable chance because this matter involves literally hundreds and hundreds of teachers, thousands and thousands of students, and it involves the school buildings and all the complications that go with it.

These schools are scheduled to open August 25. The court is trying to beat that deadline. It is very obvious. I hope that is the only reason there was such a scanty appellate hearing and such a pell-mell rush into this matter.

Mr. President, in many areas we are not prepared for these drastic changes which demand almost total integration now. A sufficient number of teachers are not available many times; even if available, many of them are unwilling to proceed in their profession under the drastic conditions required.

These conditions are not peculiar to

the South. In one of those rare proceedings outside the South I read about teachers being offered a bonus of $1,000 to accept a transfer in order to comply with an order from HEW, but that the teachers' union sharply objected. The school superintendent stated that he would ask for $5.6 million additional in Federal funds to implement the new plan.

The great city of Chicago with all the resources behind it, has not had separation of schools by law. This demand on them seems to be so great that they are sending a bill here, for their expenses perhaps through their Senators or Representatives.

The PRESIDING OFFICER (Mr. CRANSTON in the chair). The Senator's 40 minutes have expired.

Mr. STENNIS. Mr. President, I ask unanimous consent that I may proceed for 4 additional minutes.

The PRESIDING OFFICER. Without objection, it is ordered.

Mr. STENNIS. Mr. President, on the other hand, many educators inform me that workable plans are available; school trustees and educators also advise me that some plans are being used to carry out an orderly and effective school integration program. I know as a fact of my own personal knowledge that hundreds and hundreds of school trustees and school officials, dozens and dozens of superintendents and administrators, and many faculty members have taken the lead and have patiently worked with sincerity and sacrifice—admirable sacrifice—on these school plans. Some of the plans are working. But Federal officials, and many times the courts, are now rejecting these efforts as insufficient and are thus rebuking and rejecting the people that are really trying to carry out the demands of an integration policy. Commonsense tells us that the rejection of the efforts by these people does not make sense.

I fully recognize that any discrimination against any child in public school matters, because of color, is illegal under present law. However this does not mean that all children and all parents must be denied all their basic rights concerning school attendance. Children that are not objects of possible racial discrimination also have certain rights that cannot be denied. Certainly everyone has some right to have a part in making choices as to schools.

The trend of these school guidelines and their application puts everyone in a strait jacket in order to meet the required formulas. The trend of guidelines and orders chains everyone down to the requirements of the formula. Like the serfs of old who were "tied down to the land," every child now is tied to a formula.

These formulas are tied to the percentages of school population according to color. They have long been used by HEW and are now being adopted by the courts. This is another instance of doing the opposite of what was used in the original argument in the passage of the civil rights bill.

Mr. President, I introduce, for appropriate reference, the bill to which I have already referred. Briefly, the bill would require as a matter of law that compliance be nationwide regardless of the history of the law in any area with reference to public schools. I ask unanimous consent that the bill be printed in the RECORD.

The PRESIDING OFFICER. The bill will be received and appropriately referred; and, without objection, the bill will be printed in the RECORD.

The bill (S. 2762) to amend the Civil Rights Act of 1964 to assure a more uniform enforcement of title VI thereof, introduced by Mr. STENNIS, was received, read twice by its title, referred to the Committee on the Judiciary, and ordered to be printed in the RECORD, as follows:

S. 2762

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That section 601 of the Civil Rights Act of 1964 is amended by inserting "(a)" immediately after the section designation thereof and by adding at the end thereof the following new subsection:

"(b) It is the policy of the United States that compliance with the provisions of this title be effected uniformly in all regions of the United States and that the provisions of this title be enforced against de facto discrimination to the same extent as against de jure discrimination."

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

Mr. STENNIS. I yield.

Mr. ALLEN. Mr. President, I commend the distinguished Senator from Mississippi for his statesmanlike address, for its logic, its reasonableness, and its fair approach to this problem. I should like to associate myself with his remarks.

Some weeks ago, we read in the press that the guidelines to which the Senator has referred, and which are not receiving fair and equal enforcement throughout the country, had been relaxed.

For the life of me, I see no evidence whatsoever of any relaxation of those guidelines. Far from it. If we did not know that there had been a change in the occupant of the White House, if we did not know that there had been a change in the position of Secretary of Health, Education, and Welfare, we would think that members of the past administration were still in charge. Because just as soon as it was suggested there had been a relaxation of the guidelines, funds were withheld by the Secretary from schoolchildren, and many new suits were filed to place these matters in the Federal courts.

Instead of relaxation, we see an escalation of strict enforcement of the guidelines.

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

Mr. STENNIS. Mr. President, I ask unanimous consent to proceed for 1 additional minute.

Mr. ALLEN. Mr. President, I ask unanimous consent that the Senator's time be extended for 10 minutes.

The PRESIDING OFFICER. Is there objection? The Chair hears none, and it is so ordered.

Mr. STENNIS. I am delighted that the Senator can have 10 minutes.

Mr. ALLEN. I commend Representative JAMIE L. WHITTEN, of Mississippi for the amendment which he was successful in getting adopted by the House last week to the Health, Education, and Welfare appropriation bill, an amendment which was passed by the House, as I recall from reading the newspapers at that time, as to 1968 appropriations for the Department of Health, Education, and Welfare. It provided in 1968, as it did in the present amendment, that the funds appropriated for the Department of Health, Education, and Welfare cannot be withheld to force the busing of students, and cannot be used to force the closing of schools, and cannot be used to force any child to attend any particular school against the wishes of that child's parents. As I understand it, when that bill reached the Senate in 1968, the amendment was emasculated by having the additional provision added that such measures cannot be used to force a racial balance in schools. The Department of Health, Education, and Welfare has taken the position that they are not using methods of enforcement in order to force a racial balance in school systems.

However, that is exactly what is being done.

As the Senator from Mississippi has stated, segregation through the years has not been confined to the South, but the guidelines are being enforced unequally throughout the country.

I heartily approve of the bill introduced by the Senator from Mississippi and hope that it will pass.

In Alabama, our State government and our people want to see every child in Alabama receive a quality education. We want to see freedom of choice exercised by school patrons. It is the policy of our school system that any child be allowed to go to any school in that system that he or she wishes to go to, but not be forced to attend a school he does not wish to attend.

So far as I have been advised, the Supreme Court has never ruled that freedom of choice is illegal. Alabama's school policies are not designed to help only the white pupils and operate against Negro students. Far from it.

I received a call the other day from patrons of a colored high school in Alabama, which is a fine school, with a wonderful school building and fine faculty and student body. Its patrons were calling me to ask what could be done to halt the closing of their school.

They told me, "They have ordered the closing of our school. We have a wonderful band. We have a splendid football team and a wonderful spirit in our school and we do not want to see it closed. We do not want our children to have to go to a white school."

Mr. President, that is what application of the guidelines is requiring. Yes, that and the reverse of that.

Mr. President, in Alabama, the Department of Health, Education, and Welfare, and the Federal courts have caused the closing of school buildings, mostly new, which have cost over $15 million. They have ordered them closed in order to carry out the policy of forced integration of our schools.

We used to hear it said that we could not discriminate in the operation of our public school systems. But now present policies of HEW constitute discrimination in reverse, because they are forcing integration and not just outlawing segregation.

Thus, speaking on behalf of the people of Alabama, I would say to the present administration, do not destroy our public school system.

By continuing the present policy of the Department of Health, Education, and Welfare, both in the application of the guidelines and by throwing these matters into the Federal courts, the Department and the administration are destroying the public school system of Alabama.

I would say to the administration, which on occasion I support if its policies are in accord with my convictions and principles, that in Alabama—and I believe in the whole South—the present administration will not be judged by whether it presents a balanced budget to the country, it will not be judged by whether we have a recession, or whether we have good times, it will not be judged by whether the administration is able to extricate the country from the Vietnam war, but it will be judged on the fairness with which it handles the school situation in Alabama and throughout the South.

Again I say to the administration, do not destroy our public school system. We love our schoolchildren. We want to see every schoolchild, irrespective of race, receive a quality education. Under the rules and policies of the Department of Health, Education, and Welfare, and the present administration, they are not going to be able to get that quality education.

Mr. President, I thank the distinguished Senator from Mississippi very much for yielding to me.

Mr. STENNIS. I thank the distinguished Senator from Alabama for his comments.

Mr. President, I yield the floor.

AUTHORIZATION OF APPROPRIATIONS FOR FISCAL YEAR 1970 FOR MILITARY PROCUREMENT, RESEARCH, AND DEVELOPMENT, AND FOR THE CONSTRUCTION OF MISSILE TEST FACILITIES AT KWAJALEIN MISSILE RANGE, AND RESERVE COMPONENT STRENGTH

Mr. MILLER. Mr. President, I ask unanimous consent that the Senate resume the consideration of the unfinished business.

The PRESIDING OFFICER. The clerk will state the bill by title.

The ASSISTANT LEGISLATIVE CLERK. A bill (S. 2546) to authorize appropriations during the fiscal year 1970 for procurement of aircraft, missiles, naval vessels, and tracked combat vehicles, and research, development, test, and evaluation for the Armed Forces, and to authorize the construction of test facilities at Kwajalein Missile Range, and to prescribe the authorized personnel strength of the Selected Reserve of each reserve component of the Armed Forces, and for other purposes.

The PRESIDING OFFICER. Without objection, the Senate will proceed to the consideration of the bill.

The Senate resumed the consideration of the bill.

IN SUPPORT OF THE PRESIDENT ON THE ABM

Mr. MILLER. Mr. President, the Senate debate on the ABM has been in the finest traditions of a separate, coequal, independent branch of the Government. Everyone has had an ample opportunity to make his points. In my judgment, further debate will change no minds, and I hope we can get on with the voting on this matter and any amendments that may be offered.

I have been pleased that this debate has been free from partisanship, because anything relating to the security of our country certainly should not appear in the partisan political arena. I note, for example, the great leadership among my Democratic colleagues, especially the Senator from Mississippi (Mr. STENNIS) and the Senator from Washington (Mr. JACKSON), in support of the President on this issue.

It is regrettable that a certain amount of emotionalism has entered this controversy—not so much here on the floor of the Senate as among some members of the public. When the national security is involved, it is most inappropriate and unhelpful to suggest that those on either side of the controversy have a premium on morality, good faith, or wisdom. Resort to such extreme tactics, I might add, generally tends to weaken the position of those who follow them, because the natural inference is that a genuinely strong position would command a confidence which would preclude the use of such tactics.

This is a most complex issue for all of us. None of us is a physicist, and no Member of Congress I know of has had much contact with Soviet or Red Chinese officials, much less has participated in extensive negotiations with them. Accordingly, we are forced to look to those possessing expertise in the fields of physics and diplomacy, supplemented by experts—both civilian and military—in the field of national defense and such knowledge and experience as we individually possess on that subject. Ultimately a judgment factor is involved, and when some of the experts differ among themselves, judgment is more difficult. It is for this reason that I have constantly made the effort to point out that there are good, honest, decent, and conscientious people on both sides of the controversy.

MY CONCLUSION

I do say, however, that my own careful analysis of the evidence, the arguments, and the professional judgments advanced has caused me to conclude in support of the President on this issue. And let let me point out that the President's assurance to the Congress that each phase of the deployment of the ABM will be reviewed to insure that we are doing as much as necessary but no more than that required by the threat existing at that time—this assurance seems most reasonable in light of the anticipated negotiations with the Soviets on the subject of arms control and limitation.

PUTTING COST IN PERSPECTIVE

A great deal has been said about the cost of the ABM, the size of the national defense portion of the budget, and the needs of other areas of Government for money. Interesting as this information is, it seems to me that it is somewhat beside the point. If, indeed, one concludes that the the ABM "won't work," we should not approve it—regardless of how lean or fat the budget may be. If, on the other hand, one concludes that it will work and that it is likely to be necessary to our Nation's security, then it should be approved, and the state of the budget is very secondary.

I appreciate that the Senator from Missouri (Mr. SYMINGTON) is concerned about the size of the defense portion of the budget. So is everyone else. However, the size should be placed in perspective if we are to properly evaluate it. Thus, for example, the $78 billion defense budget is about 40 percent of the total expenditure budget of $195 billion. It is estimated that our total GNP for fiscal 1970 will be $960 billion, so you can see that defense will comprise approximately 8.1 percent of our GNP. If the estimated cost of the war in Vietnam totaling $28 billion is taken out of the $78 billion defense budget, this leaves $50 billion or 5.2 percent of our GNP.

For fiscal 1969, our GNP totaled $895 billion and Defense Department expenditures $75.2 billion, or 8.4 percent of our GNP. If the estimated cost of the war in Vietnam totaling $28 billion is taken out of the $75.2 billion defense budget, this leaves $47.2 billion, or 5.7 percent of our GNP.

These percentages should be compared with 1964—8.1 percent, GNP $612 billion and defense $48.9 billion—when the war in Vietnam costs were relatively small; 1959—8.5 percent, GNP $469 billion and defense $40 billion; and 1954—9.5 percent, GNP $362 billion and defense $34.4 billion.

Compared to 15 years ago, 10 years ago, 5 years ago, and last year, the portion of our gross national product going to all Department of Defense costs for fiscal 1970 is smaller in three and equal in one. And if the costs of the war in Vietnam are taken out, and this should be done to look at the defense budget from the standpoint of "sufficiency" compared to Soviet military power and also to accurately compare 1964, 1959, and 1954, the percentage of GNP for fiscal 1969 and 1970 is greatly less. This is the perspective we should have in evaluating the argument of the Senator from Missouri. Furthermore, it would be well to consider that, with a GNP of only half that of the United States, the Soviets have a military budget equal to ours—exclusive of the costs of the war in Vietnam—so it is clear that the burden on the people of the Soviet Union is very great.

On the money point, which, as I have pointed out, is something of a side issue, it appears that most of the opponents are favorable insofar as strictly research and development costs are concerned.

Of the total authorization before us, they only question some $345 million, which is scheduled for procurement leading to deployment. Of the $78 billion defense budget, one could hardly argue that $345 million is a major factor. For those who do not favor even the research and development and think the whole ABM program should be canceled, we are talking of a system which, fully deployed at all sites, would cost an estimated $10 billion, of which $9 billion would be spread over the next 7 years. This could hardly be said to be of major significance in the overall Federal budget.

WILL IT WORK?

The first real point to judge on this issue is whether or not the ABM system will work, because, regardless of how lean or fat the budget may be, it would be improvident to spend any money at all for something that will probably not work. Here is where one must look to the scientific community—particularly the physicists. As I pointed out to the Senate on May 1, Prof. Eugene P. Wigner, Nobel Laureate of Princeton University, is preeminent; and his speech of April 29 supporting the ABM before the American Physical Society, which I placed in the RECORD, is most persuasive. Even Prof. Hans Bethe of Cornell University, one of the opponents, concedes that the system could be effective and places his opposition on the matter of timing rather than on the "won't work" theory.

IS IT NEEDED?

The next point is whether it is needed, because, even if it is likely to work, it would be improvident to go ahead on it if it will not be needed. Here is where so many opponents have so much trouble, because it is necessary to project not only our own capabilities, but those of the Soviets and Red Chinese, many years into the future. It is not a question of our relative strengths today, but rather our relative capabilities in the mid-1970's. The best intelligence information we have indicates that by that time period the Soviets will have sufficient power to seriously threaten our deterrent capability; and the Red Chinese will have sufficient power to hold some of our major cities hostage. What their intentions will be then, no one knows, and there has been too much hair splitting, I think, over whether the Soviets are "going for a first strike capability"—as if it was their intention to follow a first-strike strategy—or whether they will have such a capability. It is the capability which poses the threat. Hostile intentions, without the capability, do not pose the threat. Friendly intentions, with the capability for a first strike, do not pose a threat either; but intentions can change. So it is the capability which is of primary importance.

Against this there are those who argue that we should, nevertheless, ignore the capability and stand still. Otherwise, they say, we will escalate the arms race. But who, indeed, has been doing the escalating? Who was the first to deploy an ABM? Who was the first to test it? Who is moving toward a capability of destroying our deterrent power? Who has refused during all of these years to enter into negotiations, much less an agreement, on nuclear arms limitation and control, with effective inspection to prevent cheating? It has not been the United States. I find this argument not only invalid but a dangerous form of unilateral disarmament; because one can have unilateral disarmament by standing still while a potential adversary moves ahead—just as well as by destroying one's weapons while a well-armed adversary stands still. Additionally, as I shall point out later on, the cost considerations make it unlikely that the Soviets would attempt to neutralize our ABM system.

Hopefully, the United States and the Soviet Union—and eventually the Red Chinese—will enter into a meaningful agreement which will put a stop to the arms race. To be meaningful, there will have to be some procedure to prevent cheating, and this means a certain amount of inspection. However, we have been advised that negotiations—even if they prove successful—will be terribly complex and of several years' duration—much longer than those resulting in the Nuclear Nonproliferation Treaty. It would be suicidal to entrust the security of our people meanwhile to mere hopes and trust in the "good faith" of our adversaries.

IS AN ABM THE BEST ANSWER?

The third point is whether, assuming something is needed to counter the capability of the Soviets and Red Chinese, the ABM is the best answer. For example, it is argued that it would be cheaper to simply add more Polaris submarines, or to add more Minuteman missiles, or to put our missiles in harder sites. There are several insuperable difficulties with such alternatives. For one thing, they do not afford us a capability of protecting a few of our cities which could be threatened by Red Chinese intercontinental ballistic missiles. To the people in those cities, it would be no protection if our only option was massive retaliation against Red China. If a small attack, by accident or design, occurred from the Soviet Union, our President surely should have another option than massive retaliation, which could work a holocaust on both sides. From the standpoint of the Soviets, there is no cause for concern about a purely defensive system, like the ABM, which is designed to protect our deterrent capability and, to the limited extent necessary to guard against a Red Chinese threat, a few of our cities.

TIMING OF "DEPLOYMENT"—UPCOMING TALKS WITH SOVIETS

A fourth point relates to timing of deployment. This is raised by those who say they recognize the first three points; but for the current fiscal year, at least, we should authorize the President merely to engage in further research and development on the ABM. There are three arguments revolving around this point, any or all of which are dominant in the thinking of those who advocate delay in deployment:

First. The design of the ABM system is defective in that the radars are too vulnerable to enemy attack. There are two answers to this: If, indeed, there were an enemy attack of sufficient size to threaten the radars, there would be no choice except massive retaliation—launched before the radars were struck; and, with deployment of both phases of the ABM system not scheduled before the mid-1970's, there will be time to modify the radars or to "harden" them if such action is feasible.

Second. Future action by the Soviet Union in deployment of missiles which would threaten our retaliatory force hopefully may indicate that they are not pursuing a first-strike capability. There are two answers to this: If we wait, our hopes may well not be borne out. After all, there is no indications that the Soviets will slow up or stop their deployment of such missile power; all indications are the other way. And if our hopes are not borne out, it could be too late due to the long leadtime required for deployment of an ABM system. This, incidentally, is where I must respectfully disagree with Prof. Hans Bethe. If, indeed, the Soviets slow up, reorient their system to meet a Red Chinese threat, or stop such deployment, we can slow up, reorient, or stop our own ABM deployment in line with the President's assurance to which I have previously referred.

Third. If the Congress authorizes the President to commence the long leadtime procurement required for deployment by the mid-1970's, this will undercut the arms control and limitation talks which are scheduled to begin late this summer with the Soviets. The point seems to be that the President's bargaining position with the Soviets will be better if the Congress refuses the authorization which the President has requested. My reaction is that his position would be undercut by such action by the Congress. This is supported by the recent testimony of former Secretary of State Dean Acheson—June 11, 1969, before the Subcommittee on Economy in Government of the Joint Economic Committee—as follows:

> As we add to, maintain, and protect our power, we do not in any way diminish the possibility of an agreement with the Soviet Union. In fact, we strengthen it . . . The idea that the Soviet Union will negotiate with us in the sense in which we use that term is quite untrue . . . The Russian conception of negotiation is carrying on of war by other means . . . Therefore, as we strengthen ourselves, we bring about that calculation of forces by the Russians which induces them to make a deal. They are not moved by argument, nor by exhortation, nor by considerations of morality. They are moved only when their calculations lead them to believe that it is more advantageous to make a deal than not to do so.

Mr. Acheson has had considerable experience in negotiating with the Soviets. With the Korean war, one could say that he learned the hard way and, having done so, his viewpoint is even more to be respected.

But there is an even greater deficiency in this argument to limit the President's authority to research and development without deployment. It is that "research and development," in the broad sense, includes service testing, and there can-

not be service testing without deployment. It is in the service testing that deficiencies are very often detected on the basis of which modifications are made in a weapons system—be it an aircraft, a tank, a missile, a radar, or an ABM system. Those Members of the Senate who seek to limit deployment to Kwajalein Island rather than to North Dakota and Montana, as the President requests, understand very well that service testing is a part of research and development. Where they err, it seems to me, is that service testing at Kwajalein would have to be followed by final deployment to North Dakota and Montana; whereas deployment for service testing in North Dakota and Montana would be followed by final deployment, with such modifications as service testing indicates should be made, at minimal cost to the taxpayers. I understand informally that at least $2 billion would be saved by handling the service testing this way, and there seems to be no good reason why this extra cost should be incurred.

POSSIBLE SOVIET RESPONSE

A fifth point to be considered is whether a fully developed ABM system in the mid-1970's could be neutralized by the Soviets simply by increasing the number of their SS–9 missiles. Theoretically this is possible, but as a practical matter it is unlikely because the assured destruction required to preclude us from making a sufficient retaliatory strike would be too costly. In other words, although a large force of SS–9 missiles could destroy most, if not all, of our Minutemen without an ABM protection, with an ABM system there would be enough Minutemen which would survive to provide us with a deterrent capability. From that point on, the cost of adding to our ABM system would be much less than the cost of the additional SS–9's required to overcome our deterrent capability.

It is for this reason that William R. Kintner, in his article "The Prudent Case for Safeguard," published last June, concludes that, with the Chinese Communist threat by the 1970's, the most stabilizing system as between the Soviets and the United States is the Safeguard ABM system.

The interesting and informative statement by the Senator from Wisconsin (Mr. PROXMIRE), "Russian Military Power Limited by Economic Weakness," lends support for the conclusion that cost considerations make it unlikely that the Soviet response to Safeguard would be to try to neutralize it. And this holds true even if the Soviets proceed to provide their SS–9's with a MIRV capability.

POSEIDON AND BOMBER FORCE

The so-called overkill adherents argue that even if all of our Minutemen were destroyed, we would have sufficient deterrent power left over in our Poseidon submarine force and our strategic bombers. This argument, of course, completely ignores the Red Chinese threat to hold some of our cities hostage unless we have a defensive system. But vis-a-vis the Soviets, it ignores the observations made by Dr. Wigner about the city evacuation program in the Soviet Union. Estimates of fatalities in the Soviet Union which are made by the "overkill" adherents therefore are unrealistic. As Dr. Wigner points out, only 35 to 45 percent of such fatalities could be attributed to Poseidon, and this could be a gross overestimate because the calculation assumes that all our submarine fleet is on station and the people have not evacuated their cities; further, technical developments may negate its effectiveness, so that it would be dangerous to put all our trust in a single-type deterrent. The capability of negating the effectiveness of our bomber force is even greater.

The underlying weakness of the "overkill" argument is that it proceeds on the false assumption that our planners are seeking to add to the number of weapons that can be detonated on major targets in the Soviet Union. Rather, what is being attempted is to maintain the number of such weapons we believe required for "assured destruction capability" after—not before—a first strike against us and after—not before—running the gauntlet of Soviet defenses, taking into account also anticipated failures among our strategic weapons. Accordingly, it is invalid to take into account our tactical nuclear weapons, which are designed to deter attack against Western Europe and, because of their short range, cannot be taken into account in calculating assured destruction capability against the Soviet Union.

NAIVETE TOWARD SOVIET LEADERS

Opponents of the Safeguard system are motivated by various arguments, the major ones of which I have sought to rebut. I do not question the good faith behind the arguments, although the logic, assumptions, emotionalism, and side issues must be questioned. But there is one weakness which, though not representative of the opponents, characterizes the approach of a few of the opponents and concerns me more than all of the questionable arguments. It is a naivete toward the Soviet leaders—an inexplicable tendency to overlook their words and especially their deeds, and to proceed on the basis of hope rather than on the basis of realism in our relations with them.

I am not talking about Red Chinese leaders or Rumanian leaders or Yugoslavian leaders, whose ideological differences demonstrate that there has been a departure from the Communist monolith—one which, in the case of Yugoslavia and Rumania, at least, provides optimism for genuinely friendly relations. All of us hope for genuinely friendly relations with the Soviet leaders, but this hope must be tempered with realism and a willingness to look at things as they are. As former Secretary of State Acheson testified on June 11:

> The power of the United States alone blocks the Sino-Soviet ambitions in the world. They may fall out between themselves, they may have difficulties, they may fight with one another in a minor way, but on one matter they are completely and wholly agreed. The United States is the enemy.

He continued:

> The idea has been expressed that if we take the step proposed here [authorization of the Safeguard system] it is going to make negotiations much more difficult. It is not going to make it any more difficult. Any negotiation will be difficult to start with. All the problems are very difficult. They are not made any more difficult by adding to our defense. I doubt emphatically that some great transformation of relations with the Soviet Union is about to move us from an era of confrontation to a phase of negotiation. We have been negotiating with the Soviet Union all along. We shall be involved in confrontation into an indeterminate future. The two go hand-in-hand in the Soviet view, and perforce we must see the matter in that perspective. The Soviet Union will come into agreement with us only in the measure that it discerns advantage in doing so and detriment in doing otherwise. I certainly do not oppose such negotiations. I am merely warning against the notion that the Soviet Union is on the verge of a conversion to tractability and accommodation.

It seems to me that the recent Czechoslovakian invasion underscores the realism of the former Secretary's views.

I have always supported negotiations with the Soviets, and I have advocated people-to-people type programs between our two countries as a means of laying a foundation for better relations. We must keep trying for better relations, because these would diminish the possibilities of war and enhance the progress toward a more orderly and peaceful world. But our efforts will not succeed and, indeed, could cause us to go backward if we do not proceed on the basis of things as they are rather than on the basis of what we would like them to be—if we do not maintain a posture of resoluteness and firmness of purpose.

SUPPORT OUR PRESIDENT

Mr. Acheson well summarized the ABM controversy when he said:

> Suppose the expenditure is not made, and suppose the choice turns out wrong. The consequences could be disastrous. Turn the proposition around. Say to yourself that, to be on the safe side, we had better go ahead. Then suppose that the proponents of the ABM turn out to be wrong and that this weapon will not do all that they say it will do. Has anything disastrous happened? Have you wrecked the United States? Have you ruined the internal economy? Certainly not. . . . The responsibilities seem to be wholly different. To reject ABM may mean terrible trouble. To go ahead with it cannot mean terrible trouble. It may indeed bring great assurance. If you lose the whole investment, it is not a very serious loss.

In this perspective, and assuming this is a close decision for some of my colleagues, I believe prudence requires us to support the President of the United States.

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

Mr. MILLER. I yield.

Mr. LONG. Mr. President, I congratulate the Senator on his very intelligent speech, which I think pretty well destroys the arguments I have heard made in this body against proceeding with the ABM.

There are two kinds of waste one can contemplate. One is the kind of waste that we all hope would occur—that we would never have to use these weapons. We should all hope that we would be strong enough to defend this great Nation, and so strong that no one will attack us.

There is an old Spanish saying:

If you would have peace, be prepared for war.

If you would be independent and free, you should be prepared for war. If, by being strong, no one cared to go to war with us, that is the kind of waste we should hope for—possession of the latest weapons which we never have to use, such as the hydrogen bomb. We developed it; we hoped we would never have to use it, and we never have; and may God grant it will never be necessary. That is one way in which we can waste something and hope we would waste it.

The other waste is where you spend a great deal of money for defense, perhaps $80 billion or more a year, and, having done all that, you fail to provide the essentials, so that when the showdown comes, you cannot save your country. In that event, it all has been wasted; but, in addition, you have lost your country, your lives, and your freedom. There is the supreme waste one should avoid—the failure to have the sophisticated weapons of the future that would assure you that you could fight successfully in the defense and salvation of your Nation and your people, if that should become necessary. That is the fantastic supreme waste, as I see it, that some Members of this body have been advocating, in their folly and poor judgment, although they may be sincere.

The Senator has pretty well answered the argument.

It may well be that one could not develop a successful ABM system, although I cannot see how we could put men in orbit around the earth, then have the vehicle leave the earth's gravity, orbit the moon several times, land on the moon, reenter space outside the pull of the moon's gravity, bring the two vehicles together, then dispose of one, then orbit the earth again and splash down within 3 or 4 miles of a carrier waiting to receive the capsule, and then not be able to shoot down a missile. It seems to me that all the technical problems involved in one would indicate that if one can solve all that, we can shoot down a missile. It might take a great amount of technical expertise. It might take some practice and know-how. But if those three men can do all that, with the help of a vast army of technicians to back them up, then something can be developed to shoot down a missile.

But I should think that if we cannot do it, the Russians cannot do it, either. If it is possible for one to develop it, it would be sad to think that, although we have the technical competence to build the weapons to save this great Nation, there are some in this body who lack the foresight to recognize that this would be the difference between liberty and destruction for this great Nation—when one would try to save a few billion dollars in the hope that the Communists have all of a sudden changed their ways, changed their minds. I cannot buy those arguments.

We have been successful in saving this great Nation by following the logic that the Senator has pursued; and, insofar as the major Communist powers are concerned, we have saved it without going to war with them.

I think the Senator makes an argument that is irrefutable.

Mr. MILLER. I thank the Senator from Louisiana for his kind and gracious comments. I do think that he puts his finger on a very important part of this matter.

It is something like life insurance. We have been carrying life insurance policies for a long time, and somebody could say: "Look at the waste. All those premiums down the drain. Look at what you could have been doing with those premiums—buying some extra things you would like to buy; but you never got them because you put it on insurance, and here you are, still alive."

But I assure the Senator that most of us are carrying life insurance, and we are very pleased that the premiums have been wasted, because they did provide us with the assurance that if something happened, our loved ones would be taken care of.

I hope, with the Senator from Louisiana, that the expenditures made on an ABM system will be a complete and utter waste of the taxpayers' money, in the same sense as life insurance premiums have been a complete and utter waste for those of us who are still around. I hope we will never have to use them. But I do think that prudence requires us to keep strong as a matter of life insurance to the people of our country.

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

Mr. MILLER. I yield.

Mr. THURMOND. Mr. President, I commend the able and distinguished Senator from Iowa for the magnificent presentation he has made today on the necessity for going foward with the antiballistic missile. The able Senator was a member of the Committee on Armed Services for some time, and his experience in the Air Force Reserve as well as the experience in World War II undoubtedly gird him with a lot of information from practical standpoint in military matters. In addition, the Senator from Iowa is a distinguished Reserve general, and he is well informed on military matters.

There is no question in my mind that it would be a fatal mistake for the United States not to go forward with the ABM, and as quickly as possible. If we build the ABM and never have to use it, well and good. If we build the ABM and the enemy sends over a missile to destroy our country, then we will be mighty glad we have it.

For the life of me, I cannot see how anyone would object to building a purely defensive weapon such as the antiballistic missile. This is not the type of missile that would cross the ocean and kill millions of people. This is not the type of missile that would cross the ocean and destroy military installations. This is not the type of weapon that is calculated to kill anybody. This is purely a defensive missile that will destroy the enemy's missiles in the event the enemy sees fit to send its missiles over here to try to destroy us.

To me, it only makes good sense that we can. I think it is a very peaceful weapon. It will help to preserve peace because if we do not have this missile, suppose the Soviets by accident, a pure accident, should send an ICBM across the ocean. Suppose some sergeant misunderstood orders or someone miscalculated through error and sent an ICBM over here. If we had an ABM we could knock that missile down. The exchange could stop there. If we did not have an ABM and an ICBM kills millions of people or destroys much property in this country, or if we feel it might be the beginning of a nuclear war, naturally we would respond and quickly. When we do respond with our ICBM's, the Soviets might feel we intend an all-out war and we might have a nuclear exchange which could result in the loss of millions of lives.

I think it is vital to our country that we go forward and build the ABM, not only from the standpoint of a defensive weapon but also from the standpoint of national security and preserving peace.

Again, I commend the distinguished Senator on his fine argument.

Mr. MILLER. I thank the Senator from South Carolina for his kind remarks.

Mr. President, I might say, as I pointed out in my speech, none of us in the Senate is a physicist and I do not think anyone in the Senate has had very much negotiating experience with Soviet diplomats. Therefore, we have to go outside to the experts, to the physicists and the diplomats. It becomes difficult for all of us when there are experts who disagree. In that event, who is one going to support?

As I pointed out in my remarks several weeks ago, I have put my confidence in Dr. Eugene P. Wigner because he is preeminent in the field. He is the only one of the physicists of the world who received all the major awards for physicists. He received all of them. Other physicists have received one or two of the awards but Dr. Wigner has them all and to me he is preeminent. That does not mean that there are not other good physicists who disagree with him, because there are. One must make a judgment on which physicist he is going to rely upon. I put my judgment with Dr. Wigner. Further, I must say the logic of his argument to me is almost irrebuttable.

In the area of diplomacy, how many people do we find in the United States who have had much experience negotiating with the Soviets? I do not think very many of us, outside of Averell Harriman, have had as much experience as former Secretary of State Dean Acheson. I say that the logic of Dean Acheson's statement is irrebuttable. One might say he learned the hard way from the Korean experience. When someone has learned the hard way and takes a position, it is more realistic than someone who did not learn the hard way.

I think on those two points we all have to make up our minds as to where we are going to go and in whom we are going to have confidence.

Then, we get into the fine points such as the one which will be coming up by

way of an amendment on Wednesday as to whether or not we are going to go ahead only on research and development, or permit deployment.

The Senator from South Carolina alluded to the fact that I served on the Committee on Armed Services and that I have had a number of years' experience in the Air Force. That experience gave me an opportunity to evaluate the amendment which will be voted on Wednesday, because early in World War II, I was engaged in some research and development activities for the Air Force. Along came a phase known as service testing. I did not know anything about service testing before, but I do now. Service testing means we have to have deployment for an ABM system. Service testing is a part of the broad concept of research and development. If we were going to consider buying a new fighter aircraft, I can assure the Senator he would find no procurement on it until after it had been deployed for service testing at the proving ground at Eglin Field, Fla.

I am sure the Senator from South Carolina, who has had a great deal of experience in the Army, would say, "You are not going to have the Army procure a tank unless it has been deployed and tested at one of the proving grounds."

This is where the amendment we will be voting on misses the point. They do not appreciate that there must be service testing and that is part of research and development. It is in the service testing phase of research and development when many so-called bugs are worked out. I never heard of an aircraft being sent to Eglin Field that did not have bugs in it during the first testing phase.

Some of our colleagues are opposed to the ABM as it is now. They want to confine the deployment to the Kwajalein Islands. They appreciate the fact that deployment and the service testing is a part of research and development. Where I part company with them is if it is done that way it will cost the taxpayers $2 billion more than if it were done at the sites in North Dakota and Montana. I have not heard any argument with respect to incurring that extra expense.

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

The PRESIDING OFFICER (Mr. GRAVEL in the chair). Does the Senator yield?

Mr. MILLER. I yield.

Mr. THURMOND. Is it not a fact that all of the component parts of the ABM have been tested except the perimeter acquisition radar, that is, PAR? In other words, the missile site radar, that is, MSR, has been tested. The Spartan that can go 400 miles and knock down a missile has been tested. The Sprint, which would be used in the event the missile gets by the long range Spartan, has been tested. The computers have been tested. Mostly, it is a matter of assembling all these parts and getting them together and deploying this weapon because then undoubtedly there will be some bugs that have to be ironed out and the quicker we do this service testing the quicker we will have a more perfect weapon.

Is it not sensible that we go forward and not delay? Is it not a fact that the Soviets built their system in 1962 and had it deployed in 1963, when the Senator from South Carolina called for a secret session to tell the Senate about it, the dangers of it, and urged then, 6 years ago, that we go forward? Is it not a fact that we are at least 5 years behind the Soviets today? Can we afford not to go forward? Some say this would be provocative. The Soviets have said they do not consider it to be provocative. However, if they believe it to be provocative, they took a provocative step then and they could not blame us for doing it today. If they do blame us is it not our first duty to the American people to protect this country and our national security?

I thank the Senator.

Mr. MILLER. I thank my colleague.

I yield the floor.

DEPLOYMENT OF THE ABM

Mr. MATHIAS. Mr. President, in an earlier speech in the Senate several months ago, prior to any statement of position by the administration, I explained my reasons for opposing deployment of an anti-ballistic-missile system. I emphasized that the relatively imperfect and fleeting protection offered by such a system could not compensate for its large social, economic, and diplomatic impact.

Since expressing those thoughts, I have studied closely the voluminous literature on the subject which accumulates in undiminished quantity each day, perhaps because of our efforts. During this time, of course, the proposed system and its rationale have been significantly revised by the new administration. Improvement was needed. By indicating a U.S. policy of protecting cities through active defense, the Johnson administration's Sentinel proposal implied adoption of an essentially new and open-ended defense policy goal. Not only would we maintain deterrence through secure second-strike forces, we also would advertise to the world that for the first time since the abortive fallout shelter campaign we claimed technical ability to protect our people if deterrence fails.

This new commitment, to the extent it succeeded in achieving credible population defense, seemed to suggest a U.S. resolve to retain the option of a first strike. This option—and this protection—would entail virtually unlimited increases in defense spending, since the United States would have to respond to every anticipated improvement in the Soviet or Chinese offense. Such a policy would accentuate the action-reaction cycle of the arms race.

The Safeguard proposal, on the other hand, seemingly avoids this major new turn in our armaments policy. By focusing on defense of Minuteman missiles—a key part of our second strike forces—the Nixon administration proposal indicated continued dependence on a deterrence strategy. The President courageously accompanied his recommendation with a declaration that population centers could not be protected against major attack.

This new approach was less provocative than Sentinel since it did not envisage a degree of effectiveness that would give us a plausible first-strike option. Thus, despite a larger estimated cost, Safeguard is a more limited and sophisticated proposal than its predecessor. It does not commit us to the nearly impossible, and thus egregiously expensive business of protecting population in the midst of nuclear conflagration, a form of combustion, we should remember that naturally occurs on, and consumes, whole stars.

The Safeguard recommendation is also tactically superior to Sentinel in terms of domestic politics. By focusing debate on ABM's technical utility—essentially a scientific question—rather than on its strategic and diplomatic implications which Senators are more qualified to judge, the new proposal seemingly locates the debate on the Pentagon's own ground of expertise. The Pentagon, however, also offers an argument for supporters of the coming disarmament and arms control negotiations. It is alleged that endorsement of ABM would strengthen the President's hand in the talks.

Yet, despite all, I have concluded that I should oppose deployment of Safeguard at this time, as well as Sentinel. In fact, if I may be permitted to use rather blunt and provocative language, I have come to believe that such deployments may weaken the United States just as surely as a program of unilateral disarmament. I believe that under present conditions Safeguard represents a step in the wrong direction in the arms race and actually could be a blow to the national security. Further, I believe that the proposal is based on an overall arms race strategy that has been steadily weakening the United States over the past several years.

I do not believe the Pentagon has won the technical arguments. But I think Safeguard deployment is unwise even if the system works as well and Soviet capabilities are as great as its proponents claim.

The nature of the arms race has been radically changed by the quickening rate of technological progress. During the last decades, there has been a revolution in the nature of strategic war approximately every 5 years. Bombers have given way to several generations of liquid fueled missiles, which in turn were replaced by solid fueled Minutemen and by mobile Polaris submarines. Strategies relying on instant response to enemy attack preparations have given way to a determination to wait out an attack before retaliating. Now MIRV—assuming its deployment is not arrested—promises yet another overwhelming change in the configuration of the military balance. The Poseidon missile system, submarine based, seems the ultimate in mobile, invulnerable retaliatory power, but in the realm of technological advance, the word ultimate is regarded as an impertinence.

This pace of change means that most existing systems are obsolescent—that is, more effective alternative or countervailing technology is already in prospect. Thus heavy investment in deploying or

multiplying present systems is ordinarily uneconomical.

But the Pentagon does not adequately take this reality into account. Its proposals for new bombers, air defense, and other traditional systems mean enormous commitments of resources to strategically obsolescent weapons. These investments greatly reduce our flexibility in responding to unexpected new threats in the future.

Our current propensity to deploy and expand any new system and to retain and elaborate any old system with some utility is partly based on a false notion of national security. Our national security in future years depends on what is going on today not at our missile sites, but in our classrooms. In fact, in a time of such rapid change, our national security, even in the relatively short run, relies at least as much on civilian as on military activity.

It is speaking in these terms that I say ABM is a step backward for the United States. It represents not only an extravagance in the use of resources, but also a grievous failure of strategic imagination. Minutemen in fixed bases are already a technology with predictable obsolescence. For they are ultimately vulnerable to refinements in missile accuracy; ABM, for all its redoubtable intricacy and ingenuity, is also of little usefulness in the strategic environment of the seventies. It is a system of the sixties that we wisely refrained from deploying in different forms earlier in this decade despite repeated demands from the military. The Pentagon, in effect, now is putting together two obsolescing technologies in the hope of getting one useful system. What it gets is futility at compound interest for the taxpayer.

Even if the United States succeeded in creating and deploying a completely effective ABM system—one that hermetically sealed our skies from missile attack—we could not expect our adversaries to relinquish their retaliatory ability. They would simply find other ways to visit devastation on our country—whether by exploding nuclear weapons in the ocean off our shores and flooding our coastal cities; or by some unidentifiable low altitude delivery system; through resort to chemical and biological agents; or through some as yet unanticipated mode of destruction. The only thing we can confidently say about future offensive technology—whether Russian or Chinese—is that it will be designed to frustrate any defense in which the United States invests as heavily as ABM would require.

Technologically advanced and strategically retarded, ABM symbolizes the American defense posture. New technology is too often employed not to produce more cost-effective and less provocative systems, but to redeem old modes of thought and obsolescent hardware. We do not sufficiently acknowledge the implications of mutual deterrence in an essentially qualitative arms race at a time of rapid technological change.

In these new conditions, a sure way of losing an arms race is to spend too much money on it. The Vietnam war provides an example of another kind. In Vietnam we are also using expensive new technology in an attempt to make up for strategic and political failure. But despite a spending ratio of 10 to 1 over the Soviet Union, we are not winning. Of course, Vietnam is not directly analogous to other areas of arms competition. But vis-a-vis the Soviet Union, our experience confirms the principle: the race will be won not by the side that most readily deploys its hardware but by the side that most effectively employs its resources.

In supporting the policy of heavy deployment of existing technologies, it is said that we must emphasize the capabilities rather than the intentions of our adversary. But capability is just as problematical and elusive a concept as intention. If we—or the Soviet Union—are willing to sacrifice civilian, economic, and social stability and longer term technical and military goals, either side is capable of mustering a military establishment of incalculable power. Either side can produce a military machine that would boggle the mind. But in the nuclear age, that is all that such a military machine can accomplish: it would boggle the mind, and, by extension, the social and political stability of the country that acquired it. But it would not permit either side to gain a peremptory first-strike position. And it would impair the social, economic, scientific, and educational base on which future security will depend. It would hurt our society without helping our security.

One reason for the futility of an attempt to "win" the arms race in this manner is the advantage possessed by the side that is behind. In a sense one can even win such a competition—that is, achieve one's military goals at lower cost than one's opponents—by staying behind. For the dynamics of technological arms races favor the underdog, if his basic capacity is comparable. Not only is he relieved of the expensive burden of anticipation but long before a new discovery is translated into an effective and operational weapons system, integrated in the military forces of the leader, it has usually become known to the side that is behind.

Even if the follower cannot determine the particulars of a new development, his knowledge of the general area of experiment which produced it will enable him to concentrate his effort and make similar progress more quickly and cheaply. He may be able to avoid costly experimentation with other methods of acquiring the same weapon or other weapons designed to fulfill a similar function.

Thus the country which is defeated in a race for a particular technological development may be able to save both time and money as a result. Much of the expense for weapons development is directed toward the pursuit of unsuccessful possibilities. The follower in a technological race can eliminate some of these failures.

Examples of this handicapping system abound. It is illustrated by the remarkable achievement of the Soviet Union in closing the enormous gap between herself and the United States at the end of the Second World War. American scientists consistently overestimated the time it would take the Soviet Union to equal American achievements in nuclear technology. That this process also works the other way, to our benefit, may be indicated by the speed with which we closed the presumed Soviet lead in ballistic missile technology after Sputnik. It would appear that qualitative arms races between comparable technologies tend to equalize military forces.

Of course, this does not mean we should allow ourselves to fall behind overall military strength. But the handicap for the underdog does mean that attempts to forge ahead have more to do with national vanity than with national security. In fact, if the Soviet Union did decide to invest everything in deploying new technology it would likely doom itself as a first-class power in coming decades. Already falling behind Western Europe and Japan in economic growth—already stinting on industrial modernization—the Soviet Union would fall back irretrievably if it undertook some futile and extravagant ABM-SS-9 campaign for first-strike supremacy.

In other words, achievement of the ultimate war capability of each side would combine military futility with social and political impoverishment: each side is capable of foundering its ship of state with military ballast. Neither is capable of striking its opponent without suffering devastating retaliation.

Although I do not wish such a disaster on the Soviet people, if I were exclusively concerned with disproving Communist theory with bringing down the Soviet experiment, I would hope that the Soviet leaders would embark on an attempt to fulfill their theoretical military possibilities. But since the attempt would inevitably be accompanied by an enormous aggrandizement of the power of the Soviet military—and by an expansion of their imperial designs—I shrink from an American military posture that could contribute to such an imbalance in Soviet leadership.

It should not be imagined, however, that the United States can proceed with impunity on its present course. It is sometimes asserted on the left that the American economy benefits from defense expenditures. During the ABM debate, it has been implied that the system's supporters are motivated in part by its impact on employment. This notion only reveals a failure to recognize the changing nature both of defense expenditures and of the American economy since World War II. I can say that spending, such as that proposed for ABM, contravenes most of the urgent economic and social objectives of current U.S. Government policy.

The administration currently declares that its first economic priority is to curb inflation without significantly increasing unemployment or substantially reducing real economic growth. Spending on ABM increases inflation and unemployment without contributing significantly to real economic growth. It is peculiarly inflationary because it generates demand in the economy without providing goods to

fulfill it. It increases unemployment because it diverts resources into highly specialized technical industries which hire very few marginal workers who could not easily afford to find a job elsewhere. It impedes economic growth because it employs the most valuably catalytic manpower in the economy. These are technicians and scientists who could make far greater contributions to economic growth in the private sector or in public services which improve our economic infrastructure.

When analyzing the impact of defense spending, it is crucial to consider the benefits we forgo, whether in the public or private sector. I do not deny the enormous amount of employment created by the defense budget. I merely say that the amount of employment and growth generated by a dollar of defense spending is much less than that generated by a dollar of spending in the private sector or on public services.

Strategic defense spending is now concentrated in industries with high, technically specialized labor intensity, and with relatively low capital expenditures and value added per employee. These industries make a relatively small net contribution to the economy. Yet they deprive the private sector of essential expertise for research, which is only partly recovered through military development convertible for civilian use.

I do not exaggerate when I suggest that, in purely economic and social terms, the United States would benefit more from building pyramids than from building missiles.

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

Mr. MATHIAS. I am happy to yield to the Senator from Arkansas.

Mr. FULBRIGHT. I have read the Senator's speech, and I wish to congratulate him on the entire speech; but that particular passage he has just read, in a way, sums up this whole issue. Although the Senator uses the allusion in a way that could be discounted, perhaps, I think there is a great deal of truth in it. At the last hearing the Foreign Relations Committee had with regard to this whole complex of weapons it was urged that the Minuteman itself is becoming obsolete, because it can be destroyed by these more accurate missiles. This means, therefore, we are considering the development of an obsolescent ABM to protect an obsolescent weapons system.

This, I think, makes the Senator's analogy to the pyramids very appropriate indeed. At least the Egyptians did end up with a tourist attraction, which is of use to that country hundreds of years later.

I think the Senator has made a great contribution to this debate. I think his speech is one of the most thoughtful I have read on this subject.

Mr. MATHIAS. I thank the Senator very much for his very kind remarks and his helpful counseling.

I repeat, Mr. President, that I think in economic and social terms the United States would benefit more from building pyramids than from building missiles—since pyramid construction would at least employ people who need work, and, as the distinguished Senator from Arkansas, the chairman of the Committee on Foreign Relations, has pointed out, would at least serve as a tourist attraction. Pyramids aside, the economy would benefit far more, of course, from investments in education, medical care and housing. But even if defense retrenchments were passed on to taxpayers in tax cuts, the economy would benefit since private demand would be released into areas which employ more marginal workers per dollar of investment or which contribute to real economic growth.

Compared to most other industrial products, moreover, defense items do not have a significant multiplier effect. A missile or a submarine is not serviced, retailed, or otherwise introduced into the catalytic flow of the domestic economy.

The arms race thus is economic insanity. But I contend further that current arms race policies are also irrational in terms of the national security. Our defense budget tends to overreact to current threats, overspend on present technology, and produce a useless overkill capacity, while diverting funds and energies from efforts to reinforce the social foundations of our national strength and stability. It hurts our society without helping our security.

The problem thus is not excessive emphasis on national security in the order of our priorities. In a broader sense, the security of our Nation—considered not as just a geographic or demographic entity but also a spiritual and institutional cause—national security in these terms, which indispensably include military defense, must be the primary concern of Government. The problem is the tendency of Government to identify national security with the immediate demands of the military leadership, which understandably fail to recognize the broader prerequisites of national preservation. These are popular morale, economic stability and growth, educational progress, balanced technological development and maintenance of broadly supported popular institutions. Vast multiplication of existing systems might be valuable if one planned to initiate nuclear war in the immediate future; but nuclear war is suicide. For the maintenance of our defense over a long period, advanced technology, social progress, and economic growth are imperative. Deployment should be relatively modest until real new threats materialize. We should maintain a continuing reexamination of our strategic assumptions.

This means a new set of criteria for specific defense proposals, emphasizing minimal deployment and maximum commitment to basic research, technological development, education, economic growth, and social progress. All these fields—and particularly science and education—are being deprived today. Although Safeguard is a substantial improvement over Sentinel in these terms, deployment now would nonetheless represent a severe blow to our national security.

Several Senators addressed the Chair.

Mr. MATHIAS. I yield to the Senator from New York.

Mr. JAVITS. Mr. President, I have heard a part of the Senator's speech, and I have read the rest of it. I should like to direct his attention to two points, upon which he might like to comment further.

He says:

> It is a system of the sixties that we wisely refrained from deploying in different forms earlier in this decade despite repeated demands from the military.

Is it not true that, except for the fact that the system has caught on more vigorously now, that was also the history of the various Nike series—of which the present system is a variant—and that this has been going on for the last 10 years?

Mr. MATHIAS. The Senator is absolutely correct.

Mr. JAVITS. So, if the technological progress and advance have made a weapons system first designed in the late 1950's obsolescent now, the same thing is much more likely now than when Nike-Zeus was first thought of; is that not correct?

Mr. MATHIAS. The Senator is correct.

Mr. JAVITS. I think it is an extremely valuable point. One of the strongest arguments against deployment of the ABM is that it is just about—because of the history of weaponry—to be overtaken by technological advances. If anything, it is a very late starter, and we would be very much better advised to leapfrog it technologically rather than be locked into an obsolescently conceived system.

Another very important point which the Senator makes in his speech, is:

> In fact, if the Soviet Union did decide to invest everything in deploying new technology it would likely doom itself as a first-class power in coming decades. Already falling behind Western Europe and Japan in economic growth—already stinting on industrial modernization—the Soviet Union would fall back irretrievably if it undertook some futile and extravagant ABM–SS–9 campaign for first strike supremacy.

Is it not a fact that the world should know that it is the United States and the Soviet Union which—because of this enormous defense load—are falling behind in productivity, and even in the longevity of their people? Falling behind, for example, Japan and Germany, the two powers which are the least encumbered by military expenditure?

Mr. MATHIAS. The Senator is correct. Of course, just to look at the trade balances with Japan, for example, illustrates what happens when a nation is free to invest its capital and to use its expertise in the social areas and in the private sector.

Mr. JAVITS. Therefore, it is not a sterile but a very real question to ask if the two superpowers are running themselves into the ground by the nuclear arms race, and in our case by the Vietnam war as well. If we are about to come to grips in terms of seeking an arms agreement, is it not best to leave open—without any real jeopardy to the national security—the greatest, most fertile field for agreement, the greatest consumer of resources that might now be conserved, when the two countries are coming together for the purpose of seek-

ing agreement? Does the Senator feel there is the remotest likelihood that in the next 6 months, because the President says he is going to deploy the ABM at two sites in the northwestern part of the United States, that is going to represent such material change to the Russians that they are going to make agreements which they never would have made before, and that we would have won a game of "nuclear blackmail" because the President is going to deploy this system at these two missile sites?

Mr. MATHIAS. I cannot believe that this policy will bring about all of that fallout which has been claimed.

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

Mr. JAVITS. I will yield in a moment.

Mr. DOMINICK. I am a little tired of the Senator's saying that we are engaged in nuclear blackmail.

Mr. JAVITS. I am not saying that we are engaged in nuclear blackmail.

Mr. DOMINICK. The Senator just finished stating it.

Mr. JAVITS. Not at all. And the RECORD will not show that, in my judgment. However, if the Senator will, I should like to finish with my inquiry of the Senator from Maryland.

As a matter of fact, is not the concession that this will make no difference to the Russians any more than what they have done in Moscow and in the SS–9 will make any difference to us, practically yielding the whole point? If it will make no difference, why do it?

Mr. MATHIAS. The Senator is absolutely correct.

Mr. JAVITS. To deal with the point of the overkill, we are not seeking to take advantage of nuclear blackmail. It is not so. Then, why argue that it is or that this will strengthen our hand?

Mr. MATHIAS. Exactly right.

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

Mr. MATHIAS. I yield.

Mr. DOMINICK. Mr. President, I do not know whether the Senator from Maryland was present before when the distinguished Senator from Iowa (Mr. MILLER) spoke. The Senator from Iowa had some analyses of the military spending vis-a-vis our gross national product exclusive of the Vietnam war. And he showed that in percentages the proposed budget, exclusive of expenditures for Vietnam, were the same or less in terms of percentages than the budget was for last year, 5 years ago, 10 years ago, and 15 years ago. So, when the Senator speaks of vast military expenditures, I point out that we would all, of course, like to cut them down. Obviously this is what we would all like to do.

As a matter of fact, the committee cut them down by $2 billion. I think, however, that to leave an impression on the floor that we are engaged in something new and unique at an enormous cost when we are dealing in this particular debate in this particular amendment with $345 million, is a little bit extravagant.

I was wondering if the Senator had any comment on the percentage figures that the Senator from Iowa placed in the RECORD.

Mr. MATHIAS. I certainly do. I would call to the attention of the distinguished Senator from Colorado the fact that some industrial concerns that want to expand their plants and hire new people and manufacture new goods have to pay an interest rate of 10 or 12 percent to get the money.

I point out that our trade balances with foreign countries are in worse condition today than in recent history.

I point out to the distinguished Senator the fact that it is costing the U.S. Treasury more to borrow money today than it has for a long time, maybe ever in our history.

Mr. DOMINICK. I agree with all of that.

Mr. MATHIAS. I think the Senator must agree with it because it is a fact.

These unhappy facts result in large part from too much defense spending over a long period of time, and the fact that it is down a little now or up a little at another time does not eliminate the fact that over this period there has been too much and that we are suffering for it at this time.

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

Mr. MATHIAS. I yield.

Mr. MILLER. Mr. President, I think it should be pointed out—and the Senator is talking about our trade balance—that the percentages of gross national product that has been going for national defense was a little higher in 1964 than it was last year or is going to be this year. Yet, if my recollection proves correct, we had a magnificently favorable balance of trade in 1964.

If I may have the attention of the Senator, I should like to make a point because I should like to have a responsive answer.

The Senator talks of a long, sustained period of defense spending. That is exactly why I went back to 1954 and ascertained the percentage of gross national product going for national defense.

I point out to the Senator from Maryland that he will find that the projected defense spending for fiscal year 1970 will be a lesser percentage of our gross national product than it was for 3 years in that period of time—1954, 1959, and 1964. So I must respectfully point out to the Senator that his thesis that this defense spending has ever had a direct bearing or maybe even an indirect bearing on the unfavorable balance of trade simply will not stand scrutiny.

I am concerned about defense spending. In fact, I do not know of anyone who is not. Everyone on both sides of the aisle or on either side of the controversy should be concerned about defense spending and other areas of Government spending.

That does not get us anywhere. We are all equally concerned about it. The question is whether we need something for our national security.

If the ABM will not work, and if we are convinced that it will not work, there is no point in our spending anything regardless of how lean or fat the budget is.

I must say that I think the matter of budget spending is a sort of side issue. I can assure the Senator that if I am persuaded that the ABM will not work, I will not buy it regardless of whether the budget is in good condition or not.

On the other hand, if we need it, then I think the budget condition is very secondary to what we need.

I think it is very important to point out that the defense spending is not involved in our drop in a favorable balance of trade.

Mr. MATHIAS. Since the question of defense spending up and down has been brought into this discussion, and I think very properly so, I refer the Senator from Iowa and the Senator from Colorado to the current issue of Fortune.

There is a very interesting and authoritative article in the Fortune magazine written by Ian Cameron, a splendid and well-informed writer, in which he quotes the Secretary of Defense as saying that even if we are successful in eliminating the war in Vietnam, we will still not come up with a drastically reduced defense budget.

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

Mr. MATHIAS. I will yield in a moment.

Let me say that if we go ahead with the ABM and MIRV, we can, I think, safely project a continuing expenditure of anywhere from $20 billion to $30 billion a year for strategic systems alone for perhaps the next 10 years.

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

Mr. MATHIAS. I yield.

Mr. DOMINICK. Mr. President, I had the same discussion with the Senator from Maine (Mr. MUSKIE) on Friday. It is in the RECORD.

I pointed out at that time—which I am sure the Senator from Maryland will recognize—that the question of what our defense budget will be after the Vietnam war will depend upon what Congress authorizes and appropriates. It has nothing to do with the question of what the automatic system might be, what Mr. Cameron and the like do, or anything else.

Let me point out that the question of how much we will spend on an ABM and where we will put it is under constant review, as the President pointed out, and that Congress can reduce funds. The Committee on Armed Services has cut out the funds for the Navy version of the F–111, the F–111B, after we had spent a lot of money on research. We have cut out the Cheyenne helicopter and all of these fast deployment logistic ships and a whole variety of weapons.

The statement made is not borne out by history.

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

Mr. MATHIAS. I yield.

Mr. DOLE. Mr. President, I have listened with great interest to my friend, the Senator from Maryland, say that we should not proceed with the deployment of the Safeguard system.

The Senator recognizes that the Safeguard system is an improvement over the Sentinel system.

I want to clarify the matter. What does the Senator suggest we do as an alternative? Does the Senator suggest more

research and development, or does he suggest doing nothing?

Mr. MATHIAS. Mr. President, the distinguished Senator from Kentucky (Mr. COOPER) has suggested in the amendment which we will vote on on Wednesday that we proceed with research and development for a period of time, during which we can satisfy ourselves as to the desirability of going forward.

Mr. DOLE. Mr. President, the reason I ask the question is that I think there may be a feeling or at least a misunderstanding on the part of many Americans that there are 45 or 50 Senators who want to do nothing and 45 or 50 Senators who want to do something. I point out, as I have in the past, that I think it is misreading the tenor of the Senate.

As I understand it, not one Senator says we should do nothing, that we should go backward. Senator COOPER and Senator HART are advocating what they think to be in the best interests—appropriate the money and do everything but deploy.

I have said many times that perhaps we could have chosen a better word. Perhaps we should have chosen the words "operational development" instead of "deployment," because that is what I really think it is.

But I commend the Senator from Maryland for his remarks. I disagree with his conclusion, but I am in accord with him when he says we must do something. There must be more research; there must be more development; and we must, even in the case of the Cooper-Hart amendment, authorize the money and move ahead with everything except deployment. Is that, in essence, what the Senator suggests?

Mr. MATHIAS. The Senator from Kansas, I think, has the nub of it, as usual, we find ourselves in broad general agreement on the goals to which we are moving.

Mr. DOLE. Or broad disagreement.

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

Mr. MATHIAS. I yield.

Mr. COOPER. I appreciate very much the statement by the distinguished Senator from Kansas. He has brought into better focus the purpose of the amendment we propose—what we hope our country will do.

We talk about deployment, about making a decision to deploy. That, of course, connotes that we will be able in this fiscal year to actually emplace some component of the Safeguard system on the two missile sites. Of course, that is absolutely incorrect. There is no component, there is no element of a component, that can be physically placed upon a missile site in the coming fiscal year; I am sure that no proponent of the ABM system will question that statement. It cannot be, and I have that statement from the Department of Defense.

I would point out that the funds requested in the bill are proof that nothing can be done in the fiscal year except in research and development programs. Three hundred forty-five million dollars is asked, supposedly for procurement, but when one searches out the elements of that sum, it is chiefly for preparation for procurement. The antimissile system is admitted to be a research and development program. Compared to the sum of $345 million, which is characterized as a fund for procurement but which is not at all, $400 million for research and development is requested.

In addition to the $400 million, the Department of Defense has transferred from the old Nike X program—which they have given up—an additional $120 million for research and development. A total of $520 million plus the carryover from last year for research and development, is available and requested for research and development programs, which we believe proves our point: The Department of Defense has transferred $120 million in addition to the $400 million for research and development. It is a part of the record. The Senator from Mississippi (Mr. STENNIS) brought this fact out in the hearings.

We ask that there be no decision to deploy in the future, until in this year, we can determine whether there is any necessity for deployment at all. It might turn out—I hope it will—that the Soviets will not proceed with their program of deploying SS–9's. If they do not, there will be no necessity for spending a vast sum in deployment of the ABM system. If they proceed, we believe that our scientists and engineers will design a system which will be of greater effectiveness than the proposed design of Safeguard.

Above all, we hope that, through agreements in talks or action which indicates tacit agreement, the arms race may be limited. The Senator from Maryland and the Senator from Kansas, Senator DOLE, have correctly brought out our purposes.

I was very interested in reading the testimony of Dr. Foster before the Committee on Armed Services. When asked what we will do about the ABM system around Moscow, he said, "We will simply overwhelm it." That, I think, is what the Russians would propose to do about a system which a great many people think would be ineffective.

The Senator from Maryland has opened up fields which go far beyond the limited question of the feasibility of this program. As usual, he has made a very enlightened and constructive speech.

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

Mr. MATHIAS. First, I thank the Senator from Kentucky for his astute observations which, as always, help to illuminate these discussions. I concur in his thanks to the Senator from Kansas for really making a very important point, from the point of view of the general public.

I also thank the Senator from Kentucky for shedding light on the question of the possibility of deployment within the next 12 months. In an earlier colloquy with the Senator from Iowa, it was stated categorically that everything is ready to go; all you have to do is hook it up and turn on the lights and see if it works.

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

The Senator from Iowa made no such comments.

Mr. MATHIAS. I did not say the Senator from Iowa said that. To keep the record clear, the Senator from Iowa did not make that statement, but it was said in a colloquy which followed the Senator's remarks. I think the Senator from Kentucky has put the right interpretation on that and has stated to the Senate, frankly and accurately, what the situation is.

I yield to the Senator from Iowa.

Mr. MILLER. I thank my colleague for yielding.

I think the Senator understands that the Senator from Colorado and the Senator from Iowa were trying to illuminate this matter, too.

Mr. MATHIAS. And I appreciate that contribution.

Mr. MILLER. The point I was going to bring out is this: I believe the Senator, in about the last sentence that he read from his speech, said something to the effect that we should not have deployment now. That was the point I wanted to bring out—that deployment now is just not feasible, and the Senator from Kentucky has done a pretty good job of bringing that out.

I think it is wrong for people to get the idea that what we are all fighting about is whether we are going to have deployment 6 months or 12 months from now, rather than, as I understand it, the earliest we could have full deployment, for service testing purposes, not for final purposes, would be some years yet ahead.

Mr. MATHIAS. Yes. But the Senator will recall that that was not the statement with which the Senate was left a few minutes ago. I am not saying the Senator was responsible in any way.

Mr. MILLER. But I do think that when it is said we should not have deployment now, we are not really facing up to the real issue. The Senator from Kentucky has put that in perspective.

However, I do think one thing should be emphasized, and that is that so long as we cannot possibly have deployment now, I wonder what the real reason is for the amendment on which we are going to vote on Wednesday, which provides we are only going to have research and development and not deployment. If we cannot have deployment what are we arguing about? It seems to me that what is getting across to the public and the people around the world is the fact that we are in danger of going on record as tying the hands of the President. I do not like to see us do that. I well remember some of the amendments that were debated here in earlier years during the terms of the late President Kennedy and former President Johnson. Some amendments would be introduced from this side of the aisle. We would be met with the retort from the other side of the aisle that an amendment should be defeated because it would tie the hands of the President. And it will, indeed, in the eyes of many people around the world. His hands are tied by the very fact we cannot have deployment in the next 12 months, whether we wanted it or not.

However, to go on record and indicate we cannot have procurement with long leadtime, looking forward to deployment—I am not talking about final de-

ployment but service testing—I am afraid will give us the picture in the eyes of the world of tying the hands of the President.

More than anything else, I think that is very unfortunate. I do not think we should be debating here about tying the hands of the President, especially when we are debating about something that is not going to happen because, as the Senator from Kentucky said, Mr. President, you cannot have deployment in the next 12 months.

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

The PRESIDING OFFICER (Mr. SAXBE in the chair). Does the Senator yield?

Mr. MATHIAS. I yield.

Mr. COOPER. Mr. President, the Senator from Iowa has said:

> You cannot have deployment in the next 12 months, so what are we arguing about? What is the purpose of your amendment?

The purpose of the amendment has been expressed so many times on the floor of the Senate. Either we do not do it very well, or it is not understood well enough by others.

Mr. MILLER. It is not lack of good faith.

Mr. COOPER. No, it is not lack of good faith. I point out with respect to deployment that the misunderstanding has arisen because of the statements of the Secretary of Defense. We have to be very frank. He said in his testimony before the Committee on Armed Services and before a committee in the other body that the components have been tested and that we are ready to deploy. He was quoted on television a few days ago, as saying that the components have been tested and that we are ready to deploy.

The impression that the United States is ready to deploy a Safeguard system arises from such statements.

Mr. MILLER. Mr. President, will the Senator yield on that point?

Mr. COOPER. I shall yield. We know it has not been tested.

Mr. MILLER. I think we have to be fair to the Secretary of Defense.

Mr. COOPER. I will be fair.

Mr. MILLER. I do not believe the Secretary of Defense, certainly among the sophisticated Members of the Senate, implied we could have deployment of this system much before the mid-1970's even for service testing purposes. Does the Senator remember how long the Secretary said it would be before there would be service testing?

Mr. COOPER. The initial operation date was 1974.

Mr. MILLER. Very well.

Mr. COOPER. But we are talking about an impression that has gone across our land. Some believe we are holding back on the Department of Defense from deploying a system which is needed to protect the Minuteman when in truth it cannot be deployed in fiscal year 1970.

Mr. MILLER. But the Secretary of Defense said it cannot be fully deployed for service testing purposes before 1974, and he was not in the same breath saying that we are ready to have it deployed in 12 months.

Mr. COOPER. I am only saying that when the head of the Department of Defense makes the statement that "we have tested the elements and we are ready to deploy," people will believe the testimony. I do not question his good faith—I speak only of the impression that people have.

Mr. MATHIAS. Mr. President, if I may interrupt the Senator, he is absolutely correct, because that is the statement that was repeated or paraphrased in the Senate just a few moments ago by a Senator who is no longer in the Chamber, and it gives a completely distorted picture. I think words were used here to the effect that every component had been tested and all that had to be done was to hook it up and get the bugs out. That is not the question.

Mr. COOPER. All of us, opponents and proponents, seek to do what is right on this issue and to do what is best for our country. I certainly would not question the good faith and purpose of any Member of this body, although we may form judgments that differ.

However, the statement has been made on the floor of the Senate that we have had enough research and development; let us go ahead and deploy; the impression has gone forth that the Department of Defense is ready to deploy and as a natural consequence some may believe we are endangering the security of the country by opposing deployment of the system. We do not want to lock the hands of the President, and as there can be no deployment we are not locking his hands. If the statement is made that we are opposing a decision to deploy at some time in the future, we are in opposition on that score.

If, in this year, it should be found that the system which is proposed is not an effective system as presently designed—and I believe that inference can be drawn from the fact that the administration is putting $520 million into a research program—and if the Department of Defense should procure parts of the system which may be found later to be inadequate, we may become locked in on an ineffective system. This would not contribute to the security of our country.

Finally, my chief reason for opposing a decision to deploy—and I believe it is the chief reason of many who support the amendment—many people believe there is no chance of reaching any agreement with the Soviet Union. I must say I do not know that we can. Perhaps we cannot. But it is my view that we should not make a decision to deploy a new nuclear weapons system just as we enter negotiations whose purpose is to control new weapons systems.

The President can enter the negotiation in a position that is clear and understandable. He can say, "We are not going ahead. We will not start a new weapons system when we seek to control the deployment of additional weapons systems." This is my hope.

Mr. MILLER. Mr. President, will the Senator from Maryland permit me to respond briefly to the Senator from Kentucky. I realize that I have intruded considerably on the Senator's graciousness and time.

Mr. MATHIAS. I am delighted to do so. The Senator from Iowa has not intruded or trespassed in any sense. I appreciate the spirit in which the Senator from Iowa is participating in the discussion. I think his comments have been extremely valuable and helpful, particularly on the point of deployment. I think there is a lot of popular misconception. The Senator from Kentucky and the Senator from Iowa have made extremely valuable contributions by their candor and fairmindedness. I am delighted to yield further to the Senator from Iowa, to continue the discussion.

Mr. MILLER. I thank the Senator from Maryland.

I do appreciate the delineation by my good friend from Kentucky of the rationale behind the amendment. As I understand, he says that no matter what is in the bill, the President cannot deploy in the next 12 months, but that there are possibilities of going ahead with some procurements looking toward a phased-in deployment of the system, which he does not want us to authorize now.

I suggest that if we authorize the President to go ahead with the long lead-time procurements, which may be 2 or 3 years from now, and maybe start to deploy as a part of a system, it may be that additional research will show that the procurements are not calculated to give us the most effective system, assuming at that time that we want to go ahead with it.

My trouble with that reasoning is, as I understand it, that the research and development necessary to determine whether the system, overall, is the best we can achieve within the time frame we are talking about has really been done. There may be a little extra work that can be done, such as with radar, but the system as a whole will be pretty well set. Additional research may be needed to improve some of the things. But overall, the system is pretty well set and pretty well set to the extent that the President and the rest of the Defense Establishment think it will work. If we come along and say, in effect, to the President, "Even though you cannot do anything about deployment, we are not going to let you go ahead on these procurements," I suggest, most respectfully, that we are tying the hands of the President of the United States, even though we may not like to think so. Because I just do not believe that the President of the United States would go ahead with these procurements and get locked in. Let us assume that he did, through an honest mistake; and 1 year from now we will be right back in this Chamber, after running the gauntlet of the committees, on this side of the Capitol and on the other side, and I am quite confident that the fact a mistake has been made will be brought out and Congress will certainly be in a position to vote up or down the appropriations to continue or not to continue the locked-in position.

Thus, I cannot quite understand why we are so concerned about denying the President the authority he asks for, which authority cannot be carried out within the next 12 months, but can only begin to be carried out through long leadtime procurements. Congress has a

continuing opportunity to vote up or down appropriations; yet, in many respects, we are involved in a tempest in a teapot, even though it is a very big issue in the minds of many people. The difference between research and development and deployment issue is very fine.

Now if the Senator from Kentucky is saying that we do not want any ABM system at all, let us stop all work on it, that there is no point in having an ABM system, that would be one thing; but here we are involved in a very fine delineation between research and development and deployment, in the case of a bill authorizing expenditures which will not give us deployment until 1972, 1973, or 1974.

We are all men of good will, acting in good faith. I most respectfully suggest that whether we think we are tying the hands of the President in the eyes of many people around the world, the President's hands will have been tied by Congress. I think that is a most unfortunate impression to leave in the minds of people overseas at this very touchy time in international relations.

Mr. COOPER. If the Senator from Maryland will bear with me a moment——

Mr. MATHIAS. I am delighted to yield further to the Senator from Kentucky.

Mr. COOPER. It has been stated many times by the proponents of the system that it is vital to the security of this country. Awesome pictures of the growing nuclear strength of the Soviet Union have been given in the form of projections and extrapolations. They may turn out to be a reality.

We respect the President of the United States. We know him, many of us have served with him and know the efforts he is making for peaceful solutions. I respect him. The security of this Nation, while it is very much in the hands of the President of the United States, is also in the hands of Congress. We have a joint constitutional responsibility. We too represent the people. It is also in the hands of the people. We in the Congress have a special responsibility to make judgments as to whether a process or program is in the best interests of the security of this Nation. We argue about feasibility, about funds, about deployment, and can reasonably disagree about them. But we too have the responsibility to make judgments about the best way to stop the arms race which threatens the ultimate security of the United States.

It is our judgment that it would be better not to make a decision to deploy a new weapons system in the year when we seek to control nuclear weapons, if this can be done, we would agree that the greatest step toward true national security for our country had been taken.

Thus, as we may differ with the President on this issue, it is done honorably and with great respect for him. Our duty is to be responsible to the people as Members of Congress. If deployment is not agreed to, I do not consider, as Senator AIKEN has said, that it will represent a setback for the President of the United States. He is demonstrating every day his leadership on great issues.

Mr. MATHIAS. Mr. President, I appreciate very much participation in this colloquy by the Senator from Kentucky, the Senator from Iowa, and the Senator from Colorado. It has been extremely helpful to clarify some of the questions which do exist.

I particularly want to concur with the Senator from Kentucky when he says that whatever honorable disgareements may exist, they are taken pursuant to our responsibilities as Senators to provide for the common defense of our country, which is the responsibility imposed on us by the Constitution and which we can only discharge in conscience and in no other way.

Mr. DOMINICK. Mr. President, will the Senator from Maryland yield for a unanimous consent request?

Mr. MATHIAS. I yield.

Mr. DOMINICK. Mr. President, I ask unanimous consent to have printed in the RECORD a report entitled, "Good Guys, Bad Guys, and the ABM," written by Albert Wohlstetter of the University of Chicago, which was submitted to the Los Angeles Times for publication Sunday, August 3, and Monday, August 4, 1969, and which has been published as a report by the Committee to Maintain a Prudent Defense Policy.

I have read this. It refers to several participants in this debate, not on today but on previous occasions. It has some good points, and it states them in very readable language. I think it is worthwhile to have them in the RECORD at this point.

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

[A report from the Committee to Maintain a Prudent Defense Policy, Washington, D.C.]

GOOD GUYS, BAD GUYS, AND THE ABM

Choices about bombers or missiles or defenses against them are, in the most literal sense, vital. They can mean life or death. Yet making such choices carefully has never been easy. And least so now when the closing agonies of Vietnam drive us to wish away all problems of national defense. Even thinking about such questions is unpleasant and can make your head hurt. Answers don't come in black and white and mustering vast public sentiments about precise shades of grey is particularly hard. It is much easier then to make believe that the issues are simpler than they are, that the answers are plain to any man of good will, that the issues are in fact between the concerned men of good will and a reckless entrenched malevolent authority. The good guys are against nuclear war, against taking reckless chances on nuclear accidents, against wasting money that might be used to solve our urgent domestic problems, against the "ever accelerating arms race", against the generals and munitions makers, for peace abroad and redressing the inequities at home. The bad guys. . .

The impassioned ABM debate, as the news media tend to picture it, does array the good guys on one side and on the other, the bad. The forces of virtue at last aroused against the forces of evil. ABM, as many of its opponents have said, is a symbol. One trouble with symbols, however, is that they often have little to do with reality. Any close look at the realities of the ABM and the way the debate has developed, blurs this simple picture. In fact, erases it entirely.

Intense controversy blew up suddenly last fall with an alarm sounded by some Argonne physicists about placing Sentinel defense missiles only a few miles outside Chicago's city limits. It was not hard to arouse public interest groups on this subject. It seems that very few Republicans or Democrats favor nuclear accidents. By spring, however, distinguished opponents of ABM like Hans Bethe indicated that the nuclear safety of Sentinel was not really troubling. And by late spring various opponents of ABM were themselves recommending that, rather than use Safeguard ABM to protect our bombers and missiles, we should undertake (a) an emergency dispersal of armed bombers—which would mean landings and takeoffs with nuclear bombs in commercial airports of large cities; (b) an armed air alert—that on a continuing basis might mean an average of a dozen accidents per year involving nuclear weapons; and finally, (c) most amazing, that we try to empty our silos before enemy bombs get to them by immediately launching our Minuteman at Russian cities on the basis of radar indications—which would increase the nightmare possibility not only of a nuclear accident, but of an accidentally started worldwide nuclear holocaust.

Senator Symington asked, "After PAR finds the incoming missiles, why then couldn't you fire the Minuteman on target instead of the Spartan?" And Senator Fulbright engaged in this dialogue, ". . . if the objective is deterrence . . . then . . . this would really concern the Russians to know what you would really do if they sent over a massive attack."

Senator Gore, "Or a light attack."

Senator Fulbright, "Or even a light attack, one that could be detected. . . . I would think that is the greatest deterrent you could have, and you are going to release ours before they are destroyed, and you could do it."

Indeed you could. But such a mode of decision risks delegating to a computer the most terrible decision that would ever have been made, the decision for World War III. Recognizing that, our government decided years ago to try to preserve our political decision centers and to protect our forces so that they could ride out an attack and in that way leave time for responsible political decision. A recommendation by the good guys to launch missiles on radar warnings hardly fits the simple picture. Who *are* the prudent, reflective, good guys and who are the bad guys?

Even given the deserved unpopularity of nuclear accidents, the ease with which indignation was aroused about the local defense of urban population has in it a good many paradoxes. At the very least it knocks down one widespread argument that was being made as recently as last year against an attempt to defend some cities. That, the argument used to run, can only lead to an arms race, since it was certain that the undefended cities would demand defense. Doesn't this vociferous demand not to be defended at the least suggest some flaws in the older theory?

Trying to fit the pieces of the ABM debate about arms race and military budgets and domestic needs into the simple picture yields many insoluble puzzles. Major critics of ABM (for example, Professors Wiesner, Weinberg, Panofsky and Senators Fulbright and Symington) run on about arms races; nonetheless suggest increasing, even doubling, the Minuteman force rather than defending it with ABM. But a doubled Minuteman force could annihilate the projected large number of Soviet ICBMs: it would seriously endanger Russian ability to retaliate. If the Russians, following the policy suggested by the vociferous ABM critics, responded by increasing *their* force, an accelerating race in strategic budgets and numbers of weapons would then be on in earnest. It has *not* been on in the past, despite the stereotypes. In the last 10 years our strategic budget did not "accelerate"; it *declined* by half and precisely because in the 1960s we did not merely multiply strategic vehicles but increased their

protection by methods such as blast resistant silos appropriate to the 1960s threat. In the mid and late 1970s improved offense accuracies will make blast protection inadequate and will make ABM an appropriate method for preserving a fixed offensive force. Moreover such active defense of the offense would not provoke a spiral any more than our silos did. It frustrates an adversary's ability to strike first effectively, without removing his ability to strike second, that is, his ability to strike back after attack. Protecting Minuteman doesn't add to our first-strike capacity. Doubling Minuteman does. Just who is thinking prudently about avoiding arms races?

Or about excessive military costs? Doubling the Minuteman force and keeping B–52s steadily aloft in numbers equal to our ground alert would cost several times more than protecting Minuteman and B–52s with ABM; over 20 billion dollars on a 5-year basis, even neglecting the implicit "spiral"! Hardly the way to free resources for urgent domestic needs. Moreover, unlike Safeguard, doubled Minuteman and air alert B–52s would do nothing to protect our national command or to shield our population against even small attacks.

This neglect of the expense of alternatives to ABM is only one example of the casual handling of costs by the critics of ABM. And treating costs in an offhand way turns out to be crucial for their substantive criticism. Today it is plain that these critics were extremely hasty in presenting calculations that purported to show that Minuteman would be safe without extra protection in the mid and late 1960s. And many of them have retreated on this point: they now say Minuteman will be so unsafe as to be obsolete and not worth defending. It is not yet as plain that their treatment of the costs and effectiveness of a Safeguard defense of Minuteman and its alternatives is as faulty as their earlier proofs that Minuteman would be safe. Perhaps I can make it plain. It is an important matter. Central questions that seem unrelated turn on these matters of cost, for example, the questions below.

1. CAN SAFEGUARD BE "EASILY" OVERCOME?

Opponents of ABM support their claim that overcoming Safeguard is easy by referring to a mysterious secret chart showing how the Russians can overwhelm the defenses of Minuteman by adding more of their SS–9 missiles. Such a chart hardly proves their point. Any fixed amount of defense can, of course, be overcome by adding enough to the offense. This is obviously true. It is equally true that any fixed amount of offense can be smothered by adding enough defense. Both these truths are nearly tautological. For adversaries with roughly the same resources, the practical question has to do with how much extra the offense must pay to overcome a given amount of defense and how this compares with the cost of that defense itself. The answer in the case of Safeguard defense of Minuteman is that it would cost the Russians more than twice as much to add offense as it would cost us to add an offsetting number of Sprint missiles with their fair share of the missile site radar expense.

That is why starting to deploy Safeguard is a good way to discourage an adversary from persisting in any attempt to remove our second-strike capability. On the other hand, if we do nothing to protect so large a part of our retaliatory force, we make it relatively cheap and fruitful to get the capability to destroy it. The stereotypes about the arms race talk always of "action-reaction cycles." There are inaction-reaction cycles too. And some positive acts inhibit response by making it fruitless.

How have the critics of ABM missed the point on costs? First, they rarely mention the adversary's costs and never measure the extra cost to the offense to overcome an increment in Safeguard defense. In fact, one distinguished Senator opposing ABM has suggested that the large costs of SS–9s do not concern the Russians since they are not capitalists. Another opposition Senator holds that the Russians are so limited in resources that they will not buy enough SS–9s to destroy Minuteman even if there is no Safeguard to make their resource cost higher. A more reasonable suggestion than either of these two is that expanding the SS–9 involves a serious resource expenditure for the Russians: perhaps worth it if we indicate we have no intention of protecting Minuteman: and not worth it if we can add protection much more cheaply than they can overcome it.

Not only are SS–9 missiles with three 5–MT reentry vehicles expensive, but so are the lower-yield less accurate SS–11s, which have recently been proposed by critics as "cheap defense radar killers." In fact, on a per warhead basis they are more expensive than the SS–9s and much more expensive than the defense missiles that would counter them. Nor would SS–9s with 20–30 low-yield reentry vehicles be cheap radar killers, as recently suggested by Professors Wiesner, Weinberg and Rathjens. They are much more advanced than the SS–9 with three accurate 5 megaton MIRVs. Yet these same critics doubt that the Russians can get the latter. Most important, if one includes the several billion dollars for research and development, getting two dozen missiles especially to kill radar would involve extremely high unit costs, even neglecting the expense of procurement and operation.

The critics not only neglect adversary costs, they inflate the costs of the Safeguard defense of Minuteman. They attribute the entire costs of the Safeguard program to the protection of Minuteman. They include research, development, testing and evaluation costs which both opponents and advocates of Safeguard agree should continue whether or not we start deployment now; these are not properly an *extra* cost of the decision to deploy Safeguard at the Minuteman sites or anywhere else. Furthermore, they include costs, all or part of which are required for other functions of Safeguard than the defense of Minuteman.

Safeguard is intended also to protect the National Command authority, to defend manned bombers and to provide a thin shield for population. When the critics of Safeguard want to question the value of the area defense of the bombers and of our population, they may estimate that most of the cost is for area defense and attribute only $730 million of the entire Safeguard program to the defense of Minuteman. (See Chayes and Wiesner, Eds., *ABM: An Evaluation.*) On the other hand, when they are attacking the use of Safeguard to defend Minuteman, they pile on this function the entire costs of the program including not only research and development, but also expenditures for the purpose of defending National Command, bombers and population. (See Rathjens, Wiesner and Weinberg, "Commentary on Secretary Laird's May 22 Defense of Safeguard.")

In estimating the cost of a defense interception, they neglect a major feature of the Safeguard system, that will permit immediate replacement of defense missiles that fail during or shortly after launch. Since most failures occur within this time period, a reserve of some 15% or 20% assures an extremely high probability of interception. Critics of ABM, by ignoring this, have assumed that some three times more defense missiles are required than the probable number.

This neglect is related to the critics' misunderstanding about the "softness" of the defense radars (MSRs and PARs) and the role of blast resistance in the defense. It is well known that the radars have less than one tenth the blast resistance of the Minuteman silos. They are, however, protected primarily by interceptor missiles, and they are made just blast resistant enough to force an offense warhead to come close and so permit the defense to fire several times at it. If the first or even second Sprint fails, there is time enough for a third to destroy an incoming warhead.

A final major defect in the critics' estimate of the cost of a defense interception comes from ignoring the important strategy for defending an offense force known as "preferential defense." Defending missiles is a very different thing from defending population. If only half the population survived, this would be a catastrophe of unimaginable dimensions. But the survival of fewer than half our missiles may be more than enough to assure retaliation. The defense then can decide which Minuteman silo, or if there is more than one radar, which radar to defend and can decide this at the last minute. The offense cannot know this and therefore must attack all targets as if they were all defended. When the defense doubles the number of interceptors and radars, the offense must multiply its warheads four times.

All these errors in costs add up to a very large mistake about the ease of overcoming Safeguard.

2. WILL SAFEGUARD WORK?

The answer to this question may not seem directly related to the matters of cost we have been discussing. But it is related both to our costs and to those of an adversary. When a critic says Safeguard won't work, it sounds as if he were claiming that when a switch is thrown, there will be a fizzing sound and then merely some smoke coming out of the computers. A closer look at his argument, however, will reveal that he means Safeguard will not work because in an actual war the adversary wouldn't let it work; the adversary will think of all sorts of effective counter-measures.

For the apparent (or smoking computer) meaning, the fact that Safeguard is complicated seems to be crucial. Bell Laboratories, which have technical charge of the Safeguard system design, are most experienced, cautious and successful in engineering complex systems. They are used to making very complicated things work with very high reliability. But if the trouble lies in what an enemy can do to counter Safeguard or its alternatives, complexity is not the issue at all. Many simple things won't work when a modern adversary won't let it: slingshots, catapults, moderately hardened silos, and even the "cheap" small defense radars and missiles proposed by some of the ABM critics—which unfortunately are very vulnerable to inexpensive counter-measures. The cost of the defense and the cost of offense counter-measures are at the heart of the matter, and it is here that the critics have been weakest.

The components of Safeguard and their interactions have undergone and will undergo very extensive testing. Sometimes the argument is made that this is not enough, that the only realistic test would be an actual nuclear war. This is one test we all want to forego. However, the critics appear unaware of the fact that this is a limitation affecting our certainty as to the performance of our offense also. It applies equally to Russian and American offense and defense. But this limitation does not show that defense is worse off than offense, or that we are worse off than our adversaries.

Finally, the history of the last 25 years suggests that it is hard to take claims about whether a system will work or not work on their face value, especially when there are strong passions involved. When something new is proposed for our side, scientists who oppose it tend to say not only that it would be bad, but that it won't work at all. If they

are for it, not only would it be nice, but it works like a dream. So when they were against an emphasis on the offense, the H-bomb wouldn't work. In the late 1940's, when they opposed continental defense as a poor substitute for international control, no defense was possible. In the 1950s when international control was out of the picture and continental defense seemed essential, then an adequate defense was possible. Then in the 1960s, judgments about feasibility were once more reversed to match views on the value of defense.

3. IN CASE DETERRENCE FAILS, IS IT WORTH ATTEMPTING EVEN A LIMITED POPULATION DEFENSE—ONE THAT WORKS AT LEAST AGAINST IRRATIONAL SMALL ATTACKS?

The critics of defense in general hold that there is no need to worry about reducing the damage that would be done in case deterrence fails, because, they say, it is extremely unlikely that it will fail. But they are really of two quite different minds about the possibility of the failure of deterrence, depending on what they are advocating. When they want to forego any attempt to reduce the castastrophe, they are extremely reassuring about the low probability of nuclear war. They say deterrence is stable now and will be in the face of technological change. When they are urging drastic early steps towards disarmament and perhaps risky ones, they say the very opposite. Far from being stable, deterrence is certain to fail. The critics may then even give precise odds on how soon it will fail. The odds are high. The apocalypse, it seems, may be soon.

Take Professor Wiesner. Against the Chinese as against the Russians, he says, ". . . we must rely on the offensive deterrent . . . on our known ability to retaliate devastatingly in case of a nuclear attack. Ten percent of our SAC bomber force could kill 200 million Chinese." (*Look*, November 28, 1967.) This is evidently all right, for he also says, "The fantastic power of nuclear weapons provides a high degree of stability. Consequently a few bombs, certain to be delivered, will constitute a powerful deterrent." (*Washington Post*, January 22, 1967.) On the other hand in his apocalyptic mood, Dr. Wiesner has said, "There is an ever-increasing likelihood of war so disastrous that civilization, if not man himself, will be eradicated." (*Daedalus*, Fall 1960.) The probability is not only rising, but apparently it is already high. "The odds," he estimated recently, "are in favor of a major war within the next two decades." (*Washington Post*, January 22, 1967.)

Similarly, Senator Fulbright expressed astonishment at recent Hearings that the Department of Defense has sponsored a system for protection against the Chinese, since a Chinese attack would be irrational, suicidal in fact. A system for such a purpose is so far-fetched he suspects an ulterior motive. On the other hand, in an article entitled, "Now Is the Time to Take Great Risks," in which he urges drastic and evidently chancy steps towards disarmament, he explains, "Sooner or later the law of averages will turn against us; an extremist or incompetent will come to power in one major country or another, or a misjudgment will be made by some perfectly competent official, or things will just get out of hand without anyone being precisely responsible as happened in 1914." Under present deterrent arrangements, in short, this suicidal act is in the cards; the apocalypse is certain.

My own view is that the probability of nuclear war, if we are careful, can be kept small. But this requires continuing attention to the protection of strategic forces in the face of technical change. And even then there is always a significant possibility of breakdown and therefore the need for some insurance in the form of defense.

Critics of ABM are strikingly inconsistent in their treatment of the Russians and the Chinese. In saying we don't need to defend Minuteman against Russian attack in the mid or late 1970s, they presume that, 20 years after Sputnik, Russian missiles would not be able to achieve accuracies and other performance characteristics of the Minuteman III and Poseidon missiles that we ourselves are now in the process of deploying. In opposing an area defense of population against Chinese attack, they assume that the Chinese in their first generation ICBMs will be able to deploy penetration aids that took us billions of dollars and many trials and failures, and a dozen years to develop. These are extraordinarily backward Russians and most advanced Chinese.

At a modest extra cost over and above that of defending our offense force, we can manage a very effective defense of our population against a small attack, a defense that can keep us free of substantial damage from the Chinese without our initiating a nuclear attack upon them. Moreover, given the general technological levels in the two societies, we can stay ahead of them for the foreseeable future. Even if Chinese offense technology were at a much higher level, the difference in the resources of the two societies would be decisive. I said earlier that for adversaries with roughly the same resources the practical question has to do with how much extra the offense must pay to overcome a given amount of defense and how this compares with the cost of that defense itself. A relative cost disadvantage to the offense will bear down much harder on an adversary with much smaller resources as is the case for China whose gross national product is less than a tenth and whose per capita income is about 2% of ours.

Those who reject even a thin shield for population manage simultaneously to hold that (1) the shield would have no substantial effect even against a small first generation Chinese attack, but (2) it would be so effective against the massive sophisticated Russian force that the latter could not inflict enough damage on us to deter us, even though (3) it takes only the prospect of a few bombs delivered to deter the Russians. These and other absurdities stem, I believe, from an extreme strategic dogma whose origins go back many years to the French General Staff and to a few members of operational research staffs like the Weapons Systems Evaluation Group of the Joint Chiefs of Staff. I refer to a doctrine known as "Minimum Deterrence" that holds that any attempt to protect our own civilians will make nuclear war more likely, that we must depend exclusively on a threat to bomb enemy civilians. Not an obviously humane or liberal doctrine. It defies common sense as well as rigorous analysis.

Of course very few of the public interest groups who oppose defense of population are at all aware of the origin of their views. Indeed, they abhor "Think Tanks" like the Weapons Systems Evaluation Group (now a division of IDA, a famous target for the SDS). Yet just as Keynes remarked that the practical man who scoffs at theory is frequently the slave of theorists long defunct, so the ladies in the Women's International League for Peace and Freedom and other similar organizations may say unkind things about Think Tanks, and wear Stop ABM buttons. But the theory behind the button originates from individuals in some of these same Think Tanks.

I would not myself have thought a few years ago that one could organize widespread popular indignation among church groups and mothers on the basis of so extreme and far-fetched a dogma, one that suggests that it is all right to threaten to launch missiles at enemy civilians, but peculiarly heinous to prepare to knock a missile down on its way to destroy millions of our civilians. Clergymen for Bombing Civilians Only? Mothers for the Offense? I'd have thought it would never fly. I was quite wrong. The massive lobbying activity of the last year or two has mustered a plenitude of organizations with names like "Another Mother for Peace," "Womanpower in Action," "The United Methodist Board of Christian Social Concerns." When men and women of good will take it as so obviously right to depend solely on a threat to launch nuclear weapons against cities, we've come a long way from the Spanish Civil War and the world's shocked reaction to the bombing of several thousand civilians at Guernica.

And a long way from the position taken throughout most of the 1950s by the same scientists who now refer to any use of defense as "Maginot Line mentality." "History," quotes the epigraph to the Wiesner-Chayes book on ABM, "is littered with Maginot Lines." The Final Report of the Lincoln Summer Study, in which Drs. Wiesner, Killian, Kaysen and others were prominent, had a whole section on Maginot, replying to the offense ethusiasts of that time. Putting "all our eggs in one basket," they said, is the essence of "Maginot psychology," and it is exemplified by the "great emphasis placed in recent years on the development of an effective 'retaliatory force'." Liberals have forgotten that the key substantive issue that was obscured by the tragic outcome of the Oppenheimer hearings had to do with whether a large enough part of our effort was being devoted to continental air defense. In fact, history tells us less about the relevance of Maginot (a dead Frenchman whose name is too often used to settle deep and complex issues) than it does about the pitiful inadequacy of all slogans about offense and defense. ("Maginot!" "There is a counter to every weapon!" "The offense always gets through!" Etc., etc.)

Indeed, many of these same scientists have turned 180 degrees at least twice since Hiroshima in their slogans about defense. Immediately after the war the American Federation of Scientists printed its "Creed" with the second point in bold face: There is no defense. It was, they said, One World or None. After the Russians turned down the Baruch plan for international control of atomic energy, and it soon became clear that we were not about to have one world, a majority of these articulate scientists looked a bit more closely at whether the alternative really was no world at all. Then it was announced (e.g., by Ralph Lapp) that the scientists were "rebelling against the *military* dictum that there is no defense." The rebels lobbied for civil defense and continental air defense; opposed the H-bomb on the grounds that it was infeasible; or if feasible, undeliverable; and in any case, usable only against cities rather than legitimate military targets; and finally clashed bitterly with a minority that favored going ahead with the H-bomb. I myself believe that the opposing factions of scientists tended to caricature each other. It was not really that one side wanted to depend exclusively on offense and the other solely on defense. The genuine differences concerned emphasis and allocation. But the ironic next 180 degree turn at the end of the 1950s saw the majority faction turn once more and adopt almost the caricature of the position it had been most recently opposing. It now calls for a nearly exclusive reliance on offense and the total rejection of defense of population against ballistic missiles. Cities, it seems, are now the only "legitimate" targets and defending cities is a provocation.

But even minimum deterrers who oppose defending population normally believe that we should protect our retaliatory force by concealment, shelter or active defense. The Safeguard ABM which aims to protect bombers and missiles is precisely the kind of thing that Minimum Deterrers would normally support. And in fact, many of them did, at least through March 6 of this year.

In testimony before the Senate, Hans Bethe, for example, said quite unequivocally that while he was opposed to the Sentinel defense of cities there was another kind of ballistic missile defense, namely the defense of retaliatory hard points, and that was different; he favored that:

"A completely different concept of ABM is to deploy it around Minuteman silos, and at command and control centers. This application has gone in and out of Defense Department planning. I am in favor such a scheme."*

In fact, he said, the Sprint and MSR are good components for the purpose.

Then on March 14 the President announced the Safeguard program which was primarily directed at the defense of missiles, bombers and the national command authority. This apparently posed something of a dilemma. A tremendous effort had gone into lobbying against ABM when it had been intended mainly to provide a shield for population against light ballistic missile attack. Hundreds of scientists had signed indignant petitions; public interest groups had been mobilized; speeches had been written for now indignant senators; ABM had become a symbol. The push against it gained enormous momentum; Senate hearings were rolling; and, it seems, if you push hard enough against a symbol, you may find you are being pulled. At any rate, a good many of these scientists then said that, nonetheless, even with the change, they were *still* against it; and some offered extremely hasty calculations to suggest that the missiles and the bombers really required no protection, that Sprints and MSRs wouldn't do it anyway, that it would be better simply to multiply offense forces, or launch them on warning or do almost anything other than defend them.

This sequence of events suggests the folly of transforming a complex substantive issue into a symbol in black and white. I would not turn the simple picture upside down, with the good guys supporting ABM and the bad guys in opposition. I do not represent the Safeguard issue as one that divides the forces of light from those of dark. And neither do temperate opponents of starting deployment this year, like Senator Brooke. Senator Brooke has not been pushed to the rash extreme of calling for launching Minuteman at Russian cities on radar warning or doubling the offense or doing almost anything rather than support the scoundrels advocating ABM. He rejects the first as lunacy and deplores the second.

Simply for the symbolism of taking Safeguard out of the country, some Senators propose to build on distant Pacific atolls PAR and MSR radars that could if located in Montana and Dakota protect Minuteman. This would waste billions of dollars just to defeat the bad guys in the Administration. It is such bitter symbolic struggle with shadows that makes reflective choice hard to manage and delays the sober and rigorous examination required both for our defense and domestic needs.

MESSAGE FROM THE HOUSE

A message from the House of Representatives by Mr. Hackney, one of its reading clerks, announced that the House had agreed to the amendment of the Senate to the bill (H.R. 9951) to provide for the collection of the Federal unemployment tax in quarterly installments during each taxable year; to make status of employer depend on employment during preceding as well as current taxable year; to exclude from the computation of the excess the balance in the employment security administration account as of the close of fiscal years 1970 through 1972; to raise the limitation on the amount authorized to be made available for expenditure out of the employment security administration account by the amounts so excluded; and for other purposes.

The message also announced that the House had passed a bill (H.R. 13111) making appropriations for the Departments of Labor, and Health, Education, and Welfare, and related agencies, for the fiscal year ending June 30, 1970, and for other purposes, in which it requested the concurrence of the Senate.

HOUSE BILL REFERRED

The bill (H.R. 13111) making appropriations for the Departments of Labor, and Health, Education, and Welfare, and related agencies, for the fiscal year ending June 30, 1970, and for other purposes, was read twice by its title and referred to the Committee on Appropriations.

GAO STUDY OF B. F. GOODRICH PERFORMANCE ON CONTRACT FOR THE A–7D AIRCRAFT BRAKES

Mr. PROXMIRE. Mr. President, some weeks ago I was given information alleging that B. F. Goodrich delivered brakes that failed to meet specifications to Ling Temco Vought/Vought Aeronautics Division (LTV/VAD) in Dallas, Tex., to be installed on the $1.2 million A–7D light attack aircraft.

Although the charges were difficult to believe, I was further informed that Goodrich's delivery of defective brakes to LTV for an airplane they are preparing for the Air Force involved highly questionable business practices on the part of the Goodrich wheel and brake plant in Troy, Ohio.

I was told that in order to deliver brakes that appeared qualified according to military specifications Goodrich officials altered data on the test specification logs and deviated from standard industry and military testing procedures and standards to show that the defective brakes were a qualified component.

On the basis of the allegedly false qualification report the brakes were installed on production models of the A–7D for testing, and the safety of both LTV and Air Force test pilots were endangered.

B. F. GOODRICH EMPLOYEES KNEW OF ERROR

The allegations recited here were brought to my attention by two Goodrich employees: A design engineer, Cyril Lawson, who was involved in the research and design of the A–7D brake, and the Goodrich technical writer, Kermit Vanderveer, who contends he was instructed to write the false qualification report by his superiors at the Troy, Ohio, wheel and brake plant.

The engineer said that a design miscalculation on the brake was made and subsequently discovered during the design phase. But, he explained, by the time it was found out tooling had already begun for the brake and a delivery date had been set. The engineer said he advised his superiors at the plant of the error and assumed that production of the brake would stop immediately, while the Goodrich engineering department developed a new design that would meet the specifications.

Instead of starting a new design, my two informants at Goodrich said, the company ordered qualification tests on the brake continued in the hope that it would perform satisfactorily despite the design error. In the meantime the unqualified brakes were shipped to LTV with the technical writer's inaccurate qualification report.

BRAKES COULD NOT MEET MILITARY SPECIFICATIONS

The Goodrich employees who were responsible for bringing these remarkable accusations to my attention contend that 14 separate attempts were made to nurse the brake through the required laboratory tests. All ended in complete failure they told me and it was then obvious to the Goodrich engineers working on the A–7D brake project that the brake had no chance of ever meeting the stringent military specifications.

Still, Goodrich neglected to recall the bad design nor did they give any hint that the technical writer's "concocted" qualification report contained erroneous material that showed the brake meeting the military specifications of quality and safety required before flight tests are allowed.

Customary procedure in the brake industry, I am told, is to provide this qualification certification, in writing, with all brakes. The report gives all the details of laboratory tests and supports these details with documentary evidence that all the requirements for the design, manufacture, and testing of the brakes have been met. According to the military specifications covering preproduction tests for aircraft wheels and brakes, the tests are supposed to be conducted on test articles that are representative of the production items.

TECHNICAL WRITER ADMITS WRITING FALSE REPORT

The technical writer who authored the qualification report has said in writing:

Since there was no evidence that would substantiate any of these claims (i.e. that all requirements for the design, manufacture and testing of the brakes have been met) the only alternative was to write a false qualification report.

Furthermore, he states:

I was ordered to concoct a report that would establish that the brakes had met all the necessary requirements, and to manufacture the documentary evidence to go with it.

The technical writer says:

I flatly refused, and for almost a month, a bitter argument raged between myself and various company officials. Finally, I was ordered to "write the thing" and shut up about it.

According to the technical writer, the brakes were actually never tested as his report claimed. Furthermore, he has presented evidence to my office that appears to show that additional components were added in his words, to "beef up" the

* Mimeographed statement submitted on March 6. The printed version published at the end of the month, added the phrase "at the appropriate time" to the last sentence.

brakes during laboratory tests—components that were not actually a part of the production brakes—so the brakes could successfully complete simulated aircraft landings.

ORIGINAL TEST LOGS SHOW FAILURE

In a last minute effort to exonerate himself from writing the false qualification report the technical writer says he noted in the report's conclusion that:

The B. F. Goodrich Part Number 2-1162-3 Brake Assembly does not meet the intent and requirements of the applicable specification documents and therefore is not qualified. When the report was sent to the Air Force the "nots" had been removed from the conclusion by the Technical Writer's superiors.

I have been told that the flight tests on the brake at Edwards Air Force Base, Calif., were a failure. The design engineer has said that on one occasion when the test pilot landed the plane and applied the brakes the wheels locked and the plane went into a skid. He released brake pressure, but the intense heat generated by the faulty brakes caused the brake discs to weld together. The plane continued its high-speed skid down the runway, stopping 1,500 feet later. The plane remained upright and the test pilot was uninjured, but after witnessing the near accident the design engineer said he determined to go to Government authorities before a pilot was killed or injured as a result of the design error that was being hidden from LTV and the Air Force by the false qualification report. Both the technical writer and the design engineer went to the FBI in Dayton, Ohio, with their evidence—the same evidence they later presented to me and which I am relating here today.

GOODRICH REFUSES AIR FORCE INSPECTION

The technical writer has said:

At this time, because of the numerous failures encountered during the flight tests at Edwards Air Force Base Goodrich admitted, under intensive pressure applied by LTV and Air Force personnel, that certain portions of the formal report issued by Goodrich were erroneous.

As a result of this admission, according to the technical writer, "the Air Force immediately demanded to see data taken during laboratory tests of the A-7D brake. Goodrich flatly refused to produce the data for the Air Force inspection."

Both the engineer and the technical writer resigned from B. F. Goodrich.

REQUEST FOR A GENERAL ACCOUNTING OFFICE INVESTIGATION

Although the design engineer and the technical writer both appeared to be responsible individuals, I found their account incredible. That one of the country's major corporations intentionally delivered unqualified brakes to LTV for installation on production aircraft seemed impossible.

Also, I could not believe that the Defense Department did not have some means of independent inspection and testing that would prevent defective parts from being installed on production aircraft. If true, that seemed to be a serious failure on their part.

However, in spite of my incredulity on these two points, I felt it my duty to clear the air of these accusations against B. F. Goodrich and to definitely determine the effectiveness of the Defense Department's quality control efforts. I called upon the General Accounting Office—GAO—to investigate the allegations of the design engineer and the technical writer, paying particular attention to the following two assertions:

1. that the test logs and the qualification report that indicated that the brakes were qualified were erroneous; that they were intentionally altered to show that the brakes qualified when they actually could not qualify because of a basic design error, and

2. that a test pilot's safety was endangered because the defective brakes were installed on at least two production aircraft and tested in flight tests on the basis that the erroneous qualification report showed the brakes to be qualified component.

Also, I asked the GAO to define the effectiveness of the Government's responsibilities in the testing of brakes in this case.

GAO REPORT CONFIRMS THE GOODRICH EMPLOYEES ASSERTIONS

The report handed to me by the General Accounting Office recently is startling in its crystal clear, carefully documented confirmation of the design engineer's and the technical writer's assertions.

In reviewing the qualification tests performed on the brake, the GAO reports that Goodrich's test procedures on the brakes for the A-7D do not, "comply with the specification requirements or normal industry practices." GAO concludes that—

As indicated in our report, there were discrepancies between the data shown in the B.F. Goodrich test report (Q-6031), and the data shown by its test instruments.

In our examination we noted instances where data were reported notwithstanding the fact that none were available from the test instruments. In other instances we noted that reported data were at variance with recorded test results. In some instances B.F. Goodrich personnel could not offer an explanation, while in other instances the discrepancies were justified by so-called "professional judgment."

The GAO said:

In our opinion, the B.F. Goodrich Company should have accurately reported the test results in its report Q-6031. In the absence of accurately reported test results it is difficult, if not impossible, to properly evaluate product performance.

GAO DOCUMENTS DISCREPANCIES

The GAO report confirmed the Goodrich employees assertions by showing that on a machine designed to test stop effectiveness of the A-7D brake, "brake pressure was released at 10 miles per hour and the wheel permitted to coast or taxi for 10 to 15 seconds. Military specifications required the brake to bring the wheel to rest." The report states in no uncertain terms that—

An Air Force Engineer considered that the failure to come to a complete stop was unacceptable because torque stresses reach their peak during the 10 to 0 miles per hour velocity.

The fact that the wheel was allowed to coast to a stop on the testing device was not included in the qualification report. Nor did the report indicate that Goodrich had requested a deviation from the standard testing procedure which requires the wheel to be braked to a dead stop.

Also confirming the story I had learned from the design engineer and technical writer, GAO reported that Goodrich did not use a "test sequence of 45 normal, 5 overload, and 2 rejected-take-off brake stop tests, although it was common industry practice to intersperse the normal and overload stop tests."

An Air Force engineer told GAO investigators that "any failure would disqualify the test;" and, in his opinion, "had Goodrich performed the tests on the 9 to 1 interspersed basis, the brakes would have not lasted through the 50 normal and overload stop tests."

GAO CONFIRMS GOODRICH SWITCHED PARTS

These two incidents taken either alone or together would have disqualified the brake if standard industry and military brake testing procedures had been followed by Goodrich. However, the GAO report reveals that the company went much further in their efforts to qualify this vital part for the A-7D aircraft in spite of the fact that it was evident that the brake was plainly not a qualified component. GAO investigators discovered that the test operator on the A-7D brakes even documented some of the unorthodox testing procedures. For instance, the GAO report notes:

Goodrich's Special Test Requirement and Procedures and Operator's Comments set forth various other instructions or actions regarding the procedures or methods in the qualification testing. Among these was the statement that the stators (stationary parts in the brake assembly) were switched between the number 1 and number 3 positions and we selected this for further inquiry.

B. F. Goodrich attempted to explain the changing of parts thus:

This was a laboratory technique in which the results were studied by an engineer to determine the wear pattern of the linings on the stator.

LTV officials had another description of this switching of parts for GAO:

LTV officials advised us that the switching of stator positions was not normal industry practice.

The Air Force was even more outspoken on the matter:

In the opinion of an Air Force Engineer, this switching of parts was unacceptable.

Unequivocal language of this sort throughout the GAO report leaves no room for doubt. The story I had learned through the engineer and the technical writer is confirmed in every detail by the GAO report. If anything, the GAO account is even more serious than the evidence that had been presented to me by the two Goodrich employees and that I originally found so difficult to believe.

GOODRICH PERSONNEL COULD GIVE NO EXPLANATION

For instance, in the altering of the operator-recorded test data, GAO reports that B. F. Goodrich revised the data every single time in the critical "overload brake stop, worn brake rejected takeoff tests." The GAO report

states that "Goodrich personnel could give no explanation."

In this and other critical tests Goodrich recorded data in the qualification report when the raw test records show that "the recorder was not working properly" or was not working at all.

In still another instance, the GAO report notes:

Goodrich personnel expressed the opinion that the data had been rationalized from tests of another part on which the temperature had been monitored and which was considered comparable.

According to the GAO, "this constitutes a 'rationalization of data.'"

In all of these examples, where data was altered or where data was recorded when no recorder was operating, the information reported by Goodrich in the qualification report made it appear that the A–7D brake was qualified, when in fact, if accepted industry standards had been followed, the qualification report would have shown that the brake did not meet its specifications.

Accompanied by the doctored qualification report, the brakes were installed on production aircraft at Edwards Air Force Base, Calif.

FAA WARNS OF POTENTIAL FIRE DANGER

When the GAO questioned the Federal Aviation Administration on the danger of defective brakes to test pilots and to the aircraft the report notes:

In response to our question regarding pilot safety and structural damage, FAA officials stated that warping or welding of the brakes would blow out the tire, which in turn might cause (1) collapsing of the landing gear, (2) breaking of the hyrdaulic lines, and/or (3) puncturing of the gas tanks located in the aircraft wing. As the result, they further stated the most likely danger was a fire due to the combination of the heat in the brakes and leaking hydraulic fluid and/or jet fuel.

The GAO report then notes that on "two contractor flight reports, in one instance, the wheels locked up and in another instance the brakes fused so that they had to be loosened with a screwdriver."

Fortunately on neither occasion was their a fire as there had been during the in-plant testing. The technical writer says:

I have witnessed several fires during testing caused when the pistons bottomed out allowing brake fluid to hit the hot brakes and causing the whole thing to burst into flames.

It was at this stage in the on-plane testing that the design engineer and the technical writer resigned from B. F. Goodrich rather than carry on with the A–7D brake project. In his letter of resignation, the technical writer frankly told the head of the B. F. Goodrich wheel and brake plant that he was leaving the company because he had been a part of, "numerous deliberate and willful misrepresentation which, according to legal counsel, constitutes fraud and thereby exposes both myself and others to criminal charges of conspiracy to defraud. Events of the past 7 months have created an atmosphere of deceit and mistrust in which it is impossible to work productively and effectively."

It was also at this time that the Air Force demanded to see the raw data that Goodrich had recorded when qualifying the brake. Goodrich refused. The GAO reports:

After Goodrich refused the Air Force access to Goodrich's raw data supporting the four-rotor brake Qualification report, a LTV representative was authorized to review this raw data.

GOODRICH ADMITS DATA DISCREPANCIES

The GAO reports:

LTV's review in the fall of 1968 disclosed discrepancies in the qualification tests which were considered to be of such significance as to conclude that the four-rotor brake did not qualify to the "letter of specification." Subsequently, Goodrich proposed to substitute a five-rotor for the four-rotor brake.

Thus, even though LTV had previously approved the four-rotor brake qualification test report, they now said the "brake did not qualify." LTV officials explained this turn-around to GAO by saying that in approving the original Qualification Report, "they reviewed only the data contained in the report and did not compare the reported data with the original recorded test results."

If they had made the comparisons as we now know, they would have discovered that the qualification report's figures were far different from the operator-recorded logs from the Goodrich testing laboratory.

The Air Force, perhaps because of the design engineer's and the technical writer's warning to the FBI, protected the Government's interest by withholding approval of the Qualification Report, and, as of today, they have yet to approve the Qualification Report on Goodrich's new five rotor brake.

QUALITY CONTROL IS A MYTH

In describing the Government's contract administration responsibilities in this case GAO cogently describes how quality control is a myth and how the company is really on an honor system to conduct legitimate tests and write factual qualification reports. In the case of B. F. Goodrich's Wheel and Brake plant this honor system does not work. GAO explains:

The contract administration functions at LTV were assigned to the Naval Plant Representative Office located at the prime contractor's plant. Secondary delegations of quality assurance responsibility at Goodrich was assigned to the Defense Contract Administration Services District (DCASD), Dayton, Ohio.

LTV's purchase order P–237138 provided for Government source inspection at Goodrich and the referenced LTV specification required the Government inspector to sign the qualification report without further describing the meaning or significance of such a signature.

GAO states flatly:

In our opinion, the affixing of a signature to a report is meaningless unless accompanied by some other act, such as verifying, at least on a test basis, the reported information to the original documents.

We also believe that the report or document should contain a clear and concise statement as to the meaning of the signature to indicate the reliance that may be placed upon such actions by other readers.

The DCASD quality assurance representative told GAO investigators that—

Goodrich required his signature on the qualification report because LTV would not accept it without his signature; however, he had not received any specific oral or written instructions from any Government activity or the prime contractor's officials as to what steps were to be taken prior to signing the four-rotor brake assembly qualification report, Q–6031. His signature was affixed to the Q–6031 report, in which it was concluded that the brake assembly met the intent and requirements of the applicable specification document and therefore was qualified.

The quality assurance representative explained that he interpreted LTV's quality control requirements to mean an inspection of the qualification test report in the manner as for any other hardware item, thus he assured himself that all the tests listed in the front of the report were accomplished and successfully solely on the basis of the report contents. The quality assurance representative also stated that he did not witness any of the tests on the four-rotor brake or compare any raw data with the Q–6031 report and commented that this was DSASD's normal practice.

However, the Chief, Quality Assurance Section, DCASD Dayton had a different interpretation of what the signature meant. He told GAO investigators:

The quality assurance representatives' signature meant that he had compared, on a test basis, the raw data generated by the test recording machine with the information reported in the Q–6031 report and that the information was in agreement. He stated also that he had contacted Defense Contract Administration Services Region, Cleveland, for an interpretation of the signature on a qualification test report, but that they could not provide any assistance.

We know now that the raw data generated by the test recording machine either did not exist or was in disagreement with the information reported in the qualification report on critical tests.

The GAO investigation of this matter has already produced some reforms in the area of meaningful Government inspection and quality control of the defense contractors in the Dayton, Ohio, area. It is a small start in a small area. But it is a start.

GAO INVESTIGATION BRINGS IMPROVEMENTS

The GAO report states:

Subsequent to our discussions, DCASD, Dayton issued, basically, the following internal guidance to their quality assurance personnel:

"1. Do not countersign qualification reports unless contractually required or unless directed by higher authority.

"2. A signature constitutes verification of the data contained in the report and shall not necessarily indicate concurrence with the conclusions in the report.

"3. When countersigning as authorized in 1. above, identify in the report the test data for the tests actually witnessed."

As I have stated, these improvements in inspection are a small start in one area of the country. Much more guidance is needed if the DCASD is to function effectively; many questions remain to be answered before we can be certain that an incident of this type does not occur again. For instance:

QUESTIONS REMAINING

I question the method of testing which allows a company to write its own quali-

fication report without proper supervision by the contracting governmental agency.

I question the business practice in defense plants which allows—even encourages—executives to coerce their employees to fabricate documents that determine the safety of the U.S. servicemen.

I question the justice of a system that allows a company to merely submit a new report and a new product to the Government, without penalty, when the company has been caught indulging in the business practices outlined here and confirmed by the GAO.

It is significant to note at this point that Goodrich is proceeding with business as usual, supplying brakes for the A–7D, in addition to the brakes for such aircraft as the F–111, the C5A, the AH–56A and other aircraft considered vital to the security of this Nation.

The GAO concludes:

Although we have no firm evidence, at this time, that the conditions noted with regard to the A–7D brake are widespread throughout the defense industry, we have previously programmed audit work in the area of quality assurance. Our audit staffs, in performing this work, will examine into whether or not similar situations are occurring with respect to other defense procurements. We will furnish you with any reports that result from this work.

More of this work is needed, not only to prevent the business practices outlined here and to protect the lives of our servicemen, but also to assure the taxpayers that defense spending is not a payment for waste, inefficiency, and unethical professional standards.

Had the brake in question in the GAO inquiry been permitted to go into full production for final use on the A–7D plane, we possibly would be reading in the newspapers a year or more from now about a rash of inexplicable air base accidents involving defective brakes, and wondering how it had all come about.

Many lives might have been lost—lives of our servicemen. And the taxpayer would be faced with the enormously expensive job of refitting the undamaged planes with new brakes and replacing the planes destroyed in the unnecessary accidents.

And all of this because the brake's test performance was inaccurately reported by the manufacturer and inadequately monitored by the Government.

It is this kind of laxity that is at the base of the current crisis of confidence in military procurement.

Mr. President, I ask unanimous consent that the GAO report to which I have referred be printed in the RECORD following my remarks.

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

(See exhibit 1.)

Mr. PROXMIRE. I also direct the attention of the Senate to a telegram which I have received from the B. F. Goodrich Co., following an advance on this speech which I am giving now, which was released last night.

B. F. Goodrich has replied; and I think in fairness, although it is a long telegram, I should read in full the company's response to my speech.

They said:

A wholly untrue statement has appeared in the press today that B. F. Goodrich has falsified test reports to hide defects in brakes which it made for the Air Force A7D attack plane. The statement is not supported by the findings and conclusions of the General Accounting Office report issued to Sen. Proxmire. The facts regarding the brakes which were designed and manufactured by B. F. Goodrich for the A7D plane are as follows:

There are eight A7D attack planes which have been assembled and are undergoing flight testing. The B. F. Goodrich brakes on these planes have operated successfully, exceeding the brake capacity requirements. The brakes have passed their military pilot's acceptance tests according to the responsible Air Force brake authorities Ling-Tempco-Vought. In short, the performance of the brakes has been excellent, and there have been no safety incidents of any kind in any way relating to the brakes.

The current five rotor brakes on the A7D were qualified in December, 1968, and replaced the original four rotor brake design which, although it successfully met the indoor laboratory qualifications tests, presented technical problems in the initial field testing on the first four A7D airplanes. The laboratory test data for the brakes were made available to the GAO and reviewed with it in detail. The GAO people who reviewed the test reports raised no questions whatever regarding the reports.

Mr. President, as I shall point out subsequently, the B. F. Goodrich Co. is talking about different brakes. They are talking about five-rotor brakes. I have made no criticism of the five-rotor brakes; what I am talking about are the four-rotor brakes, the original brakes which, as I have documented here, failed, as the General Accounting Office has brought out so effectively in documenting their failure.

The telegram continues:

The B.F. Goodrich Company for many years has been a leading manufacturer of airplane brakes. Many thousands of our airplane brakes are in service on commercial airlines and military planes, both in this country and throughout the world. Further, we know of no aircraft accident which has ever occurred which was related to a B. F. Goodrich aircraft brakes.

All of the above facts would be corroborated by the Air Force, LTV, and the General Accounting office.

Following is the text of the findings and conclusions of the General Accounting office:

In some instances Goodrich test procedures for the 4-rotor brake did not appear to comply with specification requirements or normal industry practice.

Goodrich's qualification report on the result of testing the 4-rotor brake contained some discrepancies that might be considered significant;

Opinions differed as to the danger to the pilot and the potential danger to an aircraft due to brake failure. No significant aircraft damage due to the use of the 4-rotor brake had been reported;

Goodrich offered to, and did, replace the 4-rotor brake with a new 5-rotor brake without any apparent increase in cost to the prime contractor or the Government. We were advised that the change did not cause any delays in the delivery or testing of the aircraft.

The prime contrators, procedures and those of the defense contract administration services district /DCASD/ were inadequate to protect the Government's interest in the qualifications test of the 4-rotor brake; and

The Department of the Air Force protected the Government's interest by withholding approval of the qualification report.

Mr. President, finally I should like to reply to the telegram.

The company bases its denial that there was any wrongdoing in the manufacture, testing and qualification reporting for the first A–7D brake, a four-rotor brake, by saying that they now produce a workable five-rotor brake for the A–7D.

No one has ever denied that B. F. Goodrich is capable of producing a qualified brake. What the GAO report states and clearly documents is that Goodrich did not produce a qualified brake for the A–7D when they manufactured the four-rotor brake.

And yet, they sent this four-rotor brake to Edwards Air Force Base, California, for installation on production aircraft, verifying the quality of the brake with a qualification report that was filled, according to GAO, with misinformation.

When Goodrich says in their denial of the GAO charges that, "final qualification of the B. F. Goodrich brake currently in use on the A–7D was performed in the presence of engineers representing the aircraft manufacturer, the Air Force, and B. F. Goodrich," they are not discussing the same brake that GAO criticized in its report.

However, a close reading of the B. F. Goodrich denial reveals that the company is admitting that testing procedures at the Troy, Ohio, wheel and brake plant have been changed since the GAO reported on testing practices at that plant. Prior to GAO's report on the four-rotor A–7D brake, B. F. Goodrich brakes did not require the, "presence of engineers representing the aircraft manufacture, the Air Force and B. F. Goodrich." The Goodrich word on the qualification report was taken at face value.

In their denial Goodrich does not address themselves to the fact that the four-rotor brake produced for the A–7D was recalled by the company only after two employees went to the FBI with the information that all was not right with the qualification report.

They do not address themselves to the fact that the brake was replaced only after the Air Force declined to approve the qualification report and demanded to inspect the raw test data that Goodrich was supposed to use to write the qualification report.

Instead of answering the GAO charges Goodrich has chosen to discuss an entirely new brake that was inspected and qualified with GAO-improved procedures on the basis of the GAO investigation.

EXHIBIT 1

Review of the qualification testing of brakes for the A–7D aircraft—Department of the Air Force, Department of the Navy, Defense Supply Agency B–167023.

(Comptroller General's report to the Honorable WILLIAM PROXMIRE, U.S. Senate)

ABREVIATIONS

DCASD: Defense Contract Administration Services District.

ECP: Engineering change proposal.

GAO: General Accounting Office.

LTV/VAD: LTV Aerospace Corporation, Vought Aeronautics Division.

COMPTROLLER GENERAL OF THE UNITED STATES,
Washington, D.C., July 11, 1969.

Hon. WILLIAM PROXMIRE,
U.S. Senate.

DEAR SENATOR PROXMIRE: This letter is an addendum to our report to you dated July 3, 1969, on the review of the qualification testing of brakes for the A–7D aircraft, and

is in response to your further inquiry of July 9, 1969, and discussion with your staff on July 10, 1969.

As indicated in our report, there were discrepancies between the data shown in the B. F. Goodrich test report (Q–6031), and the data shown by its test instruments. In our examination we noted instances where data were reported notwithstanding the fact that none were available from the test instruments. In other instances we noted that reported data were at variance with recorded test results. In some instances B. F. Goodrich personnel could not offer an explanation, while in other instances the discrepancies were justified by what they consider "professional judgment."

In our opinion, the B. F. Goodrich Company should have accurately reported the test results in its report Q–6031. In the absence of accurately reported test results it is difficult, if not impossible, to properly evaluate product performance.

Although we have no firm evidence, at this time, that the conditions noted with regard to the A–7D brake is widespread throughout the defense industry, we have previously programed audit work in the area of quality assurance. Our audit staffs, in performing this work, will examine into whether or not similar situations are occurring with respect to other defense procurements. We will furnish you with any reports that result from this work.

Sincerely yours,

LAWRENCE J. POWERS,
Acting Comptroller General of the United States.

COMPTROLLER GENERAL OF THE UNITED STATES,
Washington, D.C.

Hon. WILLIAM PROXMIRE,
U.S. Senate.

DEAR SENATOR PROXMIRE: The accompanying report presents the results of our examination into the qualification of brakes furnished by The B. F. Goodrich Company to LTV Aerospace Corporation, a subsidiary of Ling-Temco-Vought, Inc., for use on the A–7D aircraft, as requested in your letter of May 13, 1969. The significant contents of this report are summarized in the digest included with the report. The review was made pursuant to the Budget and Accounting Act, 1921 (31 U.S.C. 53), and the Accounting and Auditing Act of 1950 (31 U.S.C. 67).

We did not submit copies of this report to the Department of Defense or the contractors, The B. F. Goodrich Company, and LTV Aerospace Corporation, Vought Aeronautics Division, for comment.

We plan to make no further distribution of this report unless copies are specifically requested, and then we shall make distribution only after your agreement has been obtained or public announcement has been made by you concerning the contents of the report.

Sincerely yours,

ELMER B. STAATS,
Comptroller General of the United States.

DIGEST

Why the Review was made—At the request of Senator William Proxmire, the General Accounting Office (GAO) has reviewed certain aspects of the qualification tests of brakes for the A–7D aircraft. These tests were performed by The B. F. Goodrich Company under a subcontract with LTV Aerospace Corporation, Vought Aeronautics Division (LTV/VAD), the prime contractor with the Navy for the A–70 aircraft to be used by the Air Force.

Findings and conclusions—The results of GAO's review indicated that:

In some instances Goodrich's test procedures for the four-rotor brake did not appear to comply with specification requirements or normal industry practice;

Goodrich's qualification report on the results of testing the four-rotor brake contained some discrepancies that might be considered significant;

Opinions differed as to the danger to the pilot and the potential damage to an aircraft due to brake failure. No significant aircraft damage due to the use of the four-rotor brake had been reported;

Goodrich offered to, and did, replace the four-rotor brake with a new five-rotor brake without any apparent increase in cost to the prime contractor or the Government. We were advised that the change did not cause any delays in the delivery or testing of the aircraft;

The prime contractor's procedures and those of the Defense Contract Administration Services District (DCASD) were inadequate to protect Government's interests in the qualification tests of the four-rotor brake and;

The Department of the Air Force protected the Government's interest by withholding approval of the qualification report.

INTRODUCTION

The General Accounting Office, at the request of Senator William Proxmire, has examined into the qualification testing of the brake assemblies for the A–7D aircraft at The B. F. Goodrich Co., Troy, Ohio.

The Naval Air Systems Command is purchasing 74 A–7D aircraft for the Department of the Air Force under contract N00019–67–C–0143 with LTV Aerospace Corporation, Vought Aeronautics Division.

We were asked to inquire into whether (1) Goodrich's qualification report accurately presented the actual recorded test results, (2) the use of a defective brake endangered the test pilot's safety, and (3) the Government incurred additional costs due to the changes in the brake. In addition, we were requested to determine the Government's responsibilities in the qualification testing of the brakes and the Air Force's actions to protect the Government's interest. Additional information furnished by a member of the Senator's staff related the requested information to the four-rotor [1] brake assembly.

LTV/VAD solicited, and we were advised that they received, quotations from The B. F. Goodrich Co., Bendix Aviation Products Division, General Tire and Rubber Co., and Goodyear Aviation Products Division on various items, including the brakes, for the A–7D aircraft. LTV/VAD officials stated that The B. F. Goodrich Co., Aerospace and Defense Products Division, was selected on the basis of the price and technical design. LTV/VAD officials stated that the Air Force concurred in their selection. Thereafter, LTV/VAD issued a firm-fixed-price purchase order, number P–237138, dated June 18, 1967, to Goodrich and supplements to this purchase order have been issued, exercising options granted to LTV/VAD by Goodrich in the basic purchase order, as follows:

Purchase order document	Date	Quantity of brake assemblies	Firm-fixed unit price	Total price
Basic	June 18, 1967	40	$364.50	$14,580
Supplement 2X	Mar. 20, 1968	160	338.50	54,160
Supplement 5X	Dec. 9, 1968	2	338.50	677
Total		202	[1] 343.64	69,417

[1] Weighted-average unit price.

Also, LTV/VAD exercised the 1969 option of the above purchase order through the issuance of purchase order P–354831, dated February 10, 1969, for 260 brake assemblies at $338 each, or a total of $87,880. On April 30, 1969, this purchase order was amended to increase the number from 260 to 267 brake assemblies at the same unit price for a total price of $90,246. These brake assemblies had been included in LTV/VAD's proposal to the Government at $343.70 per unit, excluding general and administrative expenses and a 7-percent factor for scrap and other miscellaneous costs, in determining the initial cost for contract –0143.

LTV/VAD initially purchased a four-rotor brake but, in January 1969, revised, in part, the purchase order to require five-rotor brake assemblies. The differences between the four- and five-rotor brake assemblies are as follows:

Part name	4-rotor brake: Part number	4-rotor brake: Quantity	5-rotor brake: Part number	5-rotor brake: Quantity
Rotor	134–44	4	134–49	5
Stator	244–270	3	244–306	4
End plate segments	244–271	28	244–307	28

The LTV/VAD purchase orders show that the following types of brake assemblies had been ordered:

LTV/VAD purchase order No.	Quantity of brake assemblies: 4-rotor	5-rotor	Total
P–237138	46	156	202
P–354831	0	267	267
Total	46	423	469

LTV/VAD purchase order P–237138 required Goodrich to perform qualification testing on the brake assemblies and to submit a report on the results of such testing. The qualification tests are referred to as preproduction tests in the referenced specifications. Both LTV/VAD specification 204–16–37d and military specification MIL–W–5013G defined preproduction tests as tests conducted by the vendor on samples representative of the production item to ensure conformance with the specification requirements. Goodrich lawyers stated that the four-rotor brake assemblies subjected to qualification tests were hand made units, similar to brake assemblies to be manufactured, rather than production models.

Goodrich submitted to LTV/VAD its qualification test report, Q–6031 revision A, dated July 12, 1968, on the four-rotor brake assembly. This report was signed by a DCASD Dayton representative and approved by LTV/VAD. However, the Air Force's Aeronautical Systems Division recommended withholding approval of the report. Subsequently, Goodrich proposed to supply a five-rotor brake as it did not believe that the four-rotor brake met their "suitable for the intended use" obligation to LTV/VAD and requested that LTV/VAD withdraw its approval of the four-rotor brake qualification test report.

Goodrich submitted the five-rotor brake assembly qualification test report, Q–6046 revision A, dated February 18, 1969. This report also was signed by the DCASD Dayton representative and approved by LTV/VAD. We were advised, however, that, as of June

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[1] A rotor is a rotating metal disc interspersed with stators, which are stationary metal discs carrying brake lining material. The rotor and stator discs, when compressed, perform the braking action.

5, 1969, the Air Force's Aeronautical Systems Division had not approved Goodrich's qualification report on the five-rotor brake.

REVIEW OF QUALIFICATION TESTS OF BRAKES

Variations in qualification testing procedures and results reported

The results of our review indicated that, in some instances, Goodrich's qualification test procedures for the four-rotor brake did not appear to comply with the specification requirements or normal industry practices. Also, we found that Goodrich's qualification report data on the results of testing the four-rotor brake contained some discrepancies which, in the judgment of an engineer assigned to our staff, may be considered significant.

The qualification report and its supporting data were considered to be proprietary information by Goodrich, who requested that this information not be further disclosed. We have, therefore, omitted from our report the specific data obtained from Goodrich during this review.

Test Procedure for the Four-rotor Brake

Qualification report Q–6031, which was applicable to the four-rotor brake, indicated that the tests adhered to the requirements of military specification MIL–W–5013G, except where the specification differed from the LTV/VAD specification. This report indicated also, that no deviations were requested by Goodrich.

However, Goodrich's project manager stated, and documents showed, that the brake pressure was released at 10 miles per hour and the wheel permitted to coast or taxi for 10 to 15 seconds. Military specifications required the brake to bring the wheel to rest.

Goodrich officials stated that, to compensate for the rolling stop, higher energy was imposed on the wheel at the higher speeds. Goodrich's project manager stated that LTV/VAD had orally approved this waiver to the test procedures and LTV/VAD officials acknowledged verbal approval of minor deviations to Goodrich's test procedures but did not describe to us the specific deviations. However, an Air Force engineer considered that the failure to come to a complete stop was unacceptable because torque stresses reach their peak during the 10 to 0 miles per hour velocity.

Goodrich's project manager advised us of the following test procedures which, he said, were orally approved by LTV/VAD.

1. Use of the 84-inch instead of 120-inch dynamometer for the 45 normal brake stop tests because Goodrich stated the larger dynamometer was, tied up, with other programs.

2. Use of a test sequence of 45 normal, 5 overload, and 2 rejected-take-off brake stop tests, although it was common industry practice to intersperse the normal and overload stop tests.

A Goodrich official informed us, and we verified the fact, that test sequence requirements were not specified in military specification MIL–W–5013G or LTV/VAD specification 204–16–37d. LTV/VAD officials advised us that they considered the significance of the test sequence a matter of opinion, but their Assistant Director for the A–7D program stated that he preferred an interspersed 9 normal to 1 overload stop test sequence. However, an Air Force engineer stated that any brake failure would disqualify the tests; and, in his opinion, had Goodrich performed the tests on the 9 to 1 interspersed basis, the brakes would not have lasted through the 50 normal and overload stop tests.

Goodrich's Special Test Requirement and Procedures and Operator's Comments set forth various other instructions or actions regarding the procedures or methods in the qualification testing. Among these was the statement that the stators were switched between the number 1 and number 3 positions and we selected this for further inquiry. Goodrich stated that this was a laboratory technique in which the results were studied by an engineer to determine the wear pattern of the linings on the stator.

Military specification MIL–W–5013G and LTV/VAD specification 204–16–37d are silent regarding the switching of parts or components. LTV/VAD officials, however, advised us that the switching of stator positions was not normal industry practice. In the opinion of an Air Force engineer, this switching of parts was unacceptable.

Reported Test Results on the Four-Rotor Brake

We selected brake stop tests from qualification report Q–6031 for verification of the basic recorded test results. Each of these brake stop tests included the recording or measurement of 18 characteristics, or parameters, 16 of which were selected for verification. The extent and results of our verification were as follows:

Test title	Stop tests: Number in universe	GAO sample: Number	GAO sample: Percent of universe	Discrepancies [1]: Number	Discrepancies [1]: Percent of sample
Normal brake stop	45	7	15.6	2	28.6
Overload brake stop	5	5	100.0	5	100.0
Worn brake rejected, takeoff stop	2	2	100.0	2	100.0
Total, stop tests	52				
Total, GAO sample		14	26.9	9	64.3

[1] These are the discrepancies, existing in at least 1 or more of the 16 test characteristics or parameters in each of the stop tests, that may be considered significant.

The parameter discrepancies that may be considered significant between data shown in the test report (Q–6031) and data shown by Goodrich's test instruments, as well as Goodrich's explanations, are set forth in the exhibit of this report. In addition, we found other discrepancies which we considered to be insignificant because they were due to variations in engineering interpretations and transposition of the report data between stop tests.

On the two remaining parameters in our selected sample of 14 stop tests, we compared the reported data with the operator-recorded data and Goodrich's test requirements. We noted that reported and operator-recorded data on stop time were in agreement except on the five overload stop tests where reported data presented a lesser stop time than that of the operator-recorded data. A Goodrich project manager advised us, however, that LTV/VAD had orally accepted the five excessive overload stop times after the tests but prior to the issuance of the qualification report. In 12 instances the stop time reported was greater than Goodrich's test requirements. Limitations on our time for this review precluded our comparing the stop times to the basic recorded test results and discussion of the resulting discrepancies with a Goodrich engineer.

Test Procedures and Reporting on the Five-Rotor Brake

We did not review the test procedures regarding the five-rotor brake or verify the resulting data contained in qualification report Q–6046 due to the limited time for our review. However, as discussed in subsequent report segments, LTV/VAD, Air Force, and DCASD representatives monitored, at least in part, Goodrich's performance of the testing and/or were provided access to the basic recorded test results.

Inquiry into possibility of danger to pilot and aircraft damage

We found that there were differences in opinions on the danger to the pilot and potential damage to an aircraft due to brake failure but that no significant damage due to the use of the four-rotor brake had been reported.

Air Force, Navy, and LTV/VAD officials generally agreed that the brakes did not endanger the life or safety of the test pilots. However, among these same officials, there was no definite consensus regarding the potential of damage to an aircraft, which may be incurred as the result of brake failure.

In response to our question regarding pilot safety and structural damage, Federal Aviation Administration officials stated that warping of the brakes would blow out the tire, which in turn might cause (1) collapsing of the landing gear, (2) breaking of the hydraulic lines, and/or (3) puncturing of the gas tanks located in the aircraft wing. As the result, they further stated the most likely danger was a fire due to the combination of the heat in the brakes and leaking hydraulic fluid and/or jet fuel. They told us, however, that they did not have any accident investigation reports concerning such incidents.

Both contractor and military pilots conducted flights in the aircraft with four-rotor brakes prior to and after LTV/VAD's engineering approval of the qualification report. However, Air Force, Navy, and LTV/VAD officials advised us that there was no requirement for brake qualification prior to use on an aircraft. The following statistics on flights and brake problems were obtained from the contractor and military flight reports and/or flight discrepancy sheets.

	Flights: Prior to LTV/VAD approval of qualification report	Flights: After LTV/VAD approval of qualification test and before installation of the 5-rotor brake	Flights: Total
Number of flights:			
Contractor	37	192	229
Military	12	26	38
Total	49	218	267
Number of flights indicating potential brake problems: [1]			
Contractor	6	6	12
Military	0	0	0
Total	6	6	12

[1] The brake is used in conjunction with an antiskid system. These reports describe other problems which the pilots appear to relate to this system.

Generally, the contractor noted brake problems were described in terms of the sensitivity of the brakes, which concerns the relationship between the brake pedal travel distance and the braking action. This problem was also reported in a military preliminary evaluation summary report. On only two contractor flight reports did we note any effect of the brakes on the aircraft. In one instance, the wheels locked up and, in the other instance, the brakes fuzed so that they had to be loosened with a screwdriver. In addition, an LTV/VAD official stated that, in one other instance, the brakes fuzed as anticipated during a ground test.

Discussions with the contractor's test pilot who had flown the flights where the lock-up and fuzing occurred and with military test pilots indicated that they considered that there was no danger to the pilot and/or aircraft from the four-rotor brake performance.

Air Force and LTV/VAD officials stated that they were satisfied with the five-rotor brake although there were some minor problems with this brake.

No additional costs incurred due to changes in the brake

We found no evidence of an increase in the costs to the Government or LTV/VAD for the replacement of the four-rotor brake assemblies with five-rotor assemblies or for the performance of the second qualification test.

A listing of the engineering change proposals (ECPs) was furnished to us by LTV/VAD officials as being those changes to the prime contract, where additional funds had been requested by LTV/VAD but had not been negotiated as of May 26, 1969. Our review of this listing did not identify any ECPs related to brake assemblies. Furthermore, LTV/VAD officials advised us that neither had there been nor did they contemplate any ECPs for the brake assemblies under the prime contract. Also, LTV/VAD and responsible Air Force officials stated that, to their knowledge, the prime contract price to the Government had not been increased because of the brake assemblies.

Goodrich offered to replace the four-rotor with five-rotor brake assemblies and to perform the new qualification tests at no cost to LTV/VAD or the Government.

We found that the price set forth in LTV/VAD's initial purchase order, P–237138, had not been revised except for exercising the options contained in the basic order for additional quantities at predetermined unit prices. Further, we did not find, in the purchase orders we reviewed, any other LTV/VAD purchase orders which provided Goodrich with compensation for modifying the brake assemblies or performing the second brake qualification test.

Our review of the receiving and shipping records furnished to us by LTV/VAD showed that 46 four-rotor brake assemblies were received but that three had been rejected during LTV/VAD's incoming inspection. We ascertained that, of the remaining 43 units, 33 had been exchanged for five-rotor brakes at no cost to LTV/VAD or the Government. LTV/VAD officials stated that they could not readily provide us with the status of the remaining units. They assured us, however, that all four-rotor brake assemblies received from Goodrich have been or will be returned for replacement with the latest brake configuration at no charge to LTV/VAD or the Government.

Aircraft delivery and testing were not delayed by brake problems

We were advised that problems encountered with the brakes did not affect aircraft delivery or testing. We discussed the effect of the brake problems on aircraft delivery and testing with an Air Force Aeronautical Systems Division engineer and LTV/VAD officials. They advised us that the brake problems had not delayed either delivery or testing of the aircraft.

Weakness in contract administration procedures

We found that contract administration responsibilities had been assigned to LTV/VAD and DCASD. In our opinion, however, procedures of both were inadequate to protect the Government's interest in assuring that the qualification tests were properly performed and the results were correctly reported on the four-rotor brake.

Requirements of the Armed Services Procurement Regulation

According to Armed Services Procurement Regulation 14–102, the prime contractor is responsible for controlling product quality, including that at the subcontractor level, and for offering to the Government only those supplies or services which meet the contract requirements. This section provides, in addition, that the control of quality by the prime contractor may relate to, but is not limited to, testing and examination to ensure that practices and equipment provide the means for optimum evaluation of inspection characteristics.

Armed Services Procurement Regulation 14–103.1 and 14–407.1 provide for Government inspection, when deemed necessary, to assist the assigned contract administration office for the prime contract to determine whether the prime contractor is ensuring conformance of the subcontracted supplies or services with the contract requirements. They further provide that Government quality assurance actions at the subcontract level do not relieve the prime contractor of any responsibilities for subcontract administration.

Prime Contractor's Contract Administration Responsibilities

The prime contract assigned LTV/VAD the responsibility for ensuring that all supplies and services procured from the subcontractor conformed to contract requirements. However, the extent of control exercised by LTV/VAD was to be dependent upon the type of supplies purchased, the subcontractors' demonstrated capability, and quality evidence made available by the subcontractor. In addition, the prime contract reserved the right of Government inspection at the subcontractors' facilities.

LTV/VAD's purchase order P–237138 and the referenced LTV/VAD specification requirements for the qualification test included:

1. LTV/VAD's approval of Goodrich's qualification test procedures.
2. LTV/VAD's rights to witness the tests and to perform other tests to ensure a satisfactory product.
3. LTV/VAD's approval of the qualification test report.
4. Government inspection of Goodrich's plant.
5. Government inspector's singnature on the qualification test report.
6. Government inspector's right to use drawings or other pertinent data required for adequate source inspection, available at the subcontractor's plant.

LTV/VAD officials stated that they relied upon Goodrich, whom they considered a responsible contractor, to satisfactorily perform the qualification tests on the four-rotor brake assemblies. LTV/VAD officials also stated that none of their engineers were brake experts. They stated, however, that LTV/VAD's representatives had witnessed some Goodrich tests on the four-rotor brakes, but that the tests witnessed were performed prior to normal, overload, and worn brake rejected-take-off stop tests supporting the qualification test report, Q–6031.

LTV/VAD officials stated that, prior to granting its approval of the four-rotor qualification test report, they reviewed only the data contained in the report and did not compare the reported data with the original recorded test results—hereafter referred to as raw data. LTV/VAD's approval of Goodrich's four-rotor qualification test report, Q–6031, was incorporated into LTV/VAD's purchase order P–237138 in supplement 4X dated August 1, 1968, by reference to LTV/VAD's engineering order E 1001.770, signed July 16, 1968, by LTV/VAD officials. This engineering order also included LTV/VAD's approval of Goodrich's preproduction test plan for the four-rotor brake.

LTV/VAD officials stated that, after Goodrich refused the Air Force access to Goodrich's raw data supporting the four-rotor brake qualification report, a LTV/VAD representative was authorized to review this raw data. LTV/VAD's review in the fall of 1968 disclosed discrepancies in the qualification tests which were considered to be of such significance as to conclude that the four-rotor brake did not qualify to the "letter of the specification." Subsequently, Goodrich proposed to substitute a five-rotor for the four-rotor brake.

LTV/VAD officials stated that its representatives were present during the performance of the qualification tests on the five-rotor brakes. Approval of the five-rotor brake qualification report, Q–6046, was made by LTV/VAD's engineering order E1026.17, which was signed by LTV/VAD officials during February 1969 and incorporated in purchase order P–237138 by supplement 7X, dated April 9, 1969. In addition, LTV/VAD's engineering order E1026.17 canceled engineering order E1001.770 regarding approval of the four-rotor brakes and approved Goodrich's preproduction test plan for the five-rotor brake.

Government's Contract Administration Responsibilities

The contract administration functions at LTV/VAD were assigned to the Naval Plant Representative Office located at the prime contractor's plant. Secondary delegations of quality assurance responsibility at Goodrich was assigned to DCASD, Dayton, Ohio.

LTV/VAD's purchase order P-237138 provided for Government source inspection at Goodrich and the referenced LTV/VAD specication required the Government inspector to sign the qualification report without further describing the meaning or significance of such a signature. In our opinion, the affixing of a signature to a report is meaningless unless accompanied by some other act, such as verifying, at least on a test basis, the reported information to the original documents. We also believe that the report or document should contain a clear and concise statement as to the meaning of the signature as indicate the reliance that may be placed upon such actions by other readers.

The DCASD quality assurance representative stated that Goodrich required his signature on the qualification report because LTV/VAD would not accept it without his signature; however, he had not received any specific oral or written instructions from any Government activity or the prime contractor's officials as to what steps were to be taken prior to signing the four-rotor brake assembly qualification report, Q–6031. His signature was affixed to the Q–6031 report, in which it was concluded that the brake assembly met the intent and requirements of the applicable specification documents and therefore was qualified.

The quality assurance representative explained that he interpreted LTV/VAD's quality control requirements to mean an inspection of the qualification test report in the same manner as for any other hardware item, thus he assured himself that all the tests listed in the front of the report were accomplished and successful solely on the basis of the report contents. The quality assurance representative also stated that he did not witness any of the tests on the four-rotor brake or compare any raw data with the Q–6031 report and commented that this was DCASD's normal practice.

The Chief, Quality Assurance Section, DCASD Dayton, stated that the quality assurance representative's signature meant that he had compared, on a test basis, the raw data generated by the test recording machines with the information reported in the Q–6031 report and that the information was in agreement. He stated also that he had contacted Defense Contract Administration Services Region, Cleveland, for an interpretation of the signature on a qualification test report, but that they could not provide any assistance.

The DCASD quality assurance representative stated that he witnessed two of the qualification tests on the five-rotor brake at Goodrich. This qualification report, Q–6046, also was signed by the DCASD quality assurance representative.

Subsequent to our discussions, DCASD Dayton issued, basically, the following internal guidance to their quality assurance personnel:

1. Do not countersign qualification reports unless contractually required or unless directed by higher authority.

2. A signature constitutes verification of the data contained in the report and shall not necessarily indicate concurrence with the conclusions in the report.

3. When countersigning as authorized in 1. above identify in the report the test data for the tests actually witnessed.

Air Force actions to protect the Government's interests

We found that the Air Force took action to protect the Government's interest by withholding approval of the qualification test reports until assuring itself that the brake assembly either qualified or performed satisfactorily on the aircraft.

Air Force engineers advised us that the engineering responsibility for the A–7D Government-furnished aeronautical equipment and all contractor-furnished equipment was assigned to the Chief System Engineer in the Directorate of Systems Engineering, Aeronautical Systems Division, Air Force Systems Command, Department of the Air Force. We were also told that, within the Aeronautical Systems Division, the Project Engineer in the Landing Gear and Mechanical Equipment Division, Directorate of Airframe Subsystems Engineering, was responsible for reviewing and recommending approval of the design, development, and testing of the A–7D aircraft landing-gear equipment, including Goodrich's four- and five-rotor brakes.

The Project Engineer stated that he had reviewed and approved LTV/VAD's brake specifications which in his opinion were very good and exceeded the military specifications. The Project Engineer also stated that he had not witnessed any of the qualification tests of the four-rotor brake, and during August 1968 he recommended withholding approval of the qualification report, Q–6031. His recommendation was based on various specific irregularities noted during a review of the qualification report. This recommendation was forwarded by the Chief System Engineer to the Naval Air Systems Command, Washington, D.C.

The Project Engineer stated that he had requested Goodrich to furnish him with the raw data supporting its Q–6031 report during a meeting between Air Force, LTV/VAD, and Goodrich representatives in early October 1968. This request, he advised us, was not honored by Goodrich who claimed that the raw data was proprietary information.

Regarding proprietary information, attachment "E" to LTV/VAD purchase order P–237138 states that Goodrich reiterates it will provide all the data required by the prime contract pursuant to the provision of Armed Services Procurement Regulation 9–203(b). This provision sets forth the Government's "Rights in Technical Data" and provides, in part, for the Government's right of access to technical data resulting from the performance of an element of work specified in a Government contract or subcontract.

The Project Engineer stated that, during the October 1968 meeting he had advised Goodrich that he would not approve the use of the four-rotor brake assembly on the A–7D aircraft. Subsequently, during another meeting, LTV/VAD informed the Air Force engineers that Goodrich was redesigning the brake assembly and would requalify the new design.

The Project Engineer stated that he closely monitored the qualification testing of the five-rotor brakes, was provided access to the applicable raw data, and reviewed Goodrich's qualification test report, Q–6046, which he found to be satisfactory. However, because of reported problems with brake adjusters the Project Engineer, in April 1969, recommended withholding approval of Q–6046 until satisfactory performance on the aircraft was demonstrated. On June 5, 1969, the Project Engineer stated that he had not yet recommended approval of Q–6046.

SCOPE OF REVIEW

We reviewed records and discussed the performance and qualification testing of the brakes for the A–7D aircraft with officials at contractor locations and military installations associated with the design and manufacture, administration, and testing of these brakes. These locations include The B. F. Goodrich Co., Troy, Ohio; LTV Aerospace Corporation, Vought Aeronautics Division, Dallas, Texas; Naval Air Systems Command, Washington, D.C.; Naval Plant Representative Office, located at LTV/VAD, Dallas, Texas; and the Aeronautical Systems Division of the Air Force Systems Command, located in Washington, D.C., and at Wright-Patterson Air Force Base, Ohio.

In addition, we discussed brake performance with a LTV/VAD test pilot at the contractor's plant and with military test pilots located at Edwards Air Force Base, California, and Patuxent River Naval Air Station, Maryland, and with officials of the Federal Aviation Administration.

EXHIBIT

DESCRIPTION OF THE DISCREPANCY	EXPLANATION BY GOODRICH'S REPRESENTATIVES
Reported data exceeded the basic recorded test results (analog data since digital data was not available).	Normally, digital recorded data exceeds analog readings. Therefore, using one's best judgment, a similar value from an earlier similar test would be used. In this instance, he felt, the reported value had been extrapolated from the preceding and subsequent stop test.
Do.	The basic recorded value was taken from the prior stop test since the stop times were identical. This constitutes a "rationalization of data" or exercise of professional judgment.
Reported data less than the basic recorded test results.	Not discussed with Goodrich representatives due to the limited time for our review.
Data were reported; however, basic recorded tests results were not available.	Do.
Do.	Do.
Reported and digital data in agreement; however, digital data less than analog data.	Do.
Reported data less than basic recorded test results.	Do.
Reported data less than basic recorded test results. We also noted that the reported data were less, and the recorded test results were greater, than requirements of MIL–W–5013G, dated February 20, 1967, which was referenced by LTV/VAD specification number 204–16–37d.	Goodrich personnel could give no explanation.
Reported data less than basic recorded test results. Also, reported and recorded data exceed the requirements of MIL–W–5013BG, dated February 20, 1967.	Goodrich personnel could give no explanation.
Data were reported; however, basic recorded test results were not available.	No reading, due to the reaction of the thermocouple.
Do.	The recorder was not working properly.
Do.	Not discussed with Goodrich representatives due to the limited time for our review.
Reported data less than basic recorded test results.	Goodrich personnel could give no explanation.
Data were reported; however, basic recorded test results were not available.	Goodrich personnel expressed the opinion that the data had been rationalized from tests of another part on which the temperature had been monitored and which was considered comparable to the center stator.
Do.	Do.
Do.	Not discussed with Goodrich representatives due to the limited time for our review.

DATA DISCREPANCIES THAT MAY BE CONSIDERED SIGNIFICANT BETWEEN DATA SHOWN IN TEST REPORT AND DATA SHOWN BY GOODRICH'S TEST INSTRUMENTS

DATA IDENTIFIED IN TEST REPORT

Test description	Stop number	Parameter
Overload brake stops	49	Peak temperature of bead seat.
Do	49	Peak temperature of rotor.
Do	50	Peak temperature of bead seat.
Do	50	Peak temperature of tube wall.
Rejected takeoff brake stops.	1	Peak torque.
Do	2	Initial temperature of center stator.
Do	2	Peak temperature of center stator.[1]
Do	2	Peak temperature of rotor.[1]

[1] The Goodrich project manager stated that the peak temperatures reached during rejected takeoff stop tests were academic since the brake is destroyed by heat as the result of the test.

Note: Reported data are the elements set forth in qualification test report Q-6031 on the 4-rotor brake. Basic recorded test results refer to digital data, which are digital printout tapes prepared only on brake pressure and torque parameters, and/o analog data, which are pen recorder strip charts prepared on al parameters.

ORDER FOR ADJOURNMENT FROM WEDNESDAY, AUGUST 6, 1969, TO THURSDAY, AUGUST 7, 1969, AT 11 A.M.

Mr. BYRD of West Virginia. Mr. President, I ask unanimous consent that when the Senate completes its business on Wednesday next, it stand in adjournment until 11 a.m. Thursday morning next.

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

ORDER FOR RECOGNITION OF SENATOR HARTKE ON THURSDAY, AUGUST 7, 1969

Mr. BYRD of West Virginia. Mr. President, I ask unanimous consent that, upon the conclusion of the prayer and the disposition of the reading of the Journal on Thursday morning next, the able Senator from Indiana (Mr. HARTKE) be recognized for not to exceed 30 minutes.

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

PRESIDENT NIXON'S SUCCESSFUL TRIP ABROAD

Mr. DOLE. Mr. President, last night President Nixon returned from his trip to Southeast Asia and Rumania.

Today, as a result of that trip the whole world breathes a little easier because war and destruction are perhaps a little further away and peace with honor is perhaps a little closer.

Mr. President, seldom has a trip abroad by an American President been so successful, seldom have the purposes been so well met and seldom have the American people been so well informed on a day-to-day basis about the results of such a trip.

For this we can all be grateful.

The President has termed his trip "a quest for peace, reflecting the spirit of Apollo."

And truly, there is an apt comparison. During all man's time on earth he has reached out for the moon. Less than 2 weeks ago he was finally successful.

For equally as long a time man has yearned for peace. And just as surely he can reach that goal—if he will.

That goal is one the President is attempting with all his heart and all his skill to reach. He has charted new courses in two of the world's troubled areas—Southeast Asia and Eastern Europe—courses that give hope for eased tensions and international cooperation, but courses, also, that assure those who stand with us that we will continue to stand with them.

Mr. President, the success of the President's journey is a success that the entire world shares. I am certain my colleagues on both sides of the aisle join with me in congratulating the President for a task well done.

AUTHORIZATION OF APPROPRIATIONS FOR FISCAL YEAR 1970 FOR MILITARY PROCUREMENT, RESEARCH AND DEVELOPMENT, AND FOR THE CONSTRUCTION OF MISSILE TEST FACILITIES AT KWAJALEIN MISSILE RANGE, AND RESERVE COMPONENT STRENGTH

The Senate resumed the consideration of the bill (S. 2546) to authorize appropriations during the fiscal year 1970 for procurement of aircraft, missiles, naval vessels, and tracked combat vehicles, and research development, test, and evaluation for the Armed Forces, and to authorize the construction of test facilities at Kwajalein Missile Range, and to prescribe the authorized personnel strength of the Selected Reserve of each reserve component of the Armed Forces, and for other purposes.

ABM: THE MISBEGOTTEN MISSILE

Mr. McGOVERN. Mr. President, the decision the Senate will soon make regarding deployment of the antiballistic missile will be one of the most fateful in our national history. In economic, political, social and moral terms America will feel the weight of it for many years to come.

The significance of the ABM issue reaches far beyond the system itself; for it will signal the direction of the Nation in the next critical decade. At issue is the central question of whether we shall continue to pour increasing energy, brainpower and wealth into armaments, or into the urgent human needs of our society. Does the route to security and well-being lie in another costly new missile system, or should first priority go to reaching arms limitations among the great powers while we set about the reconstruction of our country and the protection of our environment? Beyond the enormous financial cost of the ABM is the danger that it contributes tc the militarization of our society and the neglect of urgent domestic problems. It may decrease our national security by increasing international tension and with it the possibility of nuclear war. Militarily, it is doubtful that it would contribute to the defense of our country.

At a time when the great powers seem to have reached an understanding that nuclear war means the end of much of mankind, one wonders why this current effort to add a new round of missile construction. Do we really believe that either Russia or China has gone so completely mad that they would invite their own certain destruction by launching a nuclear attack on the United States? Is there evidence that even a $40 or $50 billion ABM would add to our security if the adversary had such an act of madness in mind? Is it not more likely, as Senator MUSKIE has warned so convincingly, that the construction of yet another missile system will only heighten the anxiety and tension that could lead to a nuclear exchange?

It is frequently said of the ABM that it is "a missile in search of a mission." Certainly, the history of the ABM does not suggest that our military planners saw a particular national security need and developed a system to meet it. Rather, the constantly shifting rationalizations of the ABM lead one to wonder if Washington Star columnist Frank Getlein was not justified in observing:

> The real point was to spend the money and in order to spend it, the military would cheerfully swear it was needed to save the swan boats on the lagoon at the Jefferson Memorial.

First was the proposal for a $50 billion "heavy" system. This called for "thin" Spartan area defense of the entire country and for "thick" Sprint point defense of ICBM sites, SAC bomber bases, ABM radars, and 49 major population centers—plus the hometown of the chairman of the House Armed Services Committee, Charleston, S.C.—the 228th largest city in the United States.

The purpose of the heavy defense was to decrease the damage our country would suffer in a heavy Soviet attack. The Johnson administration rejected the heavy system on the grounds that the ABM as presently conceived would not perform this function; that is, there was no way to prevent the Soviet Union from destroying the United States if it were willing to see itself destroyed in return. This was valid reasoning at the time; it is still valid. Barring a fundamental technological breakthrough, which incidentally would make obsolete the system we are now considering, we would be foolish to think that any ABM can really prevent unacceptable devastation in an all-out nuclear war.

Since the heavy anti-Russian system seemed too implausible and too expensive, the ABM proponents turned next to a light ABM to defend against the Chinese. The Chinese, it was argued, would have 10 or 20 ICBM's in a few years and they might go berserk and launch these against our cities even though to do so would be to provoke the total destruction of their society.

We were told a thin Spartan area defense would be sufficient to protect the entire country against a small unsophisticated attack such as China might launch during the 1970's.

Oddly, it was said that this anti-Chinese system could serve as a bargaining counter in arms-reduction talks with the Russians, and abandonment of plans for the anti-Chinese system might be a re-

sult of these United States-Soviet talks. It was never clear to me why those who said we needed an ABM system against China were willing to abandon it if the Russians agreed not to build one.

In any event, the anti-Chinese rationale seems conspicuously invalid.

First, it relies entirely on the Spartan missile, which is easily penetrated. It assumes the Chinese will be clever enough to build an ICBM but not clever enough to incorporate simple penetration aids such as chaff. It also assumes they would be so foolish as to neglect to time their missile attack to take advantage of blackout effect.

Second, it assumes the Chinese will not try to circumvent the ABM by using cruise missiles, nuclear torpedoes, or other relatively simple devices. At this very moment, a disguised Chinese merchant ship could be sailing into New York harbor with a hydrogen bomb in its hold. If one is not concerned about size or weight, such a device is cheap and well within the reach of Chinese technology.

Any attempt to establish a dependable nuclear defense is an exercise in futility.

I think the events of the past year indicate that not even our military planners had much interest in a thin anti-Chinese system. If they had—if they had planned a thin national defense using long-range Spartan missiles—they would have purchased land for Sentinel sites in the unpopulated rural areas. Instead, last fall and winter we found that land was being purchased for Sentinel sites adjacent to our major cities. This indicated an intention to escalate Sentinel into a heavy anti-Russian city defense using short-range Sprint missiles.

But then the citizens of Boston, New York, Chicago, and Seattle made their feelings known. They were not pleased to be made links in this electronic maginot line. They did not want nuclear warheads in their backyards, and they began organizing political and legal action to prevent their communities from being used as ABM sites. Once publicized, the issue quickly became a hot political issue.

Conveniently, the ABM proponents then found it was not feasible to defend cities against a heavy attack. Even more conveniently, they suddenly found the Soviet Union was approaching the point where it would be able to destroy our ICBM and bomber forces on the ground. It also claimed the Russians would be able to detect and destroy our missile submarines, although it is not clear how this would be accomplished. Therefore, we were told that, by happy coincidence, military considerations required that the politically dangerous thick defense of the cities be withdrawn in favor of a politically safer thick defense of Minuteman ICBM sites in North Dakota and Montana. These sites are located in relatively unpopulated western areas where the inhabitants have been introduced to nuclear sites years ago.

While politically safer than the earlier city defense, the new hard-point Safeguard defense is somewhat more expensive than the earlier system.

Mr. President, if a heavy city defense is now impossible, was it possible 2 years ago when its advocates tried to get us to spend $50 billion on it? Was it possible this past winter, when military strategists tried to escalate Sentinel into a heavy city defense? If the proponents were wrong about city defense 6 months ago, why should one believe they are right about hard-point defense now?

Or is the question of whether or not any missile defense is possible of no concern to the ABM advocates? It may be that the convolutions the pro-ABM arguments have undergone result from honest technical reevaluations. Certainly, cities are less defensible than hardened missile sites. But it is hard to avoid the thought that Mr. Getlein may be right—that the main objective is to spend the money, and that rationales are changed purely as a function of what it is believed the public will swallow.

Currently, the public is being asked to accept three arguments for the Safeguard system. This system would consist of thin Spartan defense for the entire country, plus thick Sprint defense for 350 Minuteman ICBM's and about 10 ABM radars scattered around the country.

These are the three current rationales: First, Safeguard is alleged to protect our cities against an accidentally launched Russian missile. Second, it is alleged to protect our nuclear deterrent by guaranteeing the survival of at most 300 Minutemans in the event of a heavy Russian attack. Third, it is hoped that Safeguard can function as a bargaining counter in the coming United States-Soviet arms reduction talks.

In my view, none of these has much validity.

Safeguard would have little chance of protecting our cities against an accidental ICBM unless the latter conformed to highly unlikely restrictions. The ICBM would have to be devoid of all penetration aids, for even the simplest pen-aids render a Spartan umbrella useless. It is difficult to believe the Soviet Union would not respond to any American ABM by installing penetration aids on all or nearly all of its ICBM's and submarine-launched missiles. Furthermore, the more missiles we or the Soviets build—defensive or offensive—the greater is the danger of an accidental launch that could bring on war or the accidental destruction of millions of people.

The second, and most important, rationale is that Safeguard will protect our strategic deterrent.

The Secretary of Defense tells us our deterrent is in jeopardy. He tells us there is a serious possibility that within a few years the Soviet Union will have the power to destroy our Minuteman silos in a first strike, and to detect and destroy our missile submarines. These assumptions are sharply challenged by many of our most respected scientific experts. Indeed, during his short period as Defense chief, Mr. Laird has shown a tendency to make doubtful assumptions as a basis for doubtful recommendations. For example, his description of the SS–9 as a first-strike weapon is challenged by competent authorities as a piece of guesswork or rationalization. Unless one assumes that Moscow has gone mad, a more likely assumption is that they see their nuclear weapons as a deterrent rather than as a first-strike instrument against the United States.

In May, Mr. Laird told reporters the manned orbiting laboratory was essential to national security; in June, he canceled it. I expect that whether or not the ABM is deployed, it will eventually be admitted by nearly everyone that it never was a very good idea.

There are two facts we must keep in mind as we consider the protection of our strategic deterrent.

First, it is impossible to destroy both our ICBM's and our manned bombers in a first strike. It is conceivable, although extremely unlikely, that the Soviet Union will develop the ICBM ability to take out our Minuteman ICBM's on the ground. But such an attack would give our bombers the 15-minute warning they need to become airborne and safely on their way to destroy the Soviet Union. It is possible, if extremely unlikely, that the Soviet Union will develop the ability to wipe out our bombers on the ground by using orbiting or submarine-launched missiles. These weapons may give us only a 3-minute warning, but lack the accuracy-payload combination necessary for an attack against hardened silos. Hence, such an attack would leave our ICBM's intact. On learning that our SAC bases had been taken out and that Soviet ICBM's had been launched and would strike out Minuteman bases in 10 minutes, the President would certainly launch the Minutemen immediately, thereby destroying the Soviet Union.

Thus, there is no way the Soviets could hope to strike the United States without incurring self-destruction.

Moreover, we have our submarine force, which is a full deterrent in itself. And Adm. Levering Smith, who commands it, tells us this deterrent is not in jeopardy, and will not be in the foreseeable future. I have been puzzled throughout the ABM debate that its advocates so seldom refer to the enormous deterrent we have in 41 submarines, each armed with 16 missile launchers, and each of those capable of devastating a large city.

So, a first strike seems highly unlikely.

Second, the entire question of Soviet first strike capability is irrelevant to the ABM debate. It would be relevant only if we had reasonable confidence that ABM could neutralize this ability. We do not have that confidence.

Mr. President, militarily and technically, the crux of the matter is: Will the ABM do the job or will it not? Even if we restrict ourselves to consideration of defense of Minuteman sites, the overwhelming body of evidence suggests that it cannot offer meaningful protection.

I have heard it said "If we can put a man on the moon, then surely we can build an ABM." But the analogy is not valid. The question is not "Can an effective defense be built against the present offense?" This might be possible, given enough time, although Safeguard does not appear to be such a system. But the real question is: "Can a missile defense be built that will be effective against the improved offense it will have to face

by the time it is built?" For both the United States and the Soviet Union, the answer is most likely "No." The people working on offense are just as capable as those working on defense, and they have a very long headstart. In addition, their problems are inherently simpler.

There is no inherent principle that offense must always be stronger than defense. But the evidence is overwhelming that in modern nuclear weaponry, offense is stronger will remain so in the foreseeable future. Penetration aids, decoys, radar jammers, maneuverable warheads, and above all, multiple warheads give the offense an immense advantage.

If the Soviet Union builds up its offense to the point where it can threaten our hardened Minuteman silos, is it not likely that a modest further buildup would neutralize the Safeguard system? If the Russians have a first strike in mind, it is inconceivable that they would not take this further step.

From that point on, every time we built an additional ABM, the Soviets could counter by deploying a few additional MIRV warheads. Even if one assumes that a virtually impossible accuracy would enable each ABM to destroy an incoming attack missile, it would only be necessary to send one more offensive missile to a particular target than there were defensive missiles to defend it.

Of course, our offense enjoys the same advantage over the adversary's defense.

In short, we are being asked to build an ABM that would not work to protect a deterrent that is not threatened.

Mr. President, the antiballistic missile is not a question of national security; it is a question of national judgment. It is said the ABM presents the American people with a choice between butter and guns. It would be more accurate to say we have a choice between butter and a leaky maginot line that may well be obsolete before it can be constructed.

And as construction proceeds, the costs will mount. The ABM advocates would have us believe they will spend $6 or $7 billion for Safeguard. But defense contractors have a way of radically underestimating their costs, apparently with the tolerance of the Pentagon. If Safeguard follows the common pattern, it will cost several times the projected figure.

Already we are seeing private estimates of $11 or $12 billion. The official estimates went up $1.2 billion overnight, when it was pointed out that one can't build an ABM system without warheads.

But more importantly, Mr. President, I want to go on record today saying that Safeguard is not an end but a beginning. If this hard-point defense is approved, the Pentagon will then remind us that it is hopeless to try to defend even a compact ICBM site without increasing the number of ABM missiles and radars many times; they will tell us national security demands we triple or quadruple the size of our system. Next will come hard-point defense for all ICBM sites and SAC bases, and finally heavy defense for the cities.

And when we have built all this, we will find ourselves with the complete heavy system the Pentagon has sought for years, we will find ourselves $50 to $100 billion poorer, and we will find ourselves less secure than ever.

Mr. President, I predict that if we approve this Safeguard system, we will see the Vietnam pattern repeated. In Vietnam the military strategists always told us they could not win the war unless they got so many thousand additional troops and were allowed to bomb such and such targets. When we gave them the troops and let them bomb the targets, and the war continued as before except for bigger casualty lists, their answer was always to come back with still bigger troop requests and longer target lists.

The fact is that a military solution to Vietnam's problems was never possible. This enabled the generals to claim correctly that their present forces were insufficient.

This is how it is likely to be with the ABM. No matter how much we appropriate, no matter how many ABMs we build, the Pentagon will tell us, quite correctly, that it is not enough. It will never be enough because, barring an unforeseen technological breakthrough, defense against heavy missile attack is and will remain impossible. Like Vietnam, missile defense is a bottomless pit. It will swallow as much as we pour into it with no dependable increase in our security.

And the ABM is like Vietnam in still another respect: its proponents argue that we owe the President as Commander in Chief the benefit of the doubt on such national security issues. But to approve the Safeguard on this basis would constitute a major abdication of congressional power and responsibility. We have had more than enough of that in recent years.

This is not the way to serve either the President or the Nation. For if the ABM is approved, over the years we shall see its cost increase and its ineffectiveness become more apparent. We shall see a bizarre and expensive new cycle of the arms race, and we shall see our neglected domestic needs and problems rise intolerably. And the administration will have to face the electorate encumbered by a costly blunder, just as the previous administration had to face the people encumbered by Vietnam.

As we approach the first major vote on the ABM, we would do well to remember the words of President Eisenhower's last state of the Union address:

> Every dollar uselessly spent on military mechanisms decreases our total strength and therefore our security. We must not return to the "crash program" psychology of the past when each new feint by the Communists was responded to in panic. The "bomber gap" of several years ago was always a fiction, and the "missile gap" shows every sign of being the same.

Mr. Eisenhower was right about the "missile gap." The present "security gap" is equally fictitious. We have less cause to fear what the Soviet Union can do to us than what our own fears may make us do to ourselves.

Mr. TOWER. Mr. President (Mr. DOLE in the chair), unfortunately, too often in this debate, the analogy of the ABM with the maginot line has been made. I think it is a false analogy. It conveys an erroneous impression.

What the ABM is designed to do is to protect an offensive system. Everyone knows that when troops go out on offensive operations, when they bivouac at night they draw up a defense perimeter. That can hardly be considered an analogy to the maginot line.

What we propose to do here is to develop and ultimately to deploy a system that will defend an ability to mount an offense.

THE APOLLO 11 MISSION TO THE MOON

Mr. ALLOTT. Mr. President, Milford E. Shields, poet laureate of the State of Colorado, has written a poem with respect to the men on Apollo 11 and their great achievement in landing on the moon.

The poem has a rare quality which I believe commends itself to the attention of every Senator, and I therefore ask unanimous consent to have the poem, entitled "He Walks With God," printed in the RECORD.

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

HE WALKS WITH GOD

He walked with God, his name was man,
He left his tracks upon the moon;
He walked in love and showed the plan
Where men could walk and move in tune.

He walked in joy, he walked in peace,
He walked in hope, he walked in truth;
His walk has made all men increase,
His walk has brought a buoyant youth.

His tracks are pointed for the stars
As he unfolds the greater plan
Where mankind walks on tranquil bars—
He walks with God, his name is Man.

MILFORD E. SHIELDS.

JOSEPH McCAFFREY'S 25TH ANNIVERSARY

Mr. MATHIAS. Mr. President, what is the measure of the passage of time in a man's life?

We mark the passing of time with clocks, calendars, and anniversaries, but they do not truly measure what effect time has on a man and his contributions to the world.

Not long ago, someone reminded me that "time is life itself." Thus, it seems, it is not the passage of years that is worth commemorating but, rather, what those years have continued in the way of effort, aspiration, and achievement.

For some man, a silver anniversary may represent only a wastebasket full of old calendars. But this year, we are fortunate in celebrating a 25th anniversary which has meaning in the finest and fullest sense.

I am referring, of course, to Joe McCaffrey's 25th year of broadcasting, of broadcasting news from Washington to the American people.

During that quarter of a century, Joe McCaffrey has won the greatest reward that any profession can offer; namely, the confidence of the people.

When Joe McCaffrey reports it, the people know that it is so.

This is more than a personal reward.

As we know in the Senate, the news media are a vital and integral part of modern, representative, democratic government.

Without reporters of Government affairs in whom the people have confidence, our American Republic would not be what it is today.

Thus, in joining many others who have congratulated Joe McCaffrey on his 25 years of service, I also want to thank him for the important part that he plays every day in the successful operation of his Government, and of the institutions which support it.

ORDER OF BUSINESS

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

The PRESIDING OFFICER. The clerk will call the roll.

The bill 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 (Mr. MATHIAS in the chair). Without objection, it is so ordered.

MESSAGE FROM THE HOUSE

A message from the House of Representatives by Mr. Bartlett, one of its reading clerks, announced that the House had passed the bill (S. 912) to provide for the establishment of the Florissant Fossil Beds National Monument in the State of Colorado, with an amendment, in which it requested the concurrence of the Senate.

ENROLLED BILL SIGNED

The message also announced that the Speaker had affixed his signature to the enrolled bill (H.R. 9951) to provide for the collection of the Federal unemployment tax in quarterly installments during each taxable year; to make status of employer depend on employment during preceding as well as current taxable year; to exclude from the computation of the excess the balance in the employment security administration account as of the close of fiscal years 1970 through 1972; to raise the limitation on the amount authorized to be made administration account by the amounts so excluded; and for other purposes, and it was signed by the President pro tempore.

AUTHORIZATION OF APPROPRIATIONS FOR FISCAL YEAR 1970 FOR MILITARY PROCUREMENT, RESEARCH AND DEVELOPMENT, AND FOR THE CONSTRUCTION OF MISSILE TEST FACILITIES AT KWAJALEIN MISSILE RANGE, AND RESERVE COMPONENT STRENGTH

The Senate resumed the consideration of the bill (S. 2546) to authorize appropriations during the fiscal year 1970 for procurement of aircraft, missiles, naval vessels, and tracked combat vehicles, and research, development, test, and evaluation for the Armed Forces, and to authorize the construction of test facilities at Kwajalein Missile Range, and to prescribe the authorized personnel strength of the Selected Reserve of each Reserve component of the Armed Forces, and for other purposes.

NEED FOR CONTINUED ABM RESEARCH BEFORE DEPLOYMENT

Mr. ELLENDER. Mr. President, I have for months made it publicly known that I oppose congressional authorization for deployment of the Safeguard ABM system which has been recommended by the administration.

I wish to make it crystal clear at the outset that I do not oppose more research into the feasibility and workability of Safeguard or of any other ABM concepts. I intend to support either the so-called Cooper-Hart amendment or some provision similar to it which authorizes continued research and development of the Safeguard system.

Mr. President, before proceeding to outline the demerits of the ABM, I thought I would ask the indulgence of the Senate to say a few words about the various deterrents that we now have to protect our country against a surprise nuclear attack. To hear some persons talk, it would seem that without the ABM we will be defenseless against the world.

I can well remember when, 13 or 14 years ago, we built the DEW line. That line was established notwithstanding the fact that at the time there was evidence to indicate that the Russians were more or less giving up the manufacture of long-range bombers.

The DEW line cost us $1.6 billion. Although it is obsolescent, it is still being used. In order to operate this facility, in order to protect against bombers, we spend $38.9 million yearly on the DEW line alone.

It is operated, of course, by the Air Force. Outside of civilian employees, it requires 34 officers and 19 enlisted men.

In addition to the so-called DEW line, we have the ballistic missile early warning system, known as BMEWS. The cost of operating that warning system is $55.3 million a year. Over the years, it has cost the taxpayers $1.6 billion. That system is operated by the Air Force. Aside from the civilian employees, 134 officers and 734 enlisted men are used.

Aside from these, Mr. President, we have a variety of other facilities in what is called the SAGE system, costing $220.2 million annually. That system includes five types of facilities: combat centers, direction centers, BUIC centers, surveillance radars, and communications to integrate the above facilities.

To operate the combat centers, that I previously described, requires 67 officers and 340 enlisted men.

The second phase—that is, the direction centers—requires 859 officers and 3,040 enlisted men. That does not include the civilians who are employed at those centers.

The third system, the BUIC—the backup interceptor control—requires 260 officers and 818 enlisted men.

The surveillance radars require 616 officers and 10,988 enlisted men. They are aside from the civilians who are employed at the various areas.

To operate the communications which integrate these facilities—part of the NORAD system—we spend each year $30.3 million.

In addition, we have the NORAD Operations Center, which connects all of the facilities I have just mentioned to a central command post located somewhere in the Rocky Mountains near Denver. To connect and coordinate these various facilities, we have spent a total of $191.6 million, with an additional $36.6 million budgeted for fiscal 1970.

I am not quarreling at all about the amounts of money or the number of people who are employed to administer the various facilities; I simply want to show that the Department of Defense has been for many years done a thorough job of looking into and testing a multitude of warning systems which enable our offensive deterrent forces to maintain their credibility.

In addition to that, Mr. President, we have the over-the-horizon radar system, by which we are able to detect immediately a missile launch from Russia.

We also have several other warning devices which I am not privileged to mention.

The cost of the facilities I have mentioned aggregates almost $8.6 million, with an additional $371 million budgeted for fiscal 1970.

So, Mr. President, we have not been timid. The Defense Department has not been timid in providing us with all that it desired for protection by warning.

In the event that these warning systems ever give advance notice that we are under bomber or missile attack, we have the awesome power of our Minuteman and Polaris missiles, together with the SAC bombers to retaliate against any aggressor.

Mr. President, there seems to be no end to the research that we are capable of doing to improve these systems and to develop new ones. I am for that. I am very hopeful that some day we shall be able to find some one kind of instrumentality that will take the place of all these we now have. It is possible. Serving on the committee that passes on the research money, I can say that, aside from the ABM research funds that are being provided in the pending measure, we have approved, in another appropriation bill, a small sum, not too large—only $50 million—to carry on further research on one aspect of the ABM.

Mr. President, we have in another portion of the bill a sum which is not very large, only $60 million, in order to find ways and means of hardening the silos into which we put our Minuteman.

Mr. President, aside from the land-based and the sub-launched missiles and all of the warning systems, we have 528 bombers, 78 of which are medium, and 450 of which are heavy bombers. In addition, there are hundreds of carrier-based fighter bombers capable of carrying nuclear payloads against anyone who might attack us.

I point this out so as to dispel the notion that to delay deployment of Safeguard will leave us defenseless against nuclear attack. On the contrary, we have a variety of deadly systems spread around the world and representing an investment of hundreds of billions of dollars which, in my opinion, give us the

advantage of not having to take the desperate and extravagant risk of deploying an unproven ABM system.

The vast amount of "overkill" represented by all of these systems which have been built up over the past two decades should serve to give us breathing room for further testing and research into the concept of Safeguard before we talk in terms of actual deployment.

Mr. President, before I turn to my prepared statement, I should like to read from the 1970 defense budget and defense program which was issued just before Secretary of Defense Clark M. Clifford was succeeded by Mr. Laird. On page 50 of that document, after reciting things that had been done along the same lines I have been speaking of, Mr. Clifford states:

> Thus, by any definition of the term, our "Assured Destruction" capability now and over the next several years should be fully adequate even against the highest expected threat projected in the most recent NIE (National Intelligence Estimate).

Mr. Clifford indicated that we were well protected. And there is no doubt in my mind, from what I have heard, that with the weapons we now have at hand, we could destroy every city in Russia. In fact, I do not doubt that we could destroy the whole world if we were to use all the nuclear warheads in our arsenal.

With this background in mind, I would therefore like to discuss some of my reasons for opposing immediate deployment of the Safeguard system in the hope that my observations will have some constructive effect on the great debate which has evolved, not only in the Congress, but also throughout the land, regarding the fiscal, the strategic, the military, the psychological, the political, and the scientific aspects of this most complex issue.

As a further prelude to my remarks, may I point out that my observations as to fiscal aspects of the ABM program are made from the viewpoint of a fiscal conservative.

I have long carried on a campaign—sometimes a one-man campaign—to cut nonessential Federal spending wherever possible. I am sorry to observe that many of my fellow fiscal conservatives who, like me, are appalled at waste and nonessential spending in the broad spectrum of bureaucratic social programs, refuse now to apply their fiscal conservatism to the Military Establishment in evaluating the benefit-cost ratio of Safeguard.

I, for one, do not intend to exempt the Military Establishment from my motion that the wild spiral of Federal spending must be curbed where it involves nonessential and wasteful programs. I would suggest, therefore, that opposition to this ABM proposal is a noble cause for those on both sides of the aisle who, like me, have for years been fighting against nonessential Federal spending, against waste, against the resultant unbalanced Federal budget, and against an ever-increasing national debt.

May I point out further that my observations as to the military aspects of this debate are not those of a casual onlooker, but are those of a long-time member of the Senate's Subcommittee on Defense Appropriations who has attempted for years to be a conscientious student of our Nation's military operation.

Nor are my comments the remarks of a "dove" insofar as that term has been used vis-a-vis the Vietnam conflict, for I believe that we must see that conflict through to the sort of honorable and meaningful conclusion which will deny the North Vietnamese the intended fruits of their aggression upon neighboring countries.

Neither are my words those of one who ascribes to the unrealistic arguments that some propose for massive unilateral disarmament. Unfortunately, the kind of world we live in demands that we remain, as President Nixon said in his inaugural address, "as strong as we need to be for as long as we need to be."

With these basic considerations in mind, I shall now list several points which seem, to me, to argue against deployment of the ABM system which has been proposed by Mr. Nixon.

First, there is a very substantial doubt within our scientific community that Safeguard will function properly once its seven component parts are put together and are called on to interreact as a system. This evaluation seems to be based in part on suspected inadequacies of the system itself, which is fantastically complicated and which cannot be fully tested except in the event of nuclear war.

Each of the major components presents a very difficult engineering and development project in itself. The Spartan missile, the Sprint missile, the Parimenter Acquisition Radar, the Missile Site Radar, the Master Computer, the Command and Control system, and the atomic warheads—all are at varying stages of development, and none have been perfected or tried out in conjunction with all of the other parts.

As an example of the technical problems involved in deploying and keeping such a system in working order, capable of firing many missiles at a minute's notice any time of any day or night, I cite the rather embarrassing experience we have had recently with one of our supposedly well tested, highly reliable Minuteman missiles.

The Minuteman case involved a test scheduled for October 1966, which failed and had to be rescheduled for later that same year, only to fail again. It was attempted again—and failed again—late last year, and only a few weeks ago failed for the fourth consecutive time. First, there was trouble with a resistor, then with a capacitor, then with a pin in a connector, and finally with some other faulty component. In a way, each of these was a minor malfunction, but each was quite enough to disable the missile and prevent its launch—even after lengthy and highly elaborate preparations had been made in each case to insure a successful launch. I am speaking of the Minuteman.

I cite this incident not to embarrass the military or to belittle our ICBM program but to stress the point that in such a fantastically complex operation, involving literally millions of electronic components, we are foolishly optimistic to presume that even a relatively simple, fully proven offensive missile such as Minuteman will work reliably on a moment's notice.

The Safeguard system presents problems which are far more staggering than those of the Minuteman system, particularly when we consider that, unlike our Minuteman, Polaris, and other offensive missiles, it will have to operate on a "hair" trigger for weeks, months, and years at a time.

I contend that with such a complicated system, we should, by all means, be sure of what we are doing, rather than take a chance. That is exactly what we will be doing if we deploy the present system. It was known as the Nike-Zeus at one time, then as the Nike X, and then the Sentinel—all the same system.

I can well remember that President Eisenhower refused to go along with the Nike-Zeus. There has been very little added to that system since that time.

As the minority report of the Armed Services Committee so ably explains:

> Safeguard is the most complicated technological development ever planned for operation by man. The system consists of three major component parts: (1) missiles (2) radars (3) computers.
>
> Although we have had a long and therefore disturbing series of failures in missile testing, including another Minuteman failure only last week, there is no reason to conclude that the two Safeguard missiles, the Spartan and the Sprint, will not work. But there is reason to doubt that the long-range radar (PAR) and the short-range radar (MSR) parts of which have not been built, let alone tested, will operate successfully together in that almost instantaneous manner which would be necessary in case of sudden attack; and there is even more reason to doubt that the computer, which has been neither built nor tested, and which is admittedly far more complicated than any computer ever yet attempted, will operate properly when called upon to do so.
>
> Finally, it is logical to consider whether, even if these three separate components would operate properly as separate units, would they so operate when combined? For obvious reasons, the testing of any joint operation has not been possible.

Second, and also on the technical question, is the contention by many experts that it is relatively easy to take counter-ABM measures, either by disrupting the radar and guidance components of the system, by flooding the system with the decoy missiles, or by sending in a very heavy overkill of actual warheads.

In other words, even if the Safeguard system does not fail of its own innate disabilities—as the Minuteman missile did on four successive occasions as reported by me earlier—then there are a multitude of tactics that the enemy can take to overwhelm and bypass its capacity to handle incoming missiles.

In this regard, I know that our own Department of Defense and our own ICBM experts are entirely confident that they can penetrate the ABM system which the U.S.S.R. has deployed in a limited fashion around Moscow. There are apparently five or six offensive maneuvers or tactics available to us, any one of which will probably foil the Soviet ABM and the combination of which will surely do so.

Basically, what I am contending in this second argument is that offensive missile technology has a fundamental and per-

haps insurmountable advantage over defensive missile technology. If that is, indeed, the case we should all want to see a system fully proven and fully tested before we go forward on the bold assumption that it can overcome the built-in handicap it faces in trying to knock down a swarm of incoming warheads.

As defensive technology advances, so will offensive weapons technology and so will the sheer force of numbers of deliverable warheads. All of this, I feel, is certain to result in continued confidence on both sides in our respective offensive nuclear forces and continued doubt as to the reliability of the present generation—and indeed the present concept—of ABM forces.

On this point, I have just this week viewed a classified film produced by the General Electric Co. before the ABM question became such a heated national issue and while GE was promoting the notion that we should expand our offensive rather than our defensive missile systems. The film makes a very convincing demonstration of obvious, fundamental, and perhaps insurmountable advantage which offensive missile technology has over defensive missile technology. I stress the word "missile" because in a later point I will suggest that there may be alternatives to the very concept of missile versus missile.

Third, there is a closely related point which is perhaps technical in nature but which really involves nothing more than a bit of simple grade-school arithmetic. It has to do with the number of ABM missiles our system would have, compared to the number of ICBM missiles it would be guarding against.

As now proposed, by 1974, the Safeguard system would have 100 missiles at most, ready to be launched at incoming warheads. As I understand it, about half of these would be the long-range Spartan and half the short-range Sprint missiles.

For the sake of demonstrating my point, let us use this round figure of 100 ABM missiles deployed in 1974. We could use any number, as far as that is concerned. We could use 1,000 or 2,000.

The scientists—both opponents and proponents of Safeguard—seem to agree that an 80-percent reliability factor in such a set of missiles would be the very upper limit of what could be expected. In other words—assuming that there is no catastrophic failure with the whole system in which case no missiles would fire at all—everyone would be highly pleased if 80 of these 100 missiles got off the ground when the proverbial red button is pressed.

Judging from the recent record of the Minuteman tests, this is being extremely generous; but for the sake of the argument, let us assume an 80-percent reliability.

The next step is to estimate the degree of effectiveness of each of these missiles which does succeed in getting off the ground. In this regard, the experts seem to agree that it would be highly satisfactory if half of these were to find their target. This would mean that one out of every two Safeguard missiles would destroy an incoming warhead—an effectiveness factor of 50 percent.

When we apply this generous figure to the 80 Safeguard missiles which get off the ground, we find that they are able to knock out a maximum of 40 incoming warheads. By the proponents' own standards of performance, this is the result which could be expected in 1975 if the system works. My question is: Even if Safeguard works, does it give us anything really worth having and, if not, should not we be looking elsewhere for the kind of protection that is worth having.

As I read the figures which have been offered by the proponents, the U.S.S.R. will have about 2,500 ICBM's by 1975. I think that is the precise figure used by Secretary Laird on April 25 of this year. In addition, the proponents estimate that the Soviets will have at least 1,000 sub-launched missiles by 1975. This is a grand total of 3,500 missiles. Judging from "scare" statements to which we were subjected in the executive session on July 17, those estimates may now be substantially higher.

If we then assume that by 1975 a respectable number of these have MIRV potential, the number of warheads may well be 5,000, 6,000, or 7,000. And how many will we be able to knock down? Forty at most—and even this pittance assumes many excellent performance characteristics for Safeguard which the system might not have and probably does not have.

What we will have is a 1- or 2- or 3-percent return on an investment in which a 95-percent return would still leave us devastated. Of course the long-range plan is that we will then have to deploy more and more Spartan and Sprint missiles so as to get a better return, but I say that no matter how many we deploy, the same basic arithmetic will apply.

If, for instance, we spend $50 or $100 billion to expand Safeguard 10 times over to deploy not 100 but 1,000 missiles by 1980, the Soviets by that time will probably have in excess of 5,000 missiles with perhaps 15,000 warheads. We would be at even greater disadvantage than in 1975. If 800 of our 1,000 ABM missiles get off the ground and if half of these were effective, we would knock down only 400 incoming warheads among a possible 10, 12, or 15 thousand. The exact number is really unimportant because all it would take to devastate this country is about 100 well-placed warheads.

In my judgment, it is for this very reason that the Soviets have stopped deploying ABM sites around Moscow. Their system, which is probably less sophisticated than Safeguard and similar to our 1960 Nike-Zeus system, is subject to the arithmetic I described above. The Russians have apparently done their homework and have seen the pointlessness of trying to defend Moscow from the kind of attack which we are capable of launching.

It is basic logic that the more big-bad-wolf stories the proponents tell about how rapidly the U.S.S.R. is deploying ICBM's and launching missile submarines, the more useless and preposterous becomes the plan to defend against them by means of the Safeguard system—even one that has 10 or 20 times the number of sites and missiles now envisioned.

It is this undeniable ability to overwhelm the enemy's ABM system, to kill him and to devastate his cities and his industry several times over which we refer to as "overkill." In considering this subject we should remind ourselves that a one megaton bomb is 50 times the power of the Hiroshima bomb and that by the time the Safeguard system is proposed to be operational as a deterrent to a Soviet attack, our varied offensive systems could conceivably deliver as much as 5,000 megatons on the Soviet Union in a total nuclear exchange.

That would be the equivalent of 250 thousand times the destructive force of the Hiroshima bomb. If we related that awful power to the 100,000 casualties at Hiroshima, this amount of megatonnage would inflict 25 billion casualties—seven times the population of the earth.

To anticipate all of the contingencies which might be raised by the proponents, let me put it in ultraconservative terms. If only one-tenth of our megatonnage got through and if that megatonnage caused only one-tenth the relative number of casualties inflicted at Hiroshima, they would still result in 250 million casualties—equal to the entire population of the U.S.S.R.

By the same token, the Soviets could dump and would dump enough megatonnage on this country and do just as thorough a job of extermination on us. If the nuclear blasts did not do the job instantaneously, the radiation, the long-term fallout and the chemical and germ warfare which would follow would certainly complete the job.

Fourth. As a logical extension of my observations relative to "overkill," I wish to challenge and to discredit the line of reasoning engaged in by the proponents of Safeguard that the Soviet Union is scrambling to achieve a nuclear superiority with the view of attacking the United States as soon as it can inflict substantially more damage on us than we can on them.

In essence, this is the fear tactic which is being exploited when the proponents of Safeguard raise the first-strike argument. They seem to preach the notion, and indeed the presumption, that if the U.S.S.R. ever attains nuclear superiority, she will attack us on the theory that we will get the worst of a nuclear exchange and that nuclear war would, therefore, be in the Soviet's best interests. Their presumption is ill founded.

In the most basic and most frightful of terms, there are three great presumptions—each of them highly unlikely, if not impossible—which the U.S.S.R. would have to make in order to attack us first with the expectation of being able to survive our counterattack.

First. They would have to presume that as a result of their attack and as a result of whatever ABM defense they might have, not enough of our nuclear warheads would get through to cause them an unacceptable level of immediate physical damage.

Second. Along with the first highly unlikely condition they would also have to presume that the plant, animal, and human life in their country and indeed in the Northern Hemisphere could survive the fallout and radiation effects of the several thousand nuclear explosions which would occur in an all-out war—no

matter over whose territory the most bursts occurred.

Third, they would finally have to presume that we would not resort to bacteriological and chemical warfare of a sort that can and probably would exterminate mankind from this planet. They would even have to be sure that whatever germ or chemical they released on us would not eventually drift around to their side of the world and exterminate them too.

The "first-strike" argument of the proponents is so short-sighted, so uneducated and so narrow-minded that it casts the Soviets in the role of a raving madman who has neither any intelligence nor any will to survive. A sane man could not and would not stake his life on any of these presumptions, much less on all three.

Believe what else you care about the Soviets—they are intelligent, they do want to survive, and they do not want the kind of war about which I have been talking.

In addition, the very concept of "first strike" and its attendant risks of complete devastation and annihilation are at total variance with the Communist view of history. A basic tenet of the Communist "religion" is the fundamental belief that communism will prevail over capitalism as a matter of fate, as a matter of history. They are woefully wrong in this belief, but they do most deeply believe it; and to risk their own nuclear extermination for a goal which they firmly believe can be won merely by waiting and by pursuing tactics of less catastrophic potential.

In this regard, let me quote one of the most respected military leaders in our country's history to support my belief that the Soviets fear us just as much as we fear them and that neither has the intention of picking a nuclear war with the other.

Gen. Douglas MacArthur once said that world tensions were kept at a fever pitch by two great illusions:

> The one a complete belief on the part of the Soviet world that the capitalistic countries are preparing to attack them, and the other, a complete belief on the part of the capitalistic countries that the Soviets are preparing to attack us; both are wrong.

Insofar as nuclear warfare is concerned, General MacArthur was absolutely right; and when they speak of "first-strike" proponents are resorting to fear rather than to reason in a desparate attempt to promote the cause of the Safeguard system.

Fifth, there is the convincing and ironic argument offered by many of the experts that such an ABM system will actually backfire by causing the U.S.S.R. to multiply its offensive nuclear weaponry far beyond what it would if we had no ABM.

I respect that argument because I know that is precisely what we are doing in response to the alleged deployment of a Soviet ABM system around Moscow. To counter the effect of an enemy's ABM system, the military strategists simply program two or three or 10 times the number of warheads that would otherwise be required to do the job on a given target. The result is obvious. If ABM fails of its own disabilities or is out-maneuvered by the enemy, the supposedly protected target suffers two or three or 10 times the destruction it might otherwise have received.

As one of the experts on the subject has explained in very mild, reasoned and restrained language—almost to the point of understatement:

> If our potential enemy takes no steps to compensate for the deployment of ABM, some damage and casualty reduction could be expected. But the assumption that such steps would not be taken appears highly improbable if the adversary is the Soviet Union which has the means to take them and will feel compelled to do so, to preserve its secure deterrence posture. In fact, overreaction as judged by the past, would be the norm, particularly when the uncertainties about performance are as great as with the ABM system. The probable responses include increases in the numbers of offensive missiles and the deployment of MIRV's with their destabilizing effect. The development of the latter we ourselves decided to undertake upon learning of the start of the deployment of the Soviet ABM. These steps induce obvious counteractions by the other super-power and the net result could easily be another major expansion of offensive missile forces and an accompanying uncertainty about the security of our deterrent.

Under this sort of logic—and I think it is eminently sound logic—this ABM system could be less than useless. It could be highly counterproductive, and at a cost of untold billions of dollars.

To those who contend that the Soviets will continue to manufacture and to deploy missiles at a rapid pace regardless of what we do on the Safeguard question, I say, "It ain't necessarily so."

From my many travels to the U.S.S.R. and my hundreds of conversations with officials at all levels of their government, I know that they, too, are constantly engaged in an internal tug-of-war over military policy and military priorities.

I say that there is a group within the Soviet Government which would like to cool down the arms race, free their country of the back-breaking burdens of an uncontrolled missile race. They would prefer to put the country's emphasis on agriculture, on consumer goods, on housing, and on modernization of Russian industry at all levels. They know that these are the areas which, if neglected for too long, can bring the Russian people terrible hardship and could even result in civil unrest.

But what happens when these moderate elements attempt to steer the U.S.S.R. away from the arms race by leveling off missile systems development and deployment? I will tell you what happens:

The super hawks and the militarists plow them under with scare stories about Safeguard, Poseidon, Minuteman III, MIRV, AMSA, and so forth. They point out how the combination of all of these mighty American systems will give the "fiendship militarists" of the Pentagon a "first-strike" capability by 1975, unless the Soviet military effort is redoubled, unless hundreds more of the SS–9 missiles are deployed, unless 50 more missile subs are launched—unless, unless, unless.

It seems to me that we have an opportunity to strike a blow for the growth of this moderate element within the Soviet leadership by delaying deployment of what is really an unworkable ABM system anyway, and giving them the elbow room to point out that in the absence of an American ABM system, Russia does not really need quite as many SS–9's, MIRV's and missile subs and that the resources of the country ought to be diverted elsewhere.

This sort of change of pace would not occur overnight in the U.S.S.R. I am not so unrealistic as to think that. But I do know that heavy Soviet expenditures on these expensive weapons programs are seriously retarding the Russian economy. In the long run, their natural tendency would be to put more emphasis there, rather than on limitless expansion of missile forces. All that I am saying is that we should hasten this process by avoiding deployment of a system that is really useless to us but whose mere existence can easily be used by the superhawk group within the U.S.S.R. as a pretense for further escalating the arms race.

Here is our chance, perhaps, to break the action-reaction cycle on which the arms race feeds itself. Even if it is an outside chance we should take it, particularly, since we can do so without endangering our own security. All we would have to do, for the present at least, is to limit ourselves to testing a system which in the final analysis we may find does not work well enough to deploy anyway.

Sixth, I wish to raise the issue of the fiscal and budgetary impact of the Safeguard ABM proposal. As a longtime member of the Defense Appropriations Subcommittee, I know from experience that the "six or seven billion dollars" estimate of the cost of the "thin" ABM system will, in my opinion, escalate to a sum several times that amount.

Once deployed, this system's substantial and obvious inadequacy will almost certainly result in the gradual evolution of a "thick" system whose cost could run from $60 or $80 billion to the $400 billion which has been projected by Senator STUART SYMINGTON, a former Secretary of the Air Force.

As one who has always tried to be a watchdog against excessive, unwise and nonessential spending, I see the Safeguard ABM as a bottomless pit for my constituents' hard-earned tax dollars. As such, I view it as an incurable sore on the efforts that some of us are making to balance our budget, reduce the tax load and return to fiscal responsibility.

As I stated in my introductory remarks, I find it disappointing that most of my fellow fiscal conservatives who, like me, are constantly using the paring knife on wasteful social programs refuse now to apply their fiscal conservatism and good sense to the Military Establishment.

We are now spending $80 billion a year—$220 million a day—on military programs, and in my opinion, the Safeguard system could very quickly expand this sum beyond the $100-billion-a-year level. As a fiscal conservative, I fear that when combined with ever-increasing demands for medical, welfare, and "social" programs in general, this level of military spending will eventually wreck our economy.

This is the sort of development which might well bear out the prediction of one of the founders of the Soviet Communist

State who predicted that the capitalist nations would eventually "spend themselves to death." Once the system is deployed, it will serve as a bottomless pit for countless billions of dollars which our over-burdened budget, and our over-burdened taxpayers, cannot afford.

In this regard, I know that once Safeguard is deployed, it will be increasingly difficult for this body to pass objective judgment on its workability. In such a heated legislative battle as this—in which the President, the Pentagon, and so many proponents are putting their reputations and their sacred honor on the line, insisting that Safeguard will work—there will be a great, politically inspired reluctance on the part of many to admit at some time in the future that they were wrong and that Safeguard is, indeed, an Edsel.

The tendency, I fear, will be to pyramid a mountain of fundamentally unworkable, unproductive, and extremely expensive ABM hardware rather than admit error and waste. In face of such a possibility, we must take a "go-slow" attitude about deployment—until we know for certain that we do want to deploy this particular system.

Another example, in which I made unheeded recommendations to "go slow," involves our Polaris submarine fleet which has been expanded at a maximum rate over the several years and which is now having to be converted to handle the larger Poseidon missile rather than the Polaris missile. We have known for several years that Poseidon was on its way and that Polaris would soon be "obsolescent" by today's standards.

Of course, it would have been a mistake to build no Polaris subs at all while waiting for the perfection and deployment of Poseidon; but by the same token, a great savings to the economy and to military spending could have been realized by going slow on the Polaris-type subs and waiting to put our money into the Poseidon-type sub which we knew was coming.

Instead, we went full speed ahead with the Polaris subs and we are now having to spend $50 to $60 million apiece to convert 31 Polaris submarines to the Poseidon system. This conversion plan alone will cost $2 billion—a huge sum which could be spent instead to purchase a number of new Poseidon-type subs.

I can easily visualize "secret" memorandums floating around the Pentagon in 1979 which suggest that the best thing to do with Safeguard is to sink it in the ocean—the solution proposed in 1969 for our older Polaris submarines—rather than be saddled with its huge and pointless costs of operation and maintenance.

It is the old question of "haste makes waste" and in my opinion we must not make that mistake vis-a-vis the gigantic Safeguard program. If we do, we are likely to find ourselves with an outrageously expensive white elephant on our hands which is not convertible to anything at all—at a great and damaging cost to our economy.

Seventh. In discussing research and development, I find a most disturbing aspect to the manner in which the Safeguard system is being handled vis-a-vis the normal procedure of developing, testing, procuring, and deploying major weapons systems.

As a member of the Defense Appropriations Subcommittee, I learned long ago that there is a set procedure by which a weapons system must grow from the status of an obscure scientific concept to the status of deployment. Experience has proven that the more complicated the system, the more vital it is not to skip or not to violate any of these successive steps.

In a nutshell, these stages of R. & D. are: Basic research, exploratory development, advanced development, engineering development, operational systems development, and management and support.

With all its priority, costing, and rushing ahead, even the Manhattan project followed the five R. & D. steps with the rather special exception that there was only the one Alamogordo Trinity Testing. If this test had not been near fully successful, the two flights from Tinian would almost certainly not have left as they did.

The nuclear sub project of Admiral Rickover, and the Polaris missile project of Admiral Raborn similarly followed the five R. & D. steps carefully. The dangers involved made it natural that none of the five steps were omitted, although clearly the project work was rushed. An untried reactor would never have been considered by Admiral Rickover for procurement and deployment. An untested Polaris missile would never have been approved for massive procurement by Admiral Raborn. Yet, this is just the sort of hop-skip-jump procedure which the Defense Department is following with regard to the infinitely more complex Safeguard system.

The only cases of which I have been aware of successful attempts to bypass any of the normal five R. & D. steps involve the B–29 program, the Russian T–34 tank development program in the early 1940's, and the British "Mark I Star" radar system.

All other systems which have attempted to violate the five R. & D. steps in one or more ways, instead of saving time, have become grossly expensive or completely unworkable, or both. Some celebrated cases today involve the M–16 rifle and the TFX aircraft. But the worst current example is probably the combustible casing for the Sheridan tank. As a result of faulty R. & D. procedures, we now have a billion-dollar tank without an artillery shell that can safely be fired from its gun.

In the case of the Safeguard system, my observations are that the system has proceeded only to the third stage of development, which, according to armed services procurement regulations is called advanced development, a stage which is not far enough along the line to permit procurement or deployment of hardware for service use.

Mr. President, I ask that certain excerpts from part 2, title 4, section 201 of the Armed Forces procurement regulations be printed in the RECORD at this point in my remarks so that I might then refer to some of the language contained therein.

There being no objection, the excerpts were ordered to be printed in the RECORD, as follows:

4–201 DEFINITIONS

(a) The followng definitions of the term "research and development" are those set forth by the Department of Defense for the reporting of research, development, and engineering program information, and are primarily designed for program control. To enable procurement personnel to understand the meaning of these words as used by research and development personnel, the definitions are set forth here for information purposes. As the term "research and development" is used in this Regulation, it ordinarily encompasses only the first four of the categories set forth below. The definition set forth in (5) and (6) are not likely to coincide with the meaning of "research and development" as that term is used for procurement purposes. For example, "military construction of a general nature unrelated to specific programs", as included in (6) below would not be within "research and development" for procurement purposes in the case of construction of recreation facilities at an installation used exclusively for research and development. The facts of a particular case, however, may be such that (5) and (6) below would include a procurement which satisfies the procurement meaning of the term research and development.

(1) *Research*—Includes all effort directed toward increased knowledge of natural phenomena and environment and efforts directed toward the solution of problems in the physical, behavioral and social sciences that have no clear direct military application. It would thus, by definition, include all basic research and, in addition, that applied research directed toward the expansion of knowledge in various scientific areas. It does not include efforts directed to prove the feasibility of solutions of problems of immediate military importance or time-oriented investigations and developments.

(2) *Exploratory Development*—Includes all effort directed toward the solution of specific military problems, short of major development projects. This type of effort may vary from fairly fundamental applied research to quite sophisticated bread-board hardware, study, programming and planning efforts. It would thus include studies, investigations and minor development effort. The dominant characteristic of this category of effort is that it be pointed toward specific military problem areas with a view toward developing and evaluating the feasibility and practicability of proposed solutions and determining their parameters.

(3) *Adavanced Development*—Includes all effort directed toward projects which have moved into the development of hardware for experimental or operational test. It is characterized by line item projects and program control is exercised on a project basis. A further descriptive characteristic lies in the design of such items being directed toward hardware for test or experimentation as opposed to items designed and engineered for eventual Service use.

SPECIAL TYPES AND METHODS OF PROCUREMENT

(4) *Engineering Development*—Includes all effort directed toward those development programs being engineered for Service use but which have not yet been approved for procurement or operation. This area is characterized by major line item projects and program control will be exercised by review of individual projects.

(5) *Operational System Development*—Includes all effort directed toward development, engineering and test of systems, support programs, vehicles and weapons that have been approved for production and Service deployment. This area is included for convenience in considering all RDT&E projects. All items in this area are major line item projects which appear as RDT&E Costs

of Weapons Systems Elements in other Program control will thus be exercised by review of the individual research and development effort in each Weapon System Element.

(6) *Management and Support*—Includes all effort directed toward support of installations or operations required for general research and development use. Included would be military construction of a general nature unrelated to specific programs, maintenance support of laboratories, operation and maintenance of test ranges, and maintenance of test aircraft and ships. Costs of laboratory personnel, either in-house or contract-operated, would be assigned to appropriate projects or as a line item in the Research Exploratory Development, or Advanced Development Program areas, as appropriate. Military construction costs directly related to a major development program will be included in the appropriate element.

Mr. ELLENDER. Mr. President, I note that according to the DOD's own standards and regulations, under point No. 3, known as advanced development:

A further descriptive characteristic lies in the design of such items being directed toward hardware for test or experimentation as opposed to items designed and engineered for eventual service use.

Since in the case of Safeguard, many of the parts of the various component systems have not even been built in prototype form, much less tested in conjunction with the other major components, it is basic logic to conclude that Safeguard as a weapons system is certainly not beyond stage 3. In some regards, it has not even reached stage 3 and should, therefore, be considered far removed from stage 5, which is the first point at which the regulations speak of "deployment" in any sense of the word.

Although I am no expert in the matter, it seems that we might be able to give some sort of rating, between Nos. 1 and 6, to each of the major components of Safeguard. Then we might reason from these the relative stage of development of the system as a whole.

Since this is too technical an issue to explore in detail at this moment, I shall merely express my interpretation of the matter and check the RECORD in the days to come to see if proponents can prove by facts and figures that the various major components of Safeguard have, in fact, advanced farther than the levels of R.D.T. & E. which I attribute to them. If a component is in the early stage of a certain step I will use the term "minus" and if in the late stage the term "plus."

First. The Spartan missile—Step 4.

Second. The Spartan guidance and control system—Step 3 plus.

Third. The Sprint missile—Step 3 plus.

Fourth. The Sprint guidance and control system—Step 3 minus.

Fifth. The PAR—long-range radar—Step 4.

Sixth. The MSR—short-range radar—Step 3.

Seventh. The master computer—Step 3 minus.

Eighth. The master command and control system—Step 3 minus.

Ninth. The warheads—Step 4.

For the simplest reasons of logic, the workability of such a complex system cannot be glibly presumed. Without bringing each of the component parts through the whole R.D.T. & E. procedure we would be deploying Safeguard on little more than a fanciful presumption. The burden of proof of Safeguard's workability has not been satisfactorily borne by proponents who recommend the expenditure of billions for deployment of an unproven system.

Eighth, and in the same vein, I feel that deployment of the Safeguard ABM system could have a highly counterproductive effect of diverting research and resources away from programs which might someday produce a truly workable ABM system. Such a system might be based on laser beams, on other high-intensity sources of sound or light or on force fields of some sort that are unknown to us at present. Who knows what system or what concept is waiting to be discovered which does not suffer from the foibles which so many of our scientists feel are inherent to a projectile system such as the Safeguard.

In this regard, I wish to make it very plain that I am not an opponent of ABM per se, for I would be the first to want a protective shield over this great country that I knew would work. Though I do not feel that the U.S.S.R. intends to risk nuclear war with us now or in the foreseeable future, no one knows what the threat might be 5 or 10 or 20 years from now—either Russia, or more likely China or even from some other nation not now a nuclear power.

I actively support efforts to continue ABM research and view deployment of Safeguard as a threat to this research and a waste of precious resources on a system that will bog down of its own weight. A striking parallel can be seen in the history of the Nike-Zeus program for which many of Safeguard's proponents were clamouring a decade ago.

As one expert told the story so clearly:

It is interesting to contemplate that, had the deployment of Nike-Zeus been authorized in 1960–61, we would have just about now had the full system in operational readiness, after spending what was then estimated as $20 billion and could have been, judging by analogy with other large weapon systems, twice as much. Considering the current numbers and sophistication of offensive missiles now being deployed by the super-powers it is technically certain that the Nike-Zeus ABM system would now be of little value.

Full deployment of Nike-Zeus would certainly have been a stumbling block to the improved—but still inadequate and obsolescent—Safeguard ABM system. And if Safeguard is deployed now, it will have serious and perhaps deadly effect on development and eventual deployment of a truly effective ABM system, if indeed such a device can ever be created.

Ninth, and in connection with this matter of ABM research, let me raise the specter of a frightful possibility that has not yet been considered by the Senate. Since there has been a great deal of "fright peddling" by the proponents, I feel at liberty to put the shoe on the other foot and peddle a bit of fear and uncertainty on behalf of the opponents. Maybe as a result of what I am going to say, some of my colleagues will benefit by a balance of fear within their analytical processes and will then be able to look at the Safeguard more objectively than if their appetite for fear is being whetted only by proponents frightful hypotheses of what the Russians might do to us if we do not install an ABM umbrella over our heads.

My countercharge is this: What if, while we are deploying expanding and pyramiding a system which—for the many reasons I have stated—will not work, the Soviets are in the meantime putting all of their resources into research and development of a new concept which 10, 12, or 15 years from now does work.

Visualize, if you can, the situation in 1985 when we might have 10,000 improved Spartan and Sprint missiles blanketing the country, feebly facing perhaps 30,000 Soviet warheads. The arithmetic of the situation will still carry the inescapable conclusion that this is no defense at all against the U.S.S.R. if she should decide like a mad dog to attack us. This would be true even if our missiles are 100 percent reliable and 100 percent effective, which they would not be, of course.

But what if, by contrast, the Russians have spent the time and the resources between 1969 and 1985 not in burdening themselves with a white elephant but rather in finding and perfecting a system which really does work.

As I indicated earlier, there are already indications that they have stopped deploying their Golash ABM system around Moscow and are looking for something that will work. They have, no doubt, done their arithmetic and realize that—similar to the figures which apply to our Safeguard—even a 50-percent effectiveness from a system that is 80 percent reliable will still do them no good at all in the event of nuclear war.

So, apparently, they have found the good sense to stop kicking their dead horse and to go out looking for a better one. If by their commonsense efforts in this regard they jump ahead of us during the next decade—while massive deployment of Safeguard detracts from realistic R. & D. efforts into other concepts of ABM—then it is the proponents of Safeguard who will have deprived us of whatever ABM protection we might need in years to come.

I am one who wants to see this country spend whatever money is necessary in research either to prove or, more likely, to disprove the feasibility of Safeguard and then to get on to looking for something better, if such a thing exists.

Tenth, as a further matter of military strategy and programing, I fear that deployment of a hugely expensive ABM system could very easily squeeze out or seriously undermine other important military programs and place our total military posture out of balance.

If, as I have contended, nuclear war will not be chanced by the nuclear powers, then I am sorry to say that there will likely be other types of wars and conflicts of various descriptions which fall short of nuclear holocaust. I personally shall oppose such involvement wherever possible, but I am practical enough to realize that they will most probably occur from time to time.

The type of war we are fighting in Vietnam, the one we are constantly in danger

of having to fight again in Korea, the ones we are "secretly" fighting in Laos and Thailand, the conflict that is festering in the Middle East, the unsettled situation throughout Latin America—all give evidence that for a long time to come we shall have to be spending large sums on "brushfire" wars. And, too, it is a well-accepted principle that the best way to avoid such conflicts is to be eminently well prepared for them. The fiscal impact of Safeguard will certainly detract from our ability to maintain preparedness in this respect.

With the growing sentiment in Congress and in the country for a ceiling or a basic reduction in military spending, the deployment of a very expensive ABM system of very doubtful reliability would seem to me to gobble up a topheavy share of total military spending.

My educated guess is that there are many military men who would like to speak out against ABM on the grounds that it presents a clear and present danger to all military programs that are designed to assure preparedness for conventional warfare and for the necessary maintenance, modernization, and perfection of our offensive deterrent forces.

As a practical military man, I think I would be more interested, for example, in spending the necessary time, effort, and money in making sure our Minuteman system as a whole is not in the inoperative condition of the missile that failed to launch on four successive occasions. What we need here is a bit more horsesense thinking, more first things first in terms of military priorities.

Eleventh, I have come to feel a certain cynicism and disgust for the whole controversy surrounding the Safeguard proposal, because I find that it was in the beginning—and is becoming more and more—oriented toward politics than toward considerations of national security. Frankly, I feel that the Nixon administration made its initial recommendation for deployment because it was politically afraid not to do so. I think it was afraid to approach either the 1970 congressional elections or the 1972 national elections subject to charges of having allowed an "ABM gap" to develop.

I am sure that President Nixon has vivid memories of the "missile gap" psychosis employed so effectively by President John Kennedy to defeat him for the Presidency in 1960. President Nixon needed political insurance against any similar occurrence in 1970 and 1972 and in my opinion rested his decision heavily on political grounds.

To use a modern phrase, this sort of self-serving political motivation "turns me off." I frankly do not want to vote for a program that will cost billions, that is of dubious reliability, and that may hurt rather than promote our national security, when my careful observations tell me that this program is being proposed for reasons which are basically political.

In making this point, I do not mean to be totally critical of the President and the administration. Mr. Nixon and his advisers are victims of a situation which has built up over a period of years, and in a very real sense I feel sorry for them that they find themsleves locked into a position of having to propose deployment of an ABM system which they know is defective and ineffective by its very nature. I know the President wishes he had the political breathing room to do otherwise.

Twelfth, I wish to challenge the argument offered by proponents that they must test the Safeguard system on the site on which it will eventually be deployed—rather than out in the Pacific Ocean—in order, first, to obtain a realistic idea of its performance at that location and, second, in order to save money by having it already installed on the proper site if it does prove to be workable.

I shall try to demonstrate, Mr. President, that these are hollow and faulty arguments. They actually constitute a "nonthink" position for the proponents in view of the real-life situation to be faced when we talk about testing such a system and proving that it will work.

In the first place, I take the position that before we make a final judgment on an ABM system we should see all of its component parts function as a unit under conditions which simulate as closely as possible the attack against which it is designed to protect.

In the case of Safeguard, this "final judgment" of which I speak would be the foundation upon which this country might proceed to invest tens or even hundreds of billions of dollars in ABM sites and hardware in the years to come. So, it should be a realistic test which leads us to the final decision. Otherwise, we run the risk of total waste.

The charge I make is that we cannot stage such tests in Montana and North Dakota. To be certain of whether we do not have a white elephant on our hands, we would have to deploy a number of Spartan and Sprint missiles at a site, hook them into both the long-range and short-range radar systems, tie those systems into the master computers and the command apparatus and then tell the Safeguard operators something like this:

"At any time during the next 6 months, day or night, you must be prepared to defend against surprise attack from Minuteman, Polaris, Poseidon, and whatever other missiles we see fit to launch, including MIRV. The direction from which the attacks are launched, the time of attack, the decoy techniques and the numbers of missiles will constitute an attempt to stimulate a Soviet 'first-strike' attack. Only the nuclear warheads will be lacking."

Then, on some unannounced day or night, within the confines of an hour or two, we would then actually have to launch at least two dozen ICBM's and SLM's from varying distances at targets within the guarded area to see how many of those could be "killed" by a similar number of Spartan and Sprint missiles actually launched at the incoming dummy warheads. The "kills" would, of course, have to be judged on the basis of the distance by which each unarmed ABM missile missed its target. Since simulation would be at a maximum, the results of the test would contain enough realistic data on which to base a valid judgment.

This would not be true of the sort of testing that could or would be done in North Dakota or Montana. ICBM's and SLM's would not actually be fired at the sites under protection, and ABM missiles would not be fired at the incoming dummy warheads. The reason is obvious; political risk and public opinion would not allow it; there would be too much danger of stray missiles falling into towns, cities, or other populated areas.

Instead, the whole routine of "testing" would be to run tapes through the computers to simulate incoming warheads and other tapes to simulate Safeguard and Sprint launching—with the result that we would still not know whether the system really works under stress.

In effect, proponents want us to adopt a plan which by its very nature would preclude realistic testing. They will then come back next year and in succeeding years, ad infinitum, asking for additional authorization and money to deploy additional sites—always without any hard proof that the many component parts of Safeguard will work as a system under battle-like conditions.

Under these circumstances, we might be victimized by Safeguard in the same way as we were in the infamous case of the torpedoes the Navy tried to use against the Japanese in the early stages of World War II. After launching these torpedoes against Japanese ships, our submarine crews could hear them thump against the sides of the target vessels; but no explosions and no sinking of enemy tonnage ever occurred.

The fact is that a simple torpedo, which had been fully "lab tested" by the experts, regularly failed to detonate. These experts, in their haste to deploy a torpedo, had felt that if they could make their weapon work on the drawing board and if the bench-model prototype seemed to work as designed, then the real weapon would work, too.

But it did not work, and under different circumstances this result of fuzzy R. & D. thinking and hasty deployment might have cost us the war.

So, I implore my colleagues, let us not chance the same mistake. Let us not allow proponents to argue unchallenged the faulty proposition that paper testing and simulated prototype testing in Montana is an acceptable substitute for realistic testing at the Kwajalein test site in the Pacific—where real Spartan and Sprint missiles can be launched against a surprise attack of ICBM's and SLM's, lacking only the nuclear warheads which we hope will never have to be used. Let us bear in mind that Safeguard is a supercomplex interconnection of at least seven major components, not one of which—as I explained in point No. 7 of these remarks—has yet been proven acceptable for deployment under the normal rules of R.D.T. & E.

To me, these commonsense observations relative to testing make short shrift of the "economy" argument which proponents offer for deploying prototypes on the spot where eventual permanent deployment is anticipated. As explained, proper and realistic testing cannot and will not be conducted at those sites. This kills any argument for economy because it allows for the strong possibility that

the entire system will be totally unworkable and thus totally uneconomic.

Thirteenth, I would like briefly to take issue with those who argue that "Because we were able to put men on the moon, we can certainly build the Safeguard ABM system in a way that will work."

As I have explained in previous arguments, this may well be so; but we should test and prove it out as a technological fact before deploying. Also, as I have said, even if it "works" in the technical sense, Safeguard may not be capable of doing the job in terms of the numbers of warheads potentially involved in a nuclear exchange. Furthermore, as stated, the Safeguard program may be the very factor that diverts our scientists from developing a system that will work.

Be that as it may, it is a fallacy to presume that Safeguard will work because we are as capable of making it work as we are of putting men on the moon.

The manned missions which NASA has handled so masterfully involve only one missile launch at a time. Each of these rockets is specially prepared and individually installed on the launch pad several weeks before blastoff. Each then receives the almost undivided attention of the entire multibillion-dollar worldwide NASA complex, with its tens of thousands of scientists and technicians. Finally, each rocket is subject to a highly elaborate countdown of 190 hours—with several built-in "hold" periods—before it is launched.

I say that it is not good thinking to draw general comparisons and hold presumptions from the admittedly spectacular successes of the NASA manned space programs and apply them to a system which, by contrast, would involve literally hundreds of highly sophisticated rockets, each one attuned to a hair-trigger where the mere concepts of "countdown" and a "hold" is totally self-defeating.

Fourteenth. I take issue with the argument of those who suggest that although Safeguard may be useless against a Soviet first strike, it is nonetheless a good investment against the possibility of a Red Chinese first strike.

The military and strategic facts of life do not support this sort of logic. In the first place a Chinese attack would be a "madman" attack, conducted with the knowledge that massive retaliation on China would result. In such a situation, the Chinese would not have the capacity to diminish our retaliatory capacity to any significant extent, if at all, and would instead try to devastate as much of our population, our industry and our commerce as possible.

That kind of attack would be launched at our coastal areas where most of our large cities are situated and where huge amounts of our industry and commerce is to be found. The attack would come not from a handfull of ICBM's that are projected for the Chinese arsenal in the mid-1970's but from a handful of submarines or even freighters or fishing vessels—or a combination of all three—stationed right off our coasts in international waters.

In such a situation, even obsolete or obsolescent subsonic, short-ranged missiles could be used with virtually no warning at all. Under these conditions, Safeguard would be totally useless. There might be some other defense against such a sea-based coastal attack; but whatever that may be, it has nothing to do with Safeguard. Since this system cannot be linked realistically to the kind of attack that we might logically expect from the Red Chinese, proponents should not be allowed to justify it on that basis.

May I point out, parenthetically, that one of the factors which originally caused me to question the feasibility of the Safeguard system was the apparent inability of its proponents to state clearly the kind of attack against which it is supposed to protect and by precisely whom this attack is to be launched. The illogic of linking Safeguard to a Red Chinese attack describes eloquently the illogic of Safeguard itself.

Finally, I want to comment on the cold war aspects of the ABM program. I make these observations in view of the urgent need I see for slowing down the arms race and for cooling down world tensions, the alternative to which is an intensification of the cold war and a further polarization of the peoples of the world into hostile camps bent on mutual destruction.

As I have tried to indicate at several points in this address, I feel that both we and the U.S.S.R. have developed nuclear forces of such fearful potential that neither of us will now or in the foreseeable future risk atomic war.

If this is a correct conclusion, then the contest between the free world and the Communist world will be won—or lost—in the battle for men's minds—on the battlefields of ideas, of economics, of internal progress, and of fiscal stability.

As I see it, we cannot hope to defeat communism militarily because to do so would be to invite our own destruction as well. That being the case, we should look for nonmilitary means of winning this competition.

On five different occasions in recent years, I have visited Russia and have seen in the Russian people the best bet for our success over the Soviet system. Despite the fact that the U.S.S.R. remains a dictatorship, it is not and cannot be completely unresponsive to the thinking of the Russian people. They are the only ones who can—and will, if we help them—change the face of Soviet communism and help make the world a safer place in which to live.

I am not one of those who believes that communism will never change and that the U.S.S.R. will forever be the same society over which Stalin presided. My five visits to Russia since 1955 have proved to me that there has indeed been great change.

I know, too, that there is potential for much more change among a people only 5 percent of whom are members of the Communist Party, almost all of whom are educated, and most of whom—like their restless neighbors in Eastern Europe—are enough like us in their human characteristics and aspirations to be our potential allies— if we will only find some way to bring them into the mainstream of Western civilization and show them the superior system we have in comparison to the one under which they now exist.

In these circumstances, the real battle against communism will not be won by ABM systems or by how much more "overkill" we can develop. It will be won or lost—on the battlefield of ideas, of economics, of internal progress, and development and of fiscal stability. If in the process of chasing the dream—the perhaps impossible dream of nuclear invulnerability—we wreck our economy, unbalance our overall military posture, and distract ourselves from the true nature of the competition, then communism may well win by default over the forces of individual liberty, of free enterprise, and of self-determination.

In conclusion, the argument I am making is that there is a point at which the proliferation of nuclear weaponry becomes useless at best and counterproductive at worst. I explained earlier how ABM systems will have a tendency to multiply offensive weapons deployment beyond all reason, thus adding to the dilemma rather than detracting from it. I would, therefore, like to see more of our attention directed toward the nonmilitary aspects of the competition with the U.S.S.R., for that is where our real strength lies—and where the real Soviet weakness lies.

As strong as Russia is militarily, her Communist government could probably not survive the effects of a few weeks or months of a free press or freedom of speech as we know it; yet we are spending no money, no time, and no effort on strategy aimed at promoting the growth of a free press or of free speech in Russia. Perhaps such an effort would not be fruitful; but in terms of the potential benefits, it would be at least worth an effort. At least it would point us in the right direction in our efforts to undo communism, rather than up the blind alley which is being suggested by proponents of Safeguard.

As many nuclear bombs as the Soviets have, their whole economic system could be transformed by increased demands by their people for a broad system of work incentives; yet we are doing next to nothing, either in terms of brain power or money, to encourage this movement within the U.S.S.R. What is happening there in the line of economic transformation seems almost to occur despite us rather than as a result of our encouragement.

As challenging as the U.S.S.R. has become politically, scientifically, and economically, we fail to recognize and to act on the one major flaw by which the whole system might be made to crumble. That flaw is the flaw of communism itself; namely, its incapacity to offer freedom, civil liberties, and the rights of self-determination to the people without bringing about its own destruction.

If, indeed, there is such a vulnerable spot in the Soviet armor, we must direct our efforts, our talents, and our energies toward that spot. We must somehow create an atmosphere in which we can show the Russian people the benefits of our free-world institutions—material,

spiritual, social, economic, and governmental and they in turn will defeat communism for us, not by revolution, but by the constant pressure of gradual demands which, when answered, will cause Russia to outgrow her Communist system and diminish her threat to our way of life.

Contrary to popular notions of the professional anti-Communists, I picture such a development as not only possible but almost inevitable in a basically wealthy and educated nation such as Russia, if we will only stoke the fires of freedom and human rights that already reside in the hearts of the people.

Mr. President, I should like to add at this point that in my visits to Russia on 5 different occasions, I could note the differences that have accurred from year to year.

When Stalin grew to power, he grew in the midst of ignorance, want, and povetry; but that situation no longer exists in Russia. Today I would say that 95 percent, or perhaps more, of Russian adults can read and write; and they are becoming curious. They want to know what we are doing, and why it is that they do not prosper as much as we do.

As I have stated, that situation is going to continue to evolve to our advantage, and all we need to do is encourage it. I sincerely believe that the Russian people, on the whole, do not want war any more than we do. I heard on the radio awhile ago that President Nixon used almost the identical words I have been using now for the past 10 or 12 years as to the possibilities of our living side by side with the Russians, without in any manner embracing any part of their system.

It should be clear from what I have said here that my opposition to deployment of Safeguard is not intended as an appeasement of communism. I abhor it and want to see it extinguished from this planet. Actually, what I am searching for is a more effective and more realistic sort of anticommunism than "ABM-ism" or "overkill-ism."

My complaint is that the narrow, unimaginative, type of anticommunism we practice today fails even to take into account the essential nature of the cold war; namely, the fact that it is a "battle for men's minds." We not only lack a positive policy for winning the minds and the sentiments of the Russian people, but we seem to follow policies at times which deliberately and needlessly tend to drive them into the arms of their Soviet masters by isolating them and alienating them from the influences of Western civilization and current events.

As long as we limit ourselves to a narrow policy of military confrontation and arms competition with the U.S.S.R., the best we can hope for is a frustrating, costly, and highly dangerous "coexistence" with communism. At a cost of $80 to $100 billion a year this sort of perpetual coexistence with communism will mean the eventual downfall of the American economy and the American morale.

In the 25 years since the end of World War II, we have spent approximately a trillion dollars to build up our military might and to protect our territory and the territory of our allies from attack by the Communists. I feel that the tremendous overkill we now possess in the form of more than 10,000 nuclear warheads which can be delivered from submarines, aircraft carriers, underground ICBM missile silos, mobile missile carriers, and by supersonic bombers and rocket bases scattered all around the world is sufficient to insure us against a first-strike attack by anyone but an absolute madman.

Since the Safeguard ABM system is no deterrent to a madman, it does not, in my opinion, add meaningfully to the deterrent effect of the vast array of armaments I mentioned above. We should not upset our economy to set up an imaginary defense against a madman who probably does not exist—and who, if he does exist, cannot be defended against by present concepts of ABM.

THE H-BOMB CONTROVERSY AND THE ABM CONTROVERSY: AN ANALOGY AND THE LESSONS

Mr. DODD. Mr. President, more than one observer has made the point that there is a remarkable analogy between the debate surrounding the ABM decision today and the debate that raged inside the administration around the decision to build the hydrogen bomb in 1949–50.

For example, columnist Joseph Alsop has pointed out that in the debate over the development of the H-bomb in the late forties:

> The prime arguments against the H-bomb that were used by Dr. J. Robert Oppenheimer were precisely the arguments now being used by the ABM's scientist-opponents. Oppenheimer said: (a) that the H-bomb would not work; (b) that it would be inordinately expensive to develop; (c) that development would only increase the instability of the world balance of power . . . As anyone can now see, he was nonetheless dead wrong on all three points. Later he admitted as much.

Alsop later asked Oppenheimer why he has been so wrong in saying that the H-bomb would not work, and Oppenheimer replied:

> I guess I concluded it wouldn't work because I wanted it so much not to work.

In the recent ABM book which they edited and to which they contributed, Dr. Jerome Wiesner and Mr. Abram Chayes denied that there was any basic analogy between the ABM controversy and the H-bomb controversy. This is what they said:

> It is necessary to be clear about the kind of question here involved. Some people have thought it analogous to the technical issues surrounding the decision to go forward with the development of the hydrogen bomb. In that instance, it is pointed out, a substantial and respected portion of the scientific community opposed a high-priority effort to develop the H-bomb. But in the hydrogen bomb controversy the scientific issue was whether a specific design concept could *in principle* ever be developed into a workable weapon. That question could be and was resolved by additional theoretical calculations; and, in fact, though this is not generally appreciated, the original concept was demonstrated to be unworkable.

Because I thought it important to determine whether there is a valid analogy between the ABM and H-bomb controversies, I wrote parallel letters to Dr. Wiesner and Mr. Chayes, in which I posed the following question:

> Could you give me the source or sources for your statement that there was little scientific controversy over the program for production and deployment of hydrogen weapons, and that the real issue in the controversy was "whether a specific design concept could in principle ever be developed into a workable weapon"?

In addition to writing to Messrs. Wiesner and Chayes, I also wrote letters to Dr. Edward Teller and Adm. Lewis Strauss, former Chairman of the Atomic Energy Commission, asking them for their comments on the statement made by Chayes and Wiesner, on the question of whether or not there exists an analogy, in their judgment, between the ABM debate and the H-bomb debate.

I also checked back through the record of the Atomic Energy Commission and through the literature dealing with the story of the H-bomb.

My research and the replies I received convinced me that the parallel between the arguments offered against the H-bomb in the late forties and the arguments today being advanced against the deployment of the Safeguard ABM system is even more marked than Mr. Alsop indicated in his column.

Among other things, it was argued:

First, that our development of the H-bomb would escalate the arms race by encouraging the Soviets to match our development;

Second, that it would make it more difficult to achieve any meaningful agreement with the Russians on arms control;

Third, that it would make nuclear war more likely rather than less likely;

Fourth, that we should delay embarking on the H-bomb program while we sounded out the Russians on arms control; and

Fifth, that, in any case, 1 or 2 years' delay would not make any serious difference.

One need only substitute the word ABM for H-bomb to realize the amazing and frightening similarity between today's catalog of anti-ABM arguments and the 1949 catalog of anti-H-bomb arguments.

The five-page joint letter which I received from Messrs. Wiesner and Chayes in my reply to my query made no concessions, however, to the existence of an analogy between the H-bomb controversy and the ABM controversy.

Instead, they repeated their statement that "in the hydrogen bomb controversy the scientific issue was whether a specific design concept could ever be developed into a workable weapon."

They further stated that the October 29, 1949, report of the General Advisory Committee on the Atomic Energy Commission "only opposed—party on extra-scientific grounds—a crash program for the development of the 'super,' based on the design concept then available."

The statement by Dr. Wiesner and Mr. Chayes that the central issue in the hydrogen bomb controversy had to do with the feasibility of the design concept originally proposed, is in such flagrant contradiction with the public record that it

is hard to believe their error was a product of simple ignorance.

I leave it to others to draw their own conclusions from the facts and the documents I shall here set forth.

One can only hope that they were somewhat less reckless with their facts where the facts are not a matter of unchallengeable public record.

THE REAL HISTORY OF THE H-BOMB CONTROVERSY

In his reply to my letter, Admiral Strauss asserted:

> There are striking parallels between the debate on the ABM and the debate on the fusion bomb ten years ago.

Recapitulating, point by point, the arguments that were made against the H-bomb program by the General Advisory Committee scientists, Admiral Strauss added:

> These points are not in accord with the emphasis in the book [the Wiesner-Chayes book] that "the scientific issue" concerns only the feasibility of an initial design concept. Another design concept proved feasible, but it would not have been found or, if found, would not have been developed, had the opponents of the hydrogen bomb succeeded in persuading the President to declare against it as a weapon. The principle which clearly guided him—that the United States could not afford to be less well armed than a potential enemy—has a modern corollary. We cannot afford to be less well defended than a potential enemy.

Dr. Teller in his reply to me confirmed that there had been some differences over design. He said that, while it was correct that a new concept had been proposed and was eventually demonstrated to be workable, it was "an oversimplification to state, as the Wiesner-Chayes report does, that 'the original concept was demonstrated to be unworkable.'"

Dr. Teller's letter made it clear, however, that the vigorous debate in the nuclear community during the latter part of 1949, had to do essentially with the question of whether or not we should make an effort to produce the H-bomb.

That the accounts given by Admiral Strauss and Dr. Teller are basically accurate is established by the now-public record of the historic meeting of the General Advisory Committee of the Atomic Energy Commission on October 29, 1949.

The report adopted unanimously at this meeting—Dr. Seaborg was absent—agreed that "an imaginative and concerted attack on the problem has a better than even chance of producing the weapons." The GAC members, however, opposed the effort to develop the H-bomb on essentially moral grounds.

We all hope—

Read the report—

> that by one means or another, the development of these weapons can be avoided. We are all reluctant to see the United States take the initiative in precipitating this development. We are all agreed that it would be wrong at the present moment to commit ourselves to an all-out effort toward its development.

That the members of the General Advisory Committee were moved far more by moral and ethical considerations than by any scientific considerations, was further emphasized in two supplementary statements to the main report, one signed by five of the members of the Committee and the other one by two of them.

The majority supplement said in part:

> In determining not to proceed to develop the Super-bomb, we see a unique opportunity of providing by example some limitation on the totality of war and thus eliminating the fear and arousing the hopes of mankind.

The language of the minority supplement was even more imperative. Let me quote one paragraph from it:

> The fact that no limits exist to the destructiveness of this weapon makes its very existence and the knowlege of its construction a danger to humanity as a whole. It is necessarily an evil thing considered in any light. For these reasons, we believe it important for the President of the U.S. to tell the American public and the world we think it wrong on fundamental ethical principles to initiate the development of such a weapon.

Fortunately, for the free world, the attitude of the General Advisory Committee was not shared by Dr. Edward Teller, Dr. Ernest Lawrence, and a handful of other scientists. They carried their arguments to the Atomic Energy Commission and to the Joint Committee on Atomic Energy and to President Truman himself.

Their viewpoint was supported in the Atomic Energy Commission initially only by Adm. Lewis Strauss and by Gordon Dean. It was only toward the very end that they were able to enlist the support of David Lilienthal, the chairman of the Commission.

Senator Brian McMahon, of Connecticut, the Chairman of the Joint Committee on Atomic Energy, was one of the first to accept the imperative logic of the argument that we could not afford to let the Russians beat us to the H-bomb without gravely imperiling our own security. In this view, he was joined by other members of the Joint Committee.

I might say parenthetically at this point that my knowledge of the H-bomb conflict is not based entirely on the historical documentation. Both Brian McMahon and Gordon Dean were old personal friends: McMahon and I had served together in the Department of Justice, while Dean had been with me at the Nuremberg trials. And on more than one occasion when I came to Washington in 1949, McMahon and Dean discussed the matter with me and told me of their concern and of the problems they were having.

Even at the Pentagon, Secretary of Defense Louis Johnson was still disposed to question whether the Soviet Union had really exploded an A-bomb in September 1949; and Johnson, too, until the last minute, argued against the effort to make the H-bomb.

Within the State Department a battle also raged.

George Kennan, director of the policy planning staff, led the forces opposed to the H-bomb project. In a 128-page memorandum which he submitted to the Secretary of State on December 15, 1949, he argued that the Soviet Union would not deliberately initiate atomic war, and he thought the Soviet Union would not proceed with thermonuclear weapons program if we did not.

It is interesting to note, parenthetically, that Kennan had offered a quite different estimate of the Soviets in 1945, when he opposed sharing atomic energy knowledge with them. According to his memoirs, he wrote the following dispatch in December of 1945:

> There is nothing—I repeat nothing—in the history of the Soviet regime which would justify us in assuming that the men who are now in power in Russia . . . would hesitate for a moment to apply this power against us if by so doing they thought that they would materially improve their own power position in the world.

Kennan's appraisal and that of the General Advisory Committee of the Atomic Energy Commission was opposed within the Department by Secretary of State Dean Acheson, Paul Nitze, and several other key officials.

At Acheson's request, a report was prepared which concluded that we should proceed to test the feasibility of developing an H-bomb because our national security would be gravely imperiled if we did not do so. The report called for a continued effort to achieve agreement on the international control of atomic energy. But it warned:

> The necessary negotiations probably could not be completed in less than a year and a half to two years. . . . to delay an accelerated program of development for such a period in the absence of adequate assurance that work in the Soviet Union has been similarly delayed, would measurably increase the prospect of prior Soviet possession of thermonuclear weapons.

On January 27, 1950, the counselor of the British Embassy asked for an urgent meeting with Undersecretary Robert Murphy, and informed him that Dr. Klaus Fuchs, who had worked at Los Alamos from 1942 to 1946, and who possessed complete knowledge of all our thermonuclear research during that time, had admitted that he had for many years been a Soviet spy.

Against this background, on January 31, Acheson, now joined by Johnson and, reluctantly, by Lilienthal, presented to President Truman a recommendation that the United States proceed with work on the H-bomb.

This report culminated the work of a special committee of the National Security Council created nearly a year earlier under Acheson's chairmanship to consider nuclear policy.

Mr. TOWER. Mr. President, will the Senator yield for an observation?

Mr. DODD. Yes; I am happy to yield to the distinguished Senator from Texas.

Mr. TOWER. I commend the distinguished Senator from Connecticut for his historical recitation. I think it is vitally pertinent to this debate. I express, with him, the hope that all Senators will read these remarks in the RECORD. I think they give us cause for serious reflection.

Mr. DODD. I thank the Senator from Texas for his remarks. They please me very much. I have noticed that he has been listening carefully to what I have said. In my limited way, I have tried to spread on the RECORD some facts which I think ought to be called to the attention of every Senator.

There is no Member of this body who is more capable of handling facts than

the Senator from Texas (Mr. TOWER). I am pleased that he has taken note of what I have said.

To come back to my historical recitation, it was fortunate that President Truman was a leader who was singularly free of fuzzy thinking about Communist intentions. Rejecting the unanimous advice of the General Advisory Committee, and knowing that his decision would be opposed by a majority of the scientific community, Truman decided to accept the recommendation of the final Acheson-Lilienthal-Johnson paper, and to proceed immediately with the effort to produce the H-bomb.

In retrospect it is frightening to think of what might have happened if the opinion of the General Advisory Committee of the Atomic Energy Commission and of the majority of the scientific community had prevailed. For then the Soviets might have beat us to the H-bomb by as much as 3 or 4 years.

Even with President Truman's fearless and timely decision to proceed, our H-bomb was perfected and added to our deterrent arsenal only in the nick of time.

The common impression is that the United States got the H–bomb before the Soviet Union. Actually, this is not entirely accurate.

The United States exploded its first hydrogen test device on November 1, 1952, in Operation Ivy. But this was not a deliverable device.

Our first deliverable weapon was not exploded until March 1, 1954, in Operation Castle.

Meanwhile, in early August 1953, the Soviets had staged their first thermonuclear explosion, which, according to our intelligence, did involve a weapon capable of delivery.

It was thanks only to a massive effort and to the inherent superiority of American technology that we were able to pull ahead of the Soviets in thermonuclear weapons over the following years.

It is also frightening to think of what might have happened had the decision to build the H-bomb been subjected to the prolonged emotional discussion in Congress and in public that has characterized the debate of the decision to deploy Safeguard.

Hundreds of thousands of letters, I am certain, would have descended on Congress urging them not to escalate the arms race and not to squander our national resources on additional weapons of mass destruction.

Many an honorable Member of Congress, unquestionably, would have been impressed by the arguments of the distinguished scientists who composed the General Advisory Committee and would have taken the floor to argue that we should heed the advice of the majority of our scientific community.

And no one can say for certain what the outcome of such an emotionally charged debate would have been.

I do not argue against public debate.

I am all in favor of it.

But I do believe that the public debate we are today conducting would be enormously enhanced in quality if, in making our decisions for the future, we stopped to examine the lessons of the past.

That is why I have considered it important to recount the H-bomb history, with a view to determining just how much analogy there is between today's debate on the ABM and the debate that took place almost exactly 20 years ago over the decision to build the hydrogen bomb.

I believe that this review of the essential issues in the H-bomb controversy has more than passing significance in the controversy over the ABM system.

What the H-bomb controversy established is that many of the most distinguished members of our scientific community, out of the most laudable ethical motivations, are disposed to close their eyes to the harsh realities of the cold war, to credit the Soviets with a far greater degree of good faith than any reading of the record would warrant, and to persist in the dogma that restraint on our side will inevitably result in parallel restraint on the Soviet side.

The dogmatic nature of this trustfulness vis-a-vis the Soviets is amply illustrated by a statement made by Dr. Hans Bethe in an Atlantic Monthly article dealing with the Geneva test ban negotiations. Dr. Bethe said:

> I had the doubtful honor of presenting the theory of the big hole to the Russians at Geneva in November, 1959. I felt deeply embarrassed in so doing, because it implied that we considered the Russians capable of cheating on a massive scale. I think that they would have been quite justified if they had considered this an insult and had walked out of the negotiations in disgust.

This statement came from a man whose credentials include a Nobel Prize for physics and the position of chief scientific adviser to the President, a man who was a vocal opponent of the H-bomb project and who has in recent years been just as vocal in his opposition to the ABM.

To justify their naive political and ethical dogmas, scientists like Oppenheimer and Bethe frequently invoked scientific rationalizations which, in retrospect, certainly did not reflect credit on their judgment.

About the H-bomb, for example, it is reported that Hans Bethe once said:

> It cannot be made and should not be made.

It appears that, having decided that the H-bomb "should not be made," he deduced from this moral proposition the scientific conclusion that it "could not be made."

America has every reason to be proud of the accomplishments of its scientific community and of the countless benefits their collective efforts have conferred on mankind. But when scientists assume that their expertise in their own field of specialization automatically qualifies them as experts in the field of politics, they more often than not wind up by making themselves look ridiculous or, worse still, by damaging the cause they honestly desire to serve.

At the height of the debate over the H-bomb, my good friend, Senator Brien McMahon, once said to me that in his opinion Oppenheimer and his associates had gone far beyond their area of scientific competence in opposing the H-bomb on moral and political grounds. For this transgression, he said, they would suffer in the judgment of history.

McMahon's opinion turned out to be prophetic.

One of the chief lessons to be learned from the H-bomb controversy is encompassed in the two rules to which I referred in my statement of last Friday.

These are the rules:

> Rule No. 1: In assessing the potential of any important new field of technology involving new processes or systems—*half the scientists, or at least a large fraction, are usually wrong.*
>
> Rule No. 2: If a significant percentage of scientists agree, or sometimes if only one or two agree, that something new can be done—It can be.

In my statements on the ABM controversy Friday and today, I have not engaged in any numbers games or presumed to make technological evaluations. I do not feel competent to do so. But based on past experience, I believe that if 50 percent of the experts say that the ABM will not work, and the other 50 percent say it will work, then the odds are heavily in favor of the group of experts who say it will work.

With this, I rest my case.

Mr. President, I ask unanimous consent to insert in the RECORD at this point my exchange of correspondence with Messrs. Wiesner and Chayes, Adm. Lewis Strauss, and Dr. Edward Teller.

I also ask unanimous consent to insert in the RECORD the complete text of an article which appeared in Life magazine for September 6, 1954, under the caption, "Dr. Edward Teller's Magnificent Obsession."

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

MAY 20, 1969.

Dr. JEROME B. WIESNER,
Massachusetts Institute of Technology, Cambridge, Mass.

DEAR DR. WIESNER: In the study of the ABM which you and Mr. Abram Chayes prepared at the request of Senator Kennedy, the opening overview makes the point that there is no real analogy between the ABM debate and the H-bomb controversy of the late forties. This point is made in the following passage of your study, which appears on page 14:

"It is necessary to be clear about the kind of question here involved. Some people have thought it analogous to the technical issues surrounding the decision to go forward with the development of the hydrogen bomb. In that instance, it is pointed out, a substantial and respected portion of the scientific community opposed a high-priority effort to develop the H-bomb. But in the hydrogen bomb controversy the scientific issue was whether a specific design concept could in principle ever be developed into a workable weapon. That question could be and was resolved by additional theoretical calculations; and in fact, though this is not generally appreciated, the original concept was demonstrated to be unworkable. As a result of this subsequent analysis, a new approach was developed which was found to be feasible, first by theoretical and laboratory studies and ultimately by test explosions. The program for production and deployment of hydrogen weapons, about which there was little scientific controversy, did not go forward until these theoretical issues had been resolved."

Because I think it is important to determine whether or not there is a valid analogy, between the ABM controversy and the H-bomb controversy, I had planned to ask

certain questions of you and Dr. Teller during the course of last week's hearing. As matters turned out, there was not time for these questions.

I am now, therefore, taking the liberty of addressing to you by letter the basic question which I planned to ask of you at the hearing: "Could you give me the source or sources for your statement that there was little scientific controversy over the program for production and deployment of hydrogen weapons, and that the real issue in the controversy was "whether a specific design concept could in principle ever be developed into a workable weapon?"

I would be grateful if you could let me have your reply to this question by immediate return mail.

Sincerely yours,

THOMAS J. DODD.

(NOTE.—Parallel letter sent to Mr. Abram Chayes.)

LAW SCHOOL OF HARVARD UNIVERSITY,
Cambridge, Mass., May 26, 1969.

Senator THOMAS J. DODD,
Senate Office Building,
Washington, D.C.

DEAR SENATOR DODD: This is in reply to your letters of May 20, 1969 to both of us. You ask for the sources of the remarks on the hydrogen bomb controversy in our recent study of the ABM. We are glad to learn of your interest in this matter, and will reply in this joint letter.

One source for our remarks was our own general information. Also, the contrast between the present controversy with respect to the Safeguard deployment and that concerning the H-bomb 20 years ago was illuminated for us by Dr. I. I. Rabi. He drew our attention to his testimony, as published in the A.E.C. publication "In the Matter of J. Robert Oppenheimer," transcript of hearing before the Personnel Security Board, April 12 through May 6, 1954, [Referred to below as JRO]. These hearings, together with the article "Thermonuclear Devices" by S. M. Ulam, in "Perspectives in Modern Physics" (John Wiley, Inc., New York, 1966), provide the necessary technical background for our remarks. To be specific,

(1) With regard to our statement that *in the hydrogen bomb controversy the scientific issue was whether a specific design concept could ever be developed into a workable weapon:* Gordon Dean testifies at p. 302 of JRO that "The only thing which we knew about in this field at that time [autumn 1949] was one method of approach, which unfortunately if it is to remain classified, I cannot describe . . ." Oppenheimer testifies at p. 78 of JRO that "We had in mind, but I don't think we had clearly enough in mind, that we were talking about a single design, which was in its essence frozen, and that the possibility did not occur to us very strongly that there might be quite other ways of going about it. Our report [the A.E.C. General Advisory Committee report of October 29, 1949] had a single structure in mind—or almost a single structure. . . ." For further background, see the testimony of Rabi, Norris Bradbury, and Oppenheimer on pages 454–455, 487, and 952 of JRO. It must be noted here that the GAC report only opposed (partly on extra-scientific grounds) a *crash* program for the development of the "super", based on the design concept then available. It did not predict that no hydrogen bomb could ever be produced; quite the reverse, it said that "an imaginative and concerted attack on the problem has a better than even chance of producing the weapon within 5 years."

(2) With regard to our statement that *the original concept was demonstrated to be unworkable:* Ulam's article states at p. 596 that even before the directive of President Truman in January 1950 to proceed with the planning and construction of an H-bomb, "certain doubts had arisen about the practicability of the schemes outlined during the war and elaborated in subsequent work. A very detailed and comprehensive calculation was planned to be performed on the newly available electronic computing machines of the whole course of the ignition process of the thermonuclear reaction and its subsequent course. . . . Quite independently, however, the present writer, in collaboration with C. J. Everett, had undertaken the calculation of the ignition process and the following course of the thermonuclear reaction by using numerous simplifications and guesses as to the values of certain multidimensional integrals defining the distribution of neutrons, and the products of reaction during the changing geometry of the mass of the active material. These calculations were performed with the aid of computers working by hand (i.e., with tables and desk computers). The results of this work (which are described in several reports—still classified) showed a very weak process. The mechanism of ignition, as considered in the existing schemata, was submarginal and led to disappointingly weak initial conditions, and, after a time, to decreasing rates of reactions. Shortly after that time, a calculation was similarly performed by Fermi and the present writer; we considered the 'next' problem: Assuming that in some way an ignition of the mass of deuterium—perhaps supplemented by quantities of tritium, how would the subsequent reaction proceed in a volume of deuterium? . . . The result of this work was again quite negative in the sense of showing that, most likely, even if the initial reactions were established, as in the scheme proposed, it would not continue and go anywhere near to completion or even sizable burning of the remaining material. Shortly afterward, the calculations which were proceeding in the meantime on the electronic computing machines, and in which some of our intuitive arguments were replaced by a full numerical work, were completed; and the results confirmed those of the above work."

Also, Rabi testifies at p. 456 of JRO that "The subject we discussed in the 1949 meeting, that particular thing has never been made and probably never will be made, and we still don't know to this day whether something like that will function." For further background, see Oppenheimer's letter, and the testimony of Oppenheimer, Dean, and Hans Bethe, on pages 20, 251, 305, and 330 of JRO.

(3) With regard to our statement that *there was little scientific controversy* about the program for production and deployment that went forward after the theoretical issues were resolved: Ulam's article describes the resolution of these issues at p. 597:

"Some new combinations of ideas had to appear before the successful thermonuclear device could be designed. A Los Alamos report by Teller and the present writer outlined a new approach. The theoretical estimates and the subsequent calculations based on this scheme were far more promising; and, as is well known, successful H-bomb designs were produced and tested quite soon after the appearance of these new ideas, thanks to energetic and imaginative teamwork of a whole group of Los Alamos physicists. Subsequently, numerous technical improvements in sizes, weights, etc., were made by scientists at both Los Alamos and at Livermore."

We do not know of anyone who, after these developments, doubted on scientific grounds that a workable thermonuclear weapon could be produced and deployed. Indeed, Oppenheimer testifies at p. 248 of JRO that even before the Eniwetok test, he had informed the President that "although you could not be certain of the performance of any one design, it was virtually assured that this (a thermonuclear explosion based on the Ulam-Teller concept) could be done." For further background, see the Oppenheimer letter and testimony by T. K. Glennan and Dean on page 19, 255, and 304–305 of JRO.

We should perhaps emphasize that by "scientific controversy" we mean controversy on technical scientific issues. Scientists, like other citizens, have had and expressed a wide range of opinions on the political, ethical, economical, and strategic implications of the hydrogen bomb and other military systems. We do not think it is fruitful to speculate on possible analogies among the positions that scientists have taken on such non-scientific issues.

It may be useful if we state again our views on why there is no real analogy between the scientific or technical aspects of the H-bomb and the ABM controversies. There was a fundamental uncertainty about the H-bomb in 1949 and 1950. Oppenheimer expressed these doubts in a letter to J. B. Conant on October 21, 1949 (printed at p. 242–3 of JRO) as follows: "I am not sure that the miserable thing will work, nor that it can be gotten to a target except by ox-cart." And Rabi testifies at p. 454 of JRO that "We didn't even know (in October 1949) whether this thing contradicted the laws of physics. . . . It could have been altogether impossible." However, once calculations showed that an H-bomb could be made to work and could be carried in an airplane, there was no doubt of its military effectiveness.

In contrast, there is no *fundamental* scientific uncertainty about the individual components of the Safeguard system. We know that an ABM missile can intercept and destroy a *single* re-entry vehicle fired *under test conditions.* As far as workability is concerned, the technical issues that the Congress must consider in its deliberations is of a far more practical nature: Can an ABM system, consisting of large numbers of missiles, radars, and advanced computers, and manned by military personnel, protect us with high reliability against a surprise attack of many ballistic missiles, using unforeseeable penetration tactics, in an environment complicated by offensive and defensive nuclear explosions? As our report shows, there is very grave doubt that it can.

We would be happy to discuss these matters further with you in Washington, at your convenience.

Very truly yours,

ABRAM CHAYES
JEROME B. WIESNER.

MAY 20, 1969.

Dr. EDWARD TELLER,
Livermore Laboratory,
Livermore, Calif.

DEAR DR. TELLER: Because I think it is important to know whether or not a valid analogy can be made between the ABM controversy today and the H-bomb controversy of the late forties, I had planned to ask questions on this point of you and Dr. Wiesner during the course of last week's hearings. As matters turned out, there was no time for these questions.

I am now, therefore, taking the liberty of addressing to you by letter the basic questions which I planned to ask of you at the hearing.

In the study of the ABM which Dr. Jerome Wiesner and Mr. Abram Chayes prepared at the request of Senator Kennedy, the opening overview makes the point that there is no real analogy between the ABM debate and the H-bomb controversy of the late forties. This point is made in the following passage of the study, which appears on page 14:

"It is necessary to be clear about the kind of question here involved. Some people have thought it analogous to the technical issues surrounding the decision to go forward with the development of the hydrogen bomb. In that instance, it is pointed out, a substantial and respected portion of the scientific com-

munity opposed a high-priority effort to develop the H-bomb. But in the hydrogen bomb controversy the scientific issue was whether a specific design concept could in principle ever be developed into a workable weapon. That question could be and was resolved by additional theoretical calculations; and in fact, though this is not generally appreciated, the original concept was demonstrated to be unworkable. As a result of this subsequent analysis, a new approach was developed which was found to be feasible, first by theoretical and laboratory studies and ultimately by test explosions. The program for production and deployment of hydrogen weapons, about which there was little scientific controversy, did not go forward until these theoretical issues had been resolved."

Does the above quotation in your opinion constitute an accurate description of what was involved in the H-bomb controversy? If it does not, I would be grateful if you could provide me with your own account of the H-bomb controversy.

I would also like to ask whether you see any analogies between the current debate over the ABM in the scientific community and the previous controversy over the H-bomb within the scientific community in the late forties.

I would be grateful if you could let me have your reply to these questions by immediate return mail.

Sincerely yours,

THOMAS J. DODD.

(NOTE.—Parallel letter sent to Admiral Lewis L. Strauss.)

UNIVERSITY OF CALIFORNIA,
Livermore, Calif., May 22, 1969.

Hon. THOMAS J. DODD,
U.S. Senate,
Washington, D.C.

DEAR SENATOR DODD: Thank you for your letter of May 20. Your questions are put in that kind of clear language which makes it relatively easy to give an answer, even though the subject is somewhat involved and even though secrecy restrictions still prevail.

The statement which Wiesner and Chayes make concerning the development of the hydrogen bomb on the 14th page of their ABM study, is much too short to bring out all relevant points of that story. A somewhat more complete description is the following:

At the end of 1949, after the first successful Russian test of an atomic explosion, a question was raised in the General Advisory Committee of the Atomic Energy Commission whether or not great emphasis should be placed on the development of a thermonuclear explosive. The General Advisory Committee, whose members at that time were familiar with the plans for the hydrogen bomb, made a negative recommendation based on the argument that there was no need for further increase of the explosive power of our nuclear weapons, and also based on the argument that decision of an accelerated development on our part would have the effect of stimulating a corresponding Russian development. In the fall of 1949 the General Advisory Committee did not express any clear doubt concerning the feasibility of the hydrogen bomb.

In early 1950 President Truman decided in a manner contrary to the recommendation of the AEC, which in turn was based on the recommendation of the General Advisory Committee. President Truman issued the instruction to proceed with the completion of the work on the hydrogen bomb. Unfortunately, this instruction gave the erroneous impression that all basic problems concerning the hydrogen bomb had been resolved at that time.

After President Truman's decision, members of the General Advisory Committee, together with many other scientists, started to raise questions concerning the feasibility of the hydrogen bomb. These questions were justified insofar as serious doubts indeed remained as to the possible functioning of the original design.

In the course of the next year confidence in the original design continued to decline. Security does not permit me to give you a complete story but I may state that the words used in the Wiesner and Chayes report "the original concept was demonstrated to be unworkable" is an oversimplification.

It is correct to state that a new concept was proposed and was eventually demonstrated to be workable.

It is of some interest to state that a short period before the actual test in 1952 some of the most influential opponents of the hydrogen bomb, who had agreed that the new concept was probably feasible, proposed that the test be cancelled. They hoped for an agreement with Russia to renounce a test of the thermonuclear bomb. It should be also recalled that the first Russian big thermonuclear explosion occurred in 1953, less than one year after our own test.

Finally, it must be remembered that the success of the hydrogen bomb contributed to the interest in the development of the intercontinental ballistic missile since it became possible to expect that such missiles could become effective even if they were not very accurate. I understand that in the considerations of the von Neumann Committee which led to our first effective plans on ICBM development, Dr. Wiesner participated. I believe that Dr. Wiesner is correct in stating that there was little controversy concerning the production and deployment of hydrogen bombs.

With this historical review in mind I can now turn to the second question, whether I see any analogy between the current debate over the ABM in the scientific community and the previous controversy over the hydrogen bomb.

Analogies are always incomplete. However, it appears to me that some analogies do exist.

In the first place, the original recommendation of the General Advisory Committee which stressed that a U.S. development may trigger a Russian effort, appears to be analogous to present claims that our ABM deployment would stimulate the arms race. This analogous approach on the part of some scientists is reinforced by the proposal of 1952 to abstain from the testing of hydrogen explosives by mutual agreement.

The analogy is less clear as far as the objective situation is concerned. In the hydrogen controversy the Russian development lagged behind the U.S. work by so short a period that one can hardly claim that the Russians would have abstained from the development had we withheld our own effort. In the case of the ABM debate it is known that the Russians have already deployed some ABM defenses. A claim made by Drs. Wiesner and Chayes that the Russian deployment is imitative can hardly be maintained, since so far we have not deployed a defensive system. The analogy therefore holds insofar as in both cases the assertion that American abstention would have prevented a Russian effort is incorrect. The analogy is incomplete, however, since in the case of the hydrogen controversy the Russians followed us in a short time period, while in the ABM deployment they appear to be ahead of us.

Wiesner and Chayes are correct in claiming that the analogy is far from complete, in that during the hydrogen bomb controversy the question could be answered on the basis of calculations followed by a test, while in the ABM case the functioning of a much more complicated system is in question. This circumstance emphasizes the point that the ABM debate may indeed be less easily resolved on the basis of conclusive evidence.

On the other hand, I seem to notice some analogy in the fact that in the ABM case a major portion of the scientific community is assuming that a technical development is not feasible, while a smaller number of scientists who are more closely connected with the actual problems have a more positive view of future technical possibilities. Whether or not the negative judgment of numerous scientists is connected with their wishes to limit the competitive development of arms is a question where any statement will probably be based on opinion rather than on proof.

I hope that you will find the discussion given above responsive.

I also should like to express my sincere gratitude for having created the opportunity for me to appear before Senator Gore's Committee. I share your regret that the discussion before this committee was cut short.

Sincerely yours,

EDWARD TELLER.

WASHINGTON, D.C.,
June 3, 1969.

Hon. THOMAS J. DODD,
U.S. Senate,
Washington, D.C.

DEAR SENATOR DODD: This is in reply to your letter of May 22nd concerning the ABM hearings and, more particularly, the book by Professors Wiesner and Chayes, written at the suggestion of Senator Edward Kennedy. The book attacks the proposal to deploy a specific system designed to afford a measure of defense against ballistic missiles.

In their preface, the authors state their conclusion that there is no need to deploy the system "at this time". For what could be the fatal significance of these three words, see sub-paragraph (j) below.

There are striking parallels between the current debate on the ABM and the debate on the fusion bomb ten years ago. The authors' state that "For far too long they [presumably decisions in such matters] have been made largely behind closed doors." Most certainly, this was not true of the fusion bomb issue which was vigorously debated in the press as well as before the President. The argument by the opponents of the fusion bomb development was heavily weighted, in numbers of speakers and writers and was well organized, just as in the case of the opposition to the ABM today. The debate continued into the period after President Truman's decision on January 31, 1950, with the effect of persuading some men not to work on the project.

Professors Wiesner and Chayes contend that ". . . in the hydrogen bomb controversy the scientific issue was whether a specific design concept could *in principle* ever be developed into a workable weapon."

Thus stated, they have speciously narrowed the issue to design. In fact, the arguments advanced by scientists opposed included "workability" (i.e., the design concept) and other scientific issues as well as military and political differences of opinion in the scientific community.

In preparing this letter, I have reviewed the Report made by the General Advisory Committee to the Atomic Energy Commission and statements of its members as individuals plus the views of other prominent scientists of the day. As you know, the Report of the General Advisory Committee was not unanimous in opposing the development, although the Commission was informed that it was. An absent member had expressed his opinion in a letter written in 1949 which remained unknown to the Commission until revealed five years later.

The reports and statements have not been declassified although participants have publicly discussed them with some freedom over the years so that it is possible to say that the following issues concerning the fusion bomb, in opposition to its development, were

presented by a number of members of the scientific community:

(a) The statement above-mentioned by Professors Wiesner and Chayes that the original concept was unworkable.

(b) The strategic military value of such a weapon was questioned.

(c) The economical alternative to fission weapons was questioned.

(d) The "ethical principle" that a fusion bomb was morally worse than a fission bomb was asserted. [On the moral issue, the late Senator Brien McMahon of Connecticut, then Chairman of the Joint Congressional Committee on Atomic Energy, stated that he could see no moral dividing line between a big explosion causing heavy damage and many smaller explosions causing equal or greater damage.]

(e) It was stated that there was no foreseeable non-military applications of fusion. [Beneficial spin-off is frequently cited today as a result of research into unexplored areas, e.g., our Space program. Our new ability to make harbors, canals, reservoirs, and other engineering works with little or no objectionable radioactivity is due to the development of fusion explosives.]

(f) The danger of global pollution was cited. Some opponents of the fusion bomb asserted that the detonation of a small number, "perhaps 10", might pollute the earth's atmosphere. [The estimate was subsequently raised to 500 to 50,000.]

(g) Doubt was expressed that the Russians could produce an H-bomb within a decade, which was to say, not before 1959. [We now know from Kurchatov's biography that the Soviets were at work on the fusion bomb at least as early as we were. They had their own very competent scientists and the advantage of espionage by Fuchs and other traitors in our laboratories. The best evidence is that they tested an H-bomb in August of 1953.]

(h) The pseudo-military judgment was expressed that if the Soviets should ever make and use the fusion bomb against us, our large stock of fission bombs would be adequate reprisal.

(i) The statement that it was quite likely that through leaks, our own research and development would stimulate and materially assist a corresponding Russian development.

(j) And finally, that our overall national position would be weakened, not strengthened, by committing ourselves to such a program "at this time." This phrase, which also appears in the Wiesner-Chayes preface, is worthy of note for, as matters turned out, there was *no time left* in 1949–50. Had the President not made the decision to proceed with the development of the H-bomb, the Soviets, being well on their way to it, would have had it ahead of us. Had they then, relying on our unilateral renunciation, decided not to reveal their hand (as has been their custom with other developments) by refraining from testing or by testing only to prove a small hydrogen component, we would have known nothing of their success and their qualitative superiority until a possible collision. By that time, it would have been too late for us. *"At this time"* would have been a policy of fatal procrastination.

These points are not in accord with the emphasis in the book that *"the* scientific issue" concerns only the feasibility of an initial design concept. Another design concept proved feasible, but it would not have been found or, if found, would not have been developed had the opponents of the hydrogen bomb succeeded in persuading the President to declare against it as a weapon. The principle which clearly guided him—that the United States could not afford to be less well *armed* than a potential enemy—has a modern corollary. We cannot afford to be less well *defended* than a potential enemy.

Faithfully yours,

LEWIS L. STRAUSS.

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DR. EDWARD TELLER'S MAGNIFICENT OBSESSION: STORY BEHIND THE H-BOMB IS ONE OF A DEDICATED, PATRIOTIC MAN OVERCOMING HIGH-LEVEL OPPOSITION

(By Robert Coughlan)

From the testimony *In the Matter of J. Robert Oppenheimer* and the miles of comment on it in the press, it is well known that at the end of 1949 a great secret debate occurred in the government and among the atomic scientists about whether this country should try to build the hydrogen or "super" bomb; that Dr. Oppenheimer and the strong faction he led opposed and temporarily prevented it; and that another, smaller faction defeated them with the result that the H-bomb was achieved in 1952—barely nine months before the Russians fired a hydrogen device of their own.

Yet throughout these critical events, with the world balance of power and perhaps the political fate of mankind hinging on the outcome, the leading protagonist remained mostly invisible. Lately, it is true, Dr. Edward Teller's name has been in the papers; he is even recognized, although perhaps still not very widely, as "the father of the H-bomb." But as to who he is, where he came from and how he happened to achieve this extraordinary paternity—few even of the other actors in the drama could give a very full answer.

There have been good reasons for this. National security has required that his work be surrounded by secrecy. For reasons of his own Teller has welcomed anonymity. He still would very much prefer it. But now that the H-bomb is an accomplished fact, and now that the Oppenheimer affair has dragged Teller from the wings to a share of the spotlight, neither set of reasons is as valid as before. He has therefore given his cooperation during the preparation of this article—with the request that he not be given too much credit.

Very well: it can be said at once that many people at Los Alamos and Washington deserve a substantial share of it. Teller's role nevertheless was unique, indispensable and decisive. Without it the chances are quite strong that the U.S. would not have the H-bomb in deliverable form today. In that event, in the well-informed judgment of President Eisenhower, "Soviet power would today be on the march in every quarter of the globe." Teller not only produced the brilliant idea which converted the H-bomb from a monstrous "gadget" to a versatile weapon. He also, by an almost fanatic determination, kept the idea of an H-bomb from dying of pure neglect.

And among all the improbable events that led to this improbable creation, Teller's obsessiveness has struck some people as the most farfetched. An old friend said a few weeks ago, "I still don't understand it. Edward's monomania about the H-bomb simply leaves me mystified—it was so out of character with everything he had been. He was always so interested in everything. His trouble was *lack* of concentration on any one problem. Then this thing hit him and he seemingly couldn't let loose of it."

Teller's obsession, as it became fully developed, was fed from many sources: by his childhood and youth in Europe, by his personal philosophy, his political beliefs and by innate traits of character. A different mixture would have produced a different result: The key ingredient of the H–bomb is not, therefore, a certain unmentionable combination of ingredients. It is, instead, the even more complex compound comprising Edward Teller. He cannot be defined, but at least he can be described.

Physically and temperamentally he has little in common with the popular image of the calm, detached, essentially impersonal Great Scientist. His angular face is animated and his large blue eyes, under massive and expressive eyebrows, are alert, intent and often twinkling with humor. He is cheerfully pragmatic and eloquently witty, with an unabashed appreciation of his own jokes. His laughter begins from deep inside, shaking him as if he were in an incipient fit, and rises in a series of choking, half-shattered yelps until everyone within a hundred yards is made aware that Teller has just said or heard something entertaining. He is also a pianist, a poker player, a rhymester, a raconteur, a mathematician, and an avid ping-pong player and mountain hiker despite the loss of his right foot. This occurred when he was 20 and, as a student in Munich, was competing in the local sport of jumping off moving streetcars; he slipped under a wheel, and the foot had to be amputated. His limp is on the order of his accent—only enough to add novelty—and is no impediment as he lopes along with his air of purposeful energy, his dark hair and eclectic clothing always a little disarrayed, emanating a diffused human warmth and an attentive interest in whomever he meets.

By common agreement among his colleagues he is a genius. He not only knows a tremendous amount, seeming to remember everything he has ever learned, but is able to correlate his information on the run. Dr. Maria Mayer, a physicist and a personal friend of long standing, recalls the first time she was ever really awed by Teller's mind. She had joined the Manhattan District and was asked to calculate the chemical properties of a certain substance. But this required knowing the mechanical properties of its molecules. "They could be measured, but that would have taken several months. So someone said. 'Let's get Teller in and make him *guess* the data.' We got him into a room and locked the door, so no one else could get at him, and he asked questions and did some figuring at the blackboard. He got the answer in about two hours, not entirely accurately, of course, but—as we found out when we got around to verifying them—close enough for the purpose." "There is no one who equals him for sheer speed of thought," Dr. James Arnold of Chicago says. "There *may* be better scientists, but none more brilliant. You always find him a thousand feet ahead of you."

Teller's mental atheleticism, although the flashiest part of his equipment as a practicing genius, is far from being the most important part. Most of his calculations are not quite accurate—not because he lacks respect for accuracy but because he lacks the patience to spend his own time rounding off the figures. A friend says, "What Edward can't carry in his head and solve in his head, he doesn't want to bother with." He dislikes routine and method whether they affect him personally or professionally. He is unhappy and ill at ease under any imposed disciplines. This maverick streak, combined with intense gregariousness and even more intense intellectual curiosity, has given his genius some striking twists and some extra dimensions.

For instance, although Teller is one of the world's greatest theoretical physicists, he has published nearly all of his many scientific papers with collaborators. Dr. Frederic de Hoffmann, who has been his deputy and closest associate at Los Alamos, has described how this works: "Edward isn't the cloistered kind of scientist. He gets his ideas in conversation and develops them by trying them out on people. We were coming back from Europe on the *Ile de France* and I was standing in the ship's nightclub when he came up and said, 'Freddie, I think I have an idea.' It was something he'd just thought of about magnetohydrodynamics. I was a bachelor then and I'd located several good-looking girls on the ship, but I knew what I had to do, so I disappeared and started working on the calculations. I'd get something finished and start prowling on the deck again when Edward would turn up out of the night and we'd walk the deck together while he talked and I was the brick wall he was bouncing these things off of. By the end of the trip we had a paper. He'd had the ideas, and I'd done some solving of equations. But he in-

sisted that we sign in alphabetical order, which put my name first."

De Hoffmann's account is overly modest—he is a brilliant physicist in his own right—but the episode illustrates Teller's general method. He is a conceptual thinker, or, as Dr. Luis Alvarez of the University of California says, "an 'order of magnitude' man. That's his language. He's like the architect who likes to make the big drawing, the broad sketch, and not worry himself about the plumbing details."

This kind of thinking almost defines the traditional and proper role of theoretical physics, as distinguished from experimental and applied physics. The theoreticians, a small aristocracy of dealing purely in ideas, tend to regard the toilers in the latter fields as exceptionally well-educated engineers, or sometimes as mere "gadgeteers." Teller is by trade and at heart a theoretician and takes the universe for his province. But at the same time he has strong gadgeteering instincts. The result is that he is interested in everything. He has a faculty for entertaining many ideas, consequential and otherwise, at the same time, and for being almost equally fascinated by all of them. He is intellectually insatiable: as a friend has said, "All anybody has to say to Edward is, 'We've got a problem here, we need you,' and—zip! he's into it. It's helpfulness, plus maybe vanity, but mostly just curiosity."

Not all—in fact, not even most—of Teller's ideas are good, and he is often the first to recognize their flaws, interrupting himself in mid-flight to strike himself on the forehead and exclaim, "No! No! I'm an idiot!" But mistakes do not inhibit him. He likes to quote the dictum of Niels Bohr, the great Danish physicist, that, "An expert is a person who has found out by his own painful experience all the mistakes that one can make in a very narrow field." Teller succeeds, not only by the high average level of his ideas, but by producing them in unparalleled volume, thereby making his mistakes rapidly and becoming more and more expert. But until he or someone else can demonstrate that an idea is wrong he is infatuated with it. He is, moreover, intellectually aggressive, stubborn, and competitive. An idea is, for him, a personal antagonist which he conquers with an almost physical satisfaction.

His personal absorption in a problem or idea has a way of enveloping everyone with whom he happens to be, carrying them along, sometimes reluctantly, in the torrent of his enthusiasm. At the University of Chicago, where he taught for several years, his fellow physicists now measure enthusiasm in "Tellers," with Teller himself, of course, being the basic criterion comparable to the velocity of light. Degrees of enthusiasm are measured in millionths of "Tellers," called "micro-Tellers."

Teller is at the same time a philosopher, a moral and thoughtful man all of whose characteristics are subordinated ultimately to an attempt to understand the universe and man's position on the speck of it he occupies. But as a philosopher, as well as a scientist, he is an activist. As a human being faced with a moral or political choice, he not only makes the choice but reinforces it, if he can, with concrete effort. More than once this habit of acting on conviction has involved him in struggles with his colleagues and has made him unpopular.

All of these aspects of Teller's nature were important in making him "the father of the H-bomb." But the crucial ingredient was his attachment to the concepts of Western democracy, specifically those of the U.S., and conversely a fear that they would be destroyed; together with, perhaps, an inner, deeper and unarticulated fear of a more personal nature. His childhood and youth in Budapest, where he was born in 1908, were lived under several varieties of political tyranny, including the Communism of Bela Kun and the facism and Admiral Horthy. The sight of dead men, the insecurity of life from week to week, became an accepted part of existence. Being Jewish, the Teller family had to bear the complex malice of anti-Semitism as well. Edward Teller remembers that, by the time he was 10, he fully understood from family conversations that someday he would have to emigrate from Hungary and make his life in a politically different climate. He understood also that "the only way I'd be able to get along would be that I should be smarter than somebody else."

It was easy for him to be smarter than somebody else in mathematics, for which he showed a precocious gift. He remembers, at the age of about 6, lying awake in bed amusing himself before sleep by such exercises as calculating the number of seconds in a year. His father, a prosperous lawyer, and his mother, the daughter of a leading banker of a nearby smaller city, were part of a polished and intellectually eager upper middle class society in which one's position reflected mental and artistic attainment. So they applauded him when, for instance, at dinner one evening his father mentioned the figure "10,000," and young Edward piped, "That's 100 times 100, isn't it?" However, pleased though he was with this sign of talent, his father felt that mathematics was not practical as a life's work and urged him to compromise on something useful such as chemistry. Consequently Edward went in 1926 to the Institute of Technology at Karlsruhe and took a degree in chemical engineering, keeping mathematics as an avocation. Meantime, also in 1926, had come the discovery known as quantum mechanics, a system of mathematically formulated principles which can be used to calculate the behavior of atomic particles. This, Teller says, "suddenly explained almost everything—in physics, chemistry, almost everything in the world that we had wondered about could be interpreted." He began applying it to the problems of chemistry, from which he was led naturally (the two sciences being inseparable) into physics. He became hybridized: a specialist in physical chemistry. He went on to Munich and thence to Leipzig for his Ph. D., to Copenhagen for further study under Niels Bohr and to Göttingen to teach. At this point the Nazis took power in Germany.

A STRATEGIC TIME

In the ironic way that evil sometimes begets good, the tyranny of Hitlerism was indirectly responsible for strengthening democracy, for it drove many of Germany's leading physicists to the West. Teller went to England and from there, with a U.S. Rockefeller grant—and newly married to his childhood sweetheart, Maria Augusta ("Mici") Harkanyi, the younger sister of his best boyhood friend in Budapest—back to Denmark to work again under Bohr. Meantime he had become friends with Dr. George Gamow, the Russian-born physicist, and when Gamow went to George Washington University at Washington, D.C., he got Teller the offer of a job as visiting professor there. Thus it happened that the Tellers arrived in this country in 1935: a strategic time in the history of physics. It was only three years later that atomic fission was discovered in Germany, and only four years before the famous "Einstein letter" to President Roosevelt which launched this country on the development of the atom bomb.

Teller, then 27, had already developed many of the characteristics that were to amaze, charm and sometimes dismay his friends in later years. Maria Mayer, who had known him in Germany, was struck even then by his "intuitive" grasp of complex problems. He was facile, gay ("pure fun," she remembers), inquisitive and restless. Instead of settling sensibly into his chair, Teller at once began to seek out other physicists for companionable argument, trained minds against which to test his teeming ideas. And it is from these years—1935 to 1941—that the earliest origins of the conceptions that went into the H-bomb can be dated. Gamow was interested in the energy production of stars, a phenomenon thermonuclear in character. He discussed it with his brilliant young friend, and together they worked out formulas for these stellar reactions. As soon as the explosive possibilities of the atom were realized, Teller's mind took a "quantum jump" to the stars: for the heat that could be released by atomic *fission* would be comparable to the heat in the interior of the sun itself, and conceivably this heat might be concentrated long enough to bring about the *fusion* of some of the very light elements, just as hydrogen is fused in the sun to form helium and in the process gives off tremendous energy. There would be no theoretical limit to the size of such an explosion.

In simplest terms this is the theory that led to the hydrogen bomb. It was not original with Teller. As a theoretical possibility it was obvious and occurred to many physicists. But for some reason no more explicable than an unusual taste in food, it aroused an intense, specific curiosity in Teller and he never stopped thinking about it. He discussed it with Gamow and his other friends in Washington, and with Enrico Fermi, the great Italian physicist—"The Pope," as he is known—who was teaching at Columbia. The monomania of the following years had begun to take root.

Yet when he was asked to join the A-bomb project—the success of which was essential to any future H-bomb development—he hesitated for a long time. Was weaponeering the proper business of science? He thought not. Was it morally right to help create such a monster? He did not know.

On May 10, 1940, the day the Nazis invaded the Low Countries, President Roosevelt spoke before the American Scientific Congress in Washington. Teller had never heard him in person and attended out of curiosity. The President said, in part, "You who are scientists may have been told that you are, in part, responsible for the debacle of today . . . but I assure you that it is not the scientists . . . who are responsible. . . . Surely it is time for our republics . . . to use every knowledge, every science that we possess . . . You and I . . . will act together to protect and defend by every means . . . our science, our culture, our American freedom and our civilization." As the President talked, Teller began to feel that Roosevelt was speaking directly to him, answering all the questions that had been troubling him. He left George Washington the following year to join Fermi at Columbia and, when the uranium pile project that Fermi supervised was moved to Chicago, he moved with it. Later on he went to the University of California at Berkeley, where a well-known physicist of about his own age, Dr. J. Robert Oppenheimer, was assembling a group to do theoretical studies on the A-bomb. He returned to Chicago briefly and then, when Oppenheimer had established the central laboratory at Los Alamos, was among the first to join him there.

During his first conversations with Oppenheimer they had talked about the possibilities of a thermonuclear weapon, and Oppenheimer had seemed as interested by the idea as Teller himself. At Berkeley the theoretical group did preliminary studies on fusion and, as Oppenheimer has testified, "it excited us, and it seemed to make even more necessary that we understand what this was all about." Accordingly Teller went into the Manhattan District with the impression that the "super bomb," as it soon was called, would be given a high priority. And actually some of the first installations at Los Alamos were for the benefit of further studies on it. However, as Oppenheimer has said, there was "the very immediate job of getting some weapons into the places where they [were] needed," and until the A-bomb problem could be solved, few but Teller were inclined to give much

attention to the more formidable problem of the super. Teller at first tried to suppress his impatience but could not. The result was the first of what became a series of fission-fusion reactions between him and his colleagues.

He had been assigned to Los Alamos' theoretical division, headed by his friend Dr. Hans Bethe, Cornell's great physicist, As Bethe has testified, ". . . I hoped to rely very heavily on him to help our work in theoretical physics. It turned out that he did not want to cooperate. He did not want to work on the agreed line of research. . . . He always suggested new things, new deviations. So that in the end there was no choice but to relieve him of any work in the general line of the development of Los Alamos, and to permit him to pursue his own ideas entirely unrelated to the World War II work. . . ."

Teller was transferred to the F Division where Enrico Fermi presided over "advanced development." There, with Dr. Emil Konopinski and a few others, he devoted himself during the rest of the war to the super—to "my baby," as he had begun to call it. And by the end of the war he and his group had succeeded in working out some of its most intricate problems. He believed—as he was to testify later—that a concerted effort on the part of the other senior scientists could dispose of the rest by 1947. He had been led to suppose that this would occur: that once the A-bomb had been tested successfully, the great human and technical facilities of Los Alamos would converge on the super.

Instead, to his great dismay, after Hiroshima he found the laboratory disintegrating. One Los Alamos scientist remembers, "I was away for several months and got back after Hiroshima. There was a terrible sense of shock. I didn't recognize anybody. Everyone was wrapped up in petitions for world government, disarmament, internationalizing of the atom, and so forth." To this emotion, which Teller to some degree shared, there was, of course, added the normal reaction that affected scientists as well as GIs: the feeling that the war was over and it was time to get back home and pick up the threads of old lives. Teller appealed to Oppenheimer for help, but he was among the most eager to leave. At last, with great reluctance, Teller decided to join the exodus himself.

THIS FABULOUS MONSTER, RUSSIA

Early in 1946 he called a meeting of the leading members of the Los Alamos staff to summarize for them all that he and his associates had learned—a meeting known as "The Final Conference on the Super." Then, with Mici and their young son Paul, he drove to the University of Chicago, where he had been offered a job at the new Institute for Nuclear Studies. Fermi and many of his other old friends were there. The atmosphere was personally and scientifically congenial, and Teller tried hard to adapt himself to the peaceable pursuits of teaching and pure science.

For a while he succeeded. Additional "new things, new devitions" kept him embroiled in a self-renewing welter of projects, each requiring a collaborator or two, so that he was always enormously busy. With equal energy he plunged into the extracurricular aim of all the scientists who had contributed to the A-bomb; to make the atom peaceable and productive and—it was still possible then to hope—to use it as a foundation on which to raise a supernational authority, the beginnings of a real world government. Teller was a leading member of Union Now and Atlantic Union and a prolific contributor to the *Bulletin of the Atomic Scientists*, published in a basement room at the university. He endorsed the Acheson-Lilienthal report (written largely by Oppenheimer) who, became the basis of the so-called "Baruch Plan" by which this country attempted to bring the atom under international control. And in mid-1948 he wrote, "I believe that we should cease to be infatuated with the menace of this fabulous monster, Russia . . . We must work for something. We must work for world government . . . [and] concentrate for the time being on establishing common government with our friends and potential allies."

Nevertheless, the optimism he professed was qualified with private fears. Even during the war he had mistrusted the Russians. There were stories his parents told of oceans of men sweeping across the frontier during World War I, dying and endlessly replaced. The native prejudice faded when he grew up and traveled in the world, and, he recalls, he regarded Soviet Communism as "an experiment of interest and possibly of some merit." But the purge trials disillusioned him.

He believed in the ideals that were occupying so many of his colleagues, but he saw their attainment becoming increasingly unlikely while war became increasingly likely. It seemed to him that the way to prevent war was to arm this country beyond challenges with A-bombs and, if possible, with the H-bomb. The latter would deprive the Communist nations of their only advantage, their huge manpower, by making it impossible for them to mass their troops for 'human sea" breakthroughs. Possibly it would means the end of all mass armies, conceivably even the end of major wars. The result of this introspection led him to return to Los Alamos—"to do something I knew about"—at first for short periods as a consultant and finally on a leave of absence. This was 1949.

The same intuitive, synthesizing grasp of complexities that made Teller a genius in his profession seems to have been operating this time in his comprehension of world affairs. For 1949 was a decisive point in modern times. That summer the Russians exploded an atomic bomb, shattering the U.S. monopoly on which the security of the Western world was largely built.

"THE REASONS MADE ME MAD"

President Truman, reporting the Russian achievement—which had not been expected for years—to the National Security Council, finished with the simple but comprehensive question, "What do we do now?" The answer in part, was to junk the "economic budget" and put the nation "in situations of strength" throughout the world. But another part of the answer lay in the super. Could it be built? If so, should it be? And at this point the sense which had haunted the atomic scientists ever since Hiroshima asserted itself in one of the most startling decisions ever made by a sovereign and threatened government. The AEC's General Advisory Committee, made up mostly of leading physicists and chaired by Dr. Oppenheimer, recommended that then and during an indefinite future there should be *no* program on the super: partly because of technical difficulties but chiefly because they felt that the super would be an immoral weapon. And as for the Russians? Their atomic science "imitated" ours, so the reasoning went, and if we did not develop it, neither would they. The AEC commissioner supported these views of their Advisory Committee: not once, but twice they rejected the super.

The decision was, of course, a very heavy blow to Teller. Then his disappointment turned to pugnacity. "The reasons they gave just made me mad," he says. The technical difficulties seemed to him to be no different in kind or much different in degree from the normal routine of scientific effort. "A scientific invention," he says, "consists of six (or some number) ideas, five of which are absurd but which, with the addition of the sixth and enough rearrangement of the combinations, results in something no one has thought of before." He felt that the way to solve the technical problems of the super was to work on them, that sooner or later the missing "sixth idea" would emerge. As for the moral argument, Teller was as deeply conscious as anyone of the terrible possibilities of the H-bomb, but he felt that moral and political judgements were not properly the concern of science. "The important thing in any science," he has said, "is to do the things that can be done. Scientists naturally have a right and a duty to have opinions. But their science gives them no special insight into public affairs. There is a time for scientists and movie stars and people who have flown the Atlantic to restrain their opinions lest they be taken more seriously than they should be." However, Teller could do very little to make his own opinions effective. The decision had been made in Washington and it would have to be unmade there.

Lewis Strauss, who had been the only dissenter from the decision in the AEC, and Senator Brien McMahon, chairman of the Joint Committee on Atomic Energy, together set about unmaking it. McMahon wrote to the President outlining fully the case for the super and called on him for personal argument. Among some members of McMahon's committee there was talk of bringing impeachment proceedings if the final decision was negative. The President appointed a special subcommittee of the National Security Council, made up of Secretaries Acheson and Johnson and AEC Chairman Lilienthal, to advise him what to do. Strauss, who had been equally busy, became so discouraged at one point that he went to a bungalow his mother-in-law leased at the Beverly Hills Hotel and amidst the incongruous glitter of this Hollywood showpiece searched his conscience during the Christmas season. One night he received a call from the hotel lobby. It was Senator McMahon, who had come to assure him that he was right. Strauss had laboriously reached the same conclusion: they made plans to carry on the fight in Washington with even more vigor.

Their battle came to an abrupt end a few weeks later, but from a sickeningly unexpected cause. On Jan. 27, 1950 Dr. Klaus Fuchs confessed that he had been spying on behalf of the Russians since 1942. Fuchs had been a member of the British scientific mission to Los Alamos toward the end of the war. Moreover he had attended the "Final Conference on the Super" called by Teller in 1946. It thus could be assumed that the Russians not only knew all the wartime A-bomb "secrets," but also knew most of the progress that had been made by this country on the H-bomb.

The President's special subcommittee met and voted two to one for a crash program on the super, with Lilienthal in dissent. They took their decision to the White House, where President Truman concurred and released the announcement that afternoon.

Thus "Edward's monomania" found official sanction. Yet, at this stage, his and his allies' triumph was mainly theoretical. The work itself still had to be done, and Teller set out to enlist other physicists to help. He had already asked Oppenheimer once and been refused; now again he asked him, and was again refused, although one time Oppenheimer volunteered the names of people at Princeton who he thought could be useful. Teller tried them; all turned him down. Almost everywhere he encountered either indifference or active hostility. Early in February, at a meeting of the American Physical Society in New York, 12 of the most distinguished members issued a joint statement: "We believe that no nation has the right to use such a bomb, no matter how righteous its use. . . . Its use would be a betrayal of all standards of morality and of Christian civilization itself . . . we urge that the United States, through its elected government, make a solemn declaration that we shall never use this bomb first. This denunciation was soon followed by one from Dr. Einstein who warned that ". . . annihilation of any life on earth has been brought within the range of technical possibilities. . . . In the end there beckons more and more clearly gen-

eral annihilation." Hans Bethe wrote in the *Bulletin* that use of the H-bomb could be "compared to the warfare of Genghis Khan who ruthlessly killed every last inhabitant of Persia."

In an article called "Back to the Laboratories" in the March 1950 issue of the *Bulletin,* Teller pleaded with his colleagues: ". . . To my mind we are in a situation not less dangerous than the one we were facing in 1939, and it is of the greatest importance that we realize it . . . we must realize that democracy will not be saved by ideals alone. . . . The primary responsibility for action lies with the groups directing the policy and foreign relations of our country. To the scientist, at least, it should be clear that he can make a contribution by making the country strong. . . ."

Actually only three leading men joined him, John Wheeler of Princeton, John von Neumann of the Institute for Advanced Study, and Lothar Nordheim of Duke University. (Later, after Korea, Bethe and others turned up.) For the rest of his team he relied mainly on talented younger men. There were technical discouragements too: some of the earlier calculations were repeated more thoroughly and put the whole project in doubt. Even a year later, when the first "thermonuclear device" was approaching the test stage and someone asked Teller, "Will it work?" he had to admit that he didn't know. "But you didn't know *that* five years ago," the questioner pointed out. "True," Teller answered, "but now we don't know on much better grounds."

Moreover, even if this "device" worked, there was no way in sight of developing it into a really practicable weapon. Ordinary hydrogen atoms, although they fuse in the sun, cannot be made to do so under any conditions attainable on earth. Teller's calculations involved the use of special "heavy" forms of hydrogen called deuterium and tritium, and these had to be kept liquefied by means of cumbersome refrigeration equipment. The result was less a bomb than a "contraption," as Oppenheimer has called it, which could be carried in a ship's hold and thus conceivably be used against enemy ports, but which was too big to be carried in any airplane built or planned.

During the latter part of 1950 Dr. Stan Ulam, a Los Alamos mathematical physicist, was working on a paper on certain theories indirectly related to this problem. Teller got into a conversation with Ulam about it. Not long afterward something they had discussed touched a spark. That evening, as he and Frederic de Hoffmann were leaving the office, Teller said absently, "I think I have an idea." De Hoffmann recalls that he thought nothing of this at the time, "because, after all, Edward is always having an idea. But the next morning he came in to me and said, 'Freddie, I think I really have something. Stick some figures into it.' He told me about it and I started to work with my desk calculator. The answer came out right."

What Teller had thus casually and undramatically thought of was the missing "sixth idea" for his invention: an idea which disposed of all the technical and manufacturing difficulties and converted the "contraption" into a deliverable bomb as versatile as the A-bomb.

For technical reasons it was still desirable to go ahead with the test of the original device and this was done in May 1951. The next month the AEC called a meeting at Princeton, at which Oppenheimer presided, to examine Teller's "new concept." The result was general enthusiasm in which Oppenheimer joined, and it was decided to push ahead with a full-scale test as soon as possible.

Therein, however, as it turned out, lay an ambiguity which led to a fresh crisis in Teller's relations with his colleagues. Dr. Norris Bradbury, director of Los Alamos, and his division heads adopted a production schedule for "Mike," as the new device was code-named, which to them seemed efficient but to Teller seemed much too conservative. In the ensuing and growing disagreement, tempers were rubbed raw. Finally there was a definitive showdown in which Teller demanded that the target date for the test be moved ahead. Bradbury refused, and Teller thereupon resigned, "This is *not* a crash program," he commented bitterly to a friend. "They don't need me—I'm leaving."

Not only did he leave but, with the backing of his Washington allies, he persuaded the AEC to set up a new weapons laboratory especially designed for thermonuclear research. This was established the following year at Livermore, Calif., as an adjunct to the University of California Radiation Laboratory, which was under the direction of Teller's friend, Dr. E. O. Lawrence. The new lab contributed nothing to Mike, which was completed at Los Alamos and tested successfully at Elugelab in November 1952—by then the place barely existed as a going concern. However, to Teller that fact was unimportant. "There are three ways to encourage initiative," he has said. "One is to cut off people's heads as they do in Russia. Another is to subject people to public criticism which is impossible in such secret work as this. A third way is to set up competition. This is Livermore's most valuable function: simply to be a competitor."

At the time of the Mike blast, Teller was too busy helping at the birth of the new laboratory to attend in person, and he "saw" the explosion instead on the seismograph of the University of California. (His comment was, "That's very nice.") As for his being "the father of the H-bomb," he has said, "It is true that I am the father in the biological sense that I performed a necessary function and let nature take its course. After that a child had to be born. It might be robust or it might be stillborn., but *something* had to be born. The process of conception was by no means a pleasure; it was filled with difficulty and anxiety for both parties. My act—and my leaving—aroused the emotions usually associated with such behavior."

Teller's fission from Los Alamos was not final or complete. He made himself available for advice when it was wanted and returned from time to time for consultations, as he still does. Relations between the two laboratories are good, and there is full exchange of information and considerable visiting back and forth by staff members. Following the success of Mike, there was an effort mainly at Los Alamos, to simplify its construction still more and to develop it into a family of weapons comparable to the A-bomb family. This has been entirely successful.

Teller's work was complete. He had added in a fantastic measure to the power and security of the U.S. It had been for him a process filled with discouragements, anxieties an many painful experiences, but which at the same time stimulated his mind and emotions fully and carried with it, in the end, a deep personal satisfaction. But the story was to have a sequel which would bring him no satisfaction at all and disturb him more than almost any experience of his life. He was called upon to testify in the Gray board hearings "In the Matter of J. Robert Oppenheimer."

His emotions were extremely complex. He did not believe, in the first place, that the questions that had arisen about Oppenheimer were properly a matter for a "security" hearing which would carry with it connotations of disloyalty. On the other hand he had been increasingly disturbed by decisions and advice which Oppenheimer had given in his official capacities, which were so widely distributed as to give hm a dominating position in atomic matters and U.S. physics generally. Again and again, and not merely on the H-bomb development, he had thought Oppenheimer wrong, until at last he had begun to have very grave doubts about his judgment, not his motives. If asked, it would be his duty to say as much; but the idea was repellent to him. He knew that his own prestige was now so great that his testimony would be given much weight. To contribute to Oppenheimer's possible ruin was antipathetic to his nature, a nature which, where other human beings are concerned, is extremely compassionate.

Last April 28, in the small room at the Atomic Energy Commission building where the hearings were being held, Teller took his place as witness. Behind him, sitting on a leather davenport, was Oppenheimer, his old antagonist, a man he now deeply pitied. Teller paid tribute to Oppenheimer's talents, especially his "very outstanding achievement" as the wartime organizer and director of Los Alamos. He said moreover, "I have always assumed, and I now assume, that he is loyal to the United States. I believe this, and I shall believe it until I see very conclusive proof to the opposite." But he added in reply to the next question, ". . . I thoroughly disagreed with him in numerous issues and his actions frankly appeared to me confused and complicated. To this extent I feel that I would like to see the vital interests of this country in hands which I understand better, and therefore trust more." He also recounted the history of the H-bomb and gave his opinion that if Oppenheimer had thrown his prestige behind it the success could have been achieved years earlier. He went on to say, most damagingly, that ". . . if it is a question of wisdom and judgment, as demonstrated by actions since 1945, then I would say one would be wiser not to grant clearance."

At the close of his testimony he rose and turned to meet Oppenheimer's eyes. He stepped forward and said, "I'm sorry."

Oppenheimer answered, "You only did your duty."

They shook hands, and Teller said, "Good luck."

Oppenheimer looked at him oddly and answered, "After what you've just said, I don't know what you mean."

"And the terrible thing," Teller says in remembrance, "was that I don't think he did know what I meant." He turned away, his shoulders heavy, and limped slowly from the room.

Teller today, in the summer of 1954, is a man physically and emotionally depleted. He has worked beyond the limits of common sense, and his resiliency, although still exceptional, shows its diminution in the effortful, almost dragging quality with which he forces himself on. The emotional drain of nearly a dozen years' conflict was capped by the Oppenheimer case; only to be capped again by its aftermath. Nearly the whole community of physical scientists rallied behind Oppenheimer, attacked the recommendations made by the Gray board and the AEC, and inferentially and sometimes directly denounced those who, as Teller did, had denounced him. Some of Teller's old friends are charitably puzzled; others are bitter.

Teller, who has spent a gregarious life among the physical scientists and who has always cherished his friendships with them, has found this animosity very hard to bear. But what is more serious is the pressure of his own conscience; was he being morally and intellectually honest when he in effect condemned Oppenheimer because, he said, "his actions . . . appeared to me confused and complicated"? Had he inadvertently been guilty of endorsing what he himself feared most: intolerance, the limitation of debate, the punishment of a man for what was an honest mistake? Teller was immensely relieved when the AEC commissioners, in their review of the Gray board recommendation against reinstating Oppenheimer's security clearance, dismissed Oppenheimer's lack of "enthusiasm" for the H-bomb as immaterial.

But Teller's own role in the case has continued to trouble him.

Tired of controversy, duty and anxiety, Teller is perhaps most of all tired of weaponeering. At 46, long past the age when most men make their important contributions to physics if they have any to make, he realizes that he has been away from "basic physics" almost since he first became qualified to enter it. Sitting in his room recently at Los Alamos, where he was spending a fortnight helping on still more and newer weapons problems, he discussed what he hoped could be his future. "Everybody now wants to discover universal laws which will explain the structure and behavior of the nucleus of the atom. But actually our knowledge of the elementary particles that make up the nucleus is tiny. The situation calls for more modesty. We should first try to discover more about these elementary particles and about their laws. Then it will be the time for the major synthesis of what we really know, and the formulation of the universal law.

"It is like the difference between a specialist and a philosopher. A specialist is someone who knows more and more about less and less until at last he knows everything about nothing. A philosopher is someone who knows less and less about more and more until at last he knows nothing about everything. Physics is now too philosophical. In my work I would like to reverse the process, and to try to limit the things to be found out and to make some discoveries which may later be useful."

This unpretentious ambition is consistent with Teller's personal philosophy. He has no religious convictions: regarding the comprehension of God which is equally the goal of philosophy and physics, he has said, "I try to make a point not to talk about things I don't understand—at least the things I do not understand at all." But he is guided in ethics by the same pragmatism he brings to science: "We know a lot because we as a species have lived and behaved a lot." He finds himself most in tune with that very modest philosopher, Lao-tse. "He is not dogmatic, and he does not go in for big, universal ideas. For instance, I like what he says about failure and success, 'Failure is the foundation of success and the means by which it is achieved. Success is the lurking place of failure; but who can tell when the turning point will come?' "

THE ANTI-BALLISTIC-MISSILE SYSTEM AND THE DEFENSE OF THE AMERICAN PEOPLE

Mr. BYRD of West Virginia. Mr. President, whatever the outcome of the vote on the ABM in the Senate, it must be recognized that both the proponents and the opponents have made valuable contributions to the overall illumination of the critical problems of defense in the nuclear-missile age.

THE IMPORTANCE OF THE ABM DEBATE IN THE SENATE

The importance of extensive debate on national problems, both pro and con, was long ago recognized by the Founding Fathers of this country. In the Federalist No. 62, for example, which deals with the role of the Senate in our form of government, it is pointed out:

> A good government implies two things: first, fidelity to the object of government, which is the happiness of the people; secondly, a knowledge of the means by which that object can be best obtained.

It is here, in this extended debate on the deployment of an anti-ballistic-missile system, that men of good will, Senators who both defend and who oppose the ABM, seek to carry out the promise of the Federalist, by searching for "a knowledge of the means by which" the object of good government, "the happiness of the people," may be served.

The authors of the Federalist were also well aware that in world politics we Americans might have to deal with nations which had rising aspirations of world power. Wisely they understood that only power can check power. Their grasp of this basic and unchanged fact was stated clearly in the Federalist No. 4:

> We are not to expect that they [i.e., other nations] should regard our advancement in union, in power and consequence by land and by sea, with an eye of indifference and composure. The people of America are aware that inducements to war may arise out of these circumstances, as well as from others not so obvious at present, and that whenever such inducements may find fit time and opportunity for operation, pretences to color and justify them will not be found wanting.

How, then, should the United States "provide for the common defense" as mentioned in the Constitution's preamble, and avoid war? Again, the authors of the Federalist in paper No. 4 had an answer which seems, with a prophetic prevision, to apply to the complicated problems of defense in these, our own times. Their answer as to how best to prevent the scourge of war from reaching into the homeland of America was for the Congress to provide a situation that "consists in the best possible state of defence."

So, Mr. President, we come to the question before the Senate. What action will promote the "best possible state of defense"? I believe the answer lies in supporting the President's proposed Safeguard ABM system.

COMPARATVE UNITED STATES-SOVIET STRATEGIC MILITARY STRENGTH

Former Secretary of Defense Clark Clifford stated in his January 15, 1969, posture statement that the United States had 1,054 intercontinental ballistic missiles—ICBM's—and the Soviets had 900 ICBM's on September 1, 1968.

On March 19, Secretary of Defense Laird testified to the Senate Committee on Armed Services:

> As of today, the Soviets have in being and under construction more ICBM launchers than the 1,048 possessed by the United States.

On April 25, 1969, Secretary Laird reported the Soviet ICBM total was 1,140. This includes 1,000 ICBM's in hardened sites and 140 ICBM's on launching pads. He also said that the Soviets could have 2,500 ICBM's by 1975.

The New York Times, in an analysis of Soviet weaponry, April 14, 1969, said:

> Qualified sources say that the new evidence gathered by high-flying satellites shows that the Soviet Union has about 1,200 intercontinental ballistic missiles in place or rapidly going into place, roughly 150 more land-based ICBM's than the United States.

On April 10, 1969, the Institute for Strategic Studies, London, released a study which concluded:

> The Soviet Union must now be treated as a full equal in terms both of strategic power and of her ability to control conflict in the developing world.

Deputy Secretary of Defense David Packard, in testimony before the Senate Armed Services Committee March 20, 1969, stated:

> One of the things that impressed me very much in the studies that I have made is that we have a good deal of evidence, quite hard evidence, that the Soviet ICBM deployment and development is continuing. It was this that caused us to take another hard look as to what we should do about this ABM capability.

Fundamental to the understanding of this dramatic increase in Soviet missile is the erroneous assumption of U.S. policymakers in recent years that the Soviet Union would not seek a superior offensive capability but would only seek parity. This error imposed American assumptions on our vision of Soviet strategy. As a result the Soviets now enjoy a widening advantage. This was underlined by Deputy Secretary Packard on March 20 when he told the Senate Armed Services Committee, in analyzing charts of Soviet missile strength:

> As you can see, parity has been reached. The smaller Soviet missiles represented in this area of the chart make up the larger part of the totals. Those large missiles that have the accuracy and yield to be a threat to our Minuteman forces are projected on the larger part of the figure. They became operational in 1966 and their inventory has grown. . . . These are the large missiles on which the Soviets have flown multiple warheads. Thus, the force potentially represents a severe threat to our Minuteman.

Of special concern is the Soviet development and deployment of a very heavy intercontinental ballistic missile, the SS–9, which was unknown to the U.S. public until it was disclosed by Secretary Laird in his initial appearance this spring before the Senate Armed Services Committee. This missile carries a warhead in the range of 20 to 25 megatons, far larger than anything in the U.S. inventory. Because of its size and its accuracy, the SS–9 is regarded as a weapon designed to knock out American Minuteman ICBM's.

The present Soviet ICBM force now includes well over 200 SS–9's, and this deployment is progressing at a fairly rapid rate—particularly since December 1968. This is the missile which is projected by the Defense Department to reach possibly 500 by 1975. This missile booster can also be adapted to fire an orbital bombardment warhead. It can also be adapted to carry a multiple warhead, which the Soviets are known to have been testing.

With reference to Soviet testing, it is noteworthy that one such Soviet test into the Pacific Ocean was made public by Secretary of State Rogers on April 12, 1969. He stated that the Soviet Union had tested the multiple warhead before but that this recent test was a "longer shot."

In addition to the SS–9, the Soviets are continuing to deploy the SS–11 and the newer SS–13 model ICBM's. These carry smaller warheads than the SS–9, but the SS–13 is the first solid-fueled Soviet ICBM, and it can be developed and deployed in large numbers.

This surge in Soviet ICBM's is one of the most direct reasons for the Nixon administration's decision to proceed with the Safeguard ABM.

Then, too, the Soviets presently enjoy a clear lead in space orbital weapons.

Mr. McNamara released information in 1967 that the U.S.S.R. was developing a fractional orbital bombardment system. Mr. Laird confirmed that the Soviets were very likely deploying this system. He said:

> They are also working hard on FOBS . . . also designed to reduce warning time to our bombers so that they will not have sufficient time to become airborne. (testimony March 20)

I am told that, if these vehicles were launched into near-earth orbit on approximately 70 to 75 degrees inclination, they would bracket the United States periodically. They would then be known as orbital bombardment systems rather than FOBS. Properly deployed, a significant number, for example 100, could be in a position to attack the United States in a matter of seconds after the button was pushed in the Kremlin. This would add enormously to a credible Soviet capability to deliver a first strike against the United States.

Furthermore, in his testimony before the Senate Armed Services Committee on March 19, Deputy Defense Secretary Packard commented on Soviet submarine-launched missiles:

> We know that the Soviets have been moving ahead with a rather active program in producing Polaris-type submarines. They are now in production. They are not yet deployed as far as we know. But this gives the Soviets the possibility of launching missiles from locations close to our shores, and we are very much concerned about this threat which could reduce the ability of our bombing force to get off.

The submarine referred to here is the "Y" class, which went into production in 1968. Seven were commissioned in that year. This sub carries 16 underwater-launched, 1,500-mile range missiles. Secretary of the Navy Chafee, in his testimony to the Senate committee, referred to it when he declared:

> The Soviets are modernizing their submarine force, the world's largest. Following a period of large-scale shipyard expansion, new classes of ballistic missile submarine and nuclear attack boats are becoming operational. More of these new types have been launched than foreseen a year ago.

The Institute for Strategic Studies, London, recently pointed out that the Soviet underseas fleet now exceeds in numbers all the submarines in the fleets of the United States and other NATO nations.

The situation regarding attack submarines is critical and rapidly deteriorating. The Soviet Navy has more than a 2-to-1 numerical advantage over the U.S. Navy in this area of sea warfare, and this is a matter of concern since the attack submarine is considered to be the most effective weapon against a nuclear submarine.

The U.S. position is worsened by the age of many of the attack boats. Forty-five of the 105 attack submarines in the U.S. Navy are of World War II construction. On the other hand, I am advised that almost all of the Soviet attack submarines have been built within the last 14 years. It is these submarines that pose a direct threat to the U.S. ballistic missile-firing submarines.

Moreover, former Secretary of Defense Clark M. Clifford did not include the medium and intermediate range Soviet ballistic missiles in his 1969 posture statement assessment of the U.S.S.R. strategic inventory. The United States has no such weapons deployed against Soviet targets, whereas the Soviets have their missiles targeted against our NATO allies. Clifford credited the U.S.S.R. with 700 operational MRBM/IRBM launchers, some in hardened sites. He said:

> Evidence is accumulating that the Soviets have embarked on the development of solid-fuel missiles for medium and intermediate as well as intercontinental ranges.

British Defense Miinister Dennis Healy recently estimated that the Soviet MRBM/IRBM force now approximates 1,000 missiles.

As to bomber strength, the United States continues to lead the Soviet Union in heavy bombers—B–52's and B–58's versus Soviet Bisons and Bears—but Department of Defense figures show the United States ahead overall in bomber strength only because the Soviet Badger and Blinder medium range bombers are not credited with a strategic role. Both their threat to Western Europe and their threat to the continental United States—they are air refuelable—makes them strategic bombers.

Hence, Mr. President, not only has the military power of the Soviet Union grown more rapidly than that of the United States, but it has also rapidly overtaken the forces of the United States in new concepts and new weapons systems.

The U.S.S.R. now, for example, has whole families of military—and naval—weapons systems that the United States does not have in its inventory. Let us consider the following:

First. The large IRBM and MRBM force—1,000—is such a family of weapon systems. This force is primarily aimed at Europe and now completely pins Europe down. Generals of the U.S.S.R. have stated "we now hold Europe as a hostage."

Second. Very large—50 to 100 megaton—nuclear weapons which were tested in 1961–62 and which, it is generally conceded in unclassified literature, have been adapted for missile delivery. The United States not only has no such weapons in its inventory it has not even tested them and can only speculate as to the unique effects they may produce.

In this connection, it should be noted that the Proton satellite, according to Soviet releases, weighed some 40,000 pounds. The Proton booster, therefore, could launch very large ICBM warheads—50 megaton—or large warhead orbital bombardment systems.

Third. The Bear bomber is unique. It is the world's longest range, highest endurance bomber. It is an effective antishipping and antisubmarine attack aircraft with air-to-surface attack missiles on board.

Fourth. The ABM development and deployment in Russia is an innovation.

Fifth. The orbital bombardment system, of which the United States has no counterpart. The United States respects the treaty forbidding the use of space for weapons of mass destruction.

So, Mr. President, it is apparent that the Soviets have jumped into the lead in overall strategic missile strength. They have made optimum use of a much smaller economic base than the United States—in effect, they have been and are operating on a war economy basis.

The combined total of ICBM's, IR/MRBM's and SLM's is now estimated as 2,750 for the U.S.S.R., to 1,710 for the United States.

Meanwhile, the four-to-one U.S. lead in individually targeted warheads, which was long used by the Defense Department as a source of reassurance to the American public, was discarded by Air Force Secretary, Dr. Robert C. Seamans, Jr., in his testimony to the Senate Armed Services Committee on April 16, 1969:

> The much-quoted figure of a 4-to-1 U.S. advantage in individually targetable warheads may not be too reassuring. The 4-to-1 figure stems mainly from the bomber portion of the forces, since missile forces are rapidly approaching a 1-to-1 relationship. It was arrived at by omitting the Soviet medium bomber force from the calculations, while counting several bombs on each of our own bombers. The inclusion of Soviet medium bombers, medium-range missiles, and cruise missile submarines would bring the ratio of individually targeted warheads close to 1-to-1 with a payload advantage somewhat in favor of the Soviets.
>
> I might add that it is not enough to argue that these ratios involve relatively higher numbers—about 4,000 weapons on each side at the present time—and that only a few hundred weapons would be needed to destroy the Soviet Union. The critical factor here is not how many total weapons we have, but how many would survive a Soviet attack, and, of these, how many would penetrate Soviet defenses.

It should also be considered that Secretary Laird told the Senate Foreign Relations Committee that because of geography and the location of major centers of population and industry in Russia, as compared with the United States, the United States needs to be able to deliver six times as many warheads as would the Russians to achieve destruction "parity" with them.

It would take, Laird reported, some 1,200 one-megaton warheads to destroy 45 percent of the total population of Russia while the Soviet Union would need only 200 warheads of identical size to wipe out 55 percent of our population.

THE SOVIET STRATEGIC DEFENSE

Mr. President, the Soviets always have devoted great attention to active defense as a key component of their military policy. As Dr. D. G. Brennan, Director of the Hudson Institute, has pointed out—page 12 Adelphia Papers, November 1967:

> This heavy doctrinal bias in favor of defense can probably be traced to Russian military experience at least as far back as Napoleon. It is the Soviets who initiated ballistic missile defense deployment.

Against this background of Soviet thinking one can trace the manner in which the Soviet Union has developed strategic defense forces.

While the United States conducts a national debate over deployment of the Safeguard antimissile system, it is worthwhile noting that the genesis of the Soviet ABM system dates back from the early 1950's. With three generations of ABM weapons already developed, and a fourth undergoing tests, the Soviets are now in a position to deal with the far

more sophisticated problems of defense against space weapons. Even if the Safeguard ABM system is approved by Congress, the Soviet Union still will enjoy a sizable lead in strategic defense.

From the first, the Soviets have given strategic defense the command recognition it deserves in the nuclear era.

In April of this year, a new book, "Fifty Years of the Armed Forces of the U.S.S.R.," arrived in the United States for registration at the U.S. Library of Congress.

Published last year, it was written by Marshall M. V. Zakharov, Chief of the General Staff of the Soviet Armed Forces. In it, he states:

> The creation of ballistic missiles and space vehicles required a modern air defense system to respond not only against the aircraft threat, but also—and first of all—to provide anti-missile and anti-space (specifically, in Russian) anti-cosmic defense.

The Soviets are developing a new surface-to-air missile roughly every year to 18 months.

This means that the U.S.S.R. has made consistent and steady investments in research and development forces to create ABM systems.

So, if the present Galosh and Tallinn systems are not wholly effective in the judgment of the U.S.S.R., new systems will undoubtedly appear which will improve the effectiveness of the overall Soviet ABM system.

THE ABM

On March 14, 1969, President Nixon announced that his administration planned to modify the Sentinel missile defense system approved by Congress under the Johnson administration by using it first to defend some U.S. retaliatory missiles rather than to defend cities. This modification was named the Safeguard system.

According to the President, this measured deployment is designed to fulfill three objectives:

> 1. Protection of our land-based retaliatory forces against a direct attack by the Soviet Union.
>
> 2. Defense of the American people against the kind of nuclear attack which Communist China is likely to be able to mount within the decade.
>
> 3. Protection against the possibility of accidental attacks from any source.

President Richard Nixon, at his press conference on April 18, 1969, said:

> I believe it (the Safeguard ABM system) is absolutely essential for the security of the country . . . I do not want to see an American President in the future, in the event of a crisis, to have his diplomatic credibility be so impaired because the United States was in a second class or inferior position. We saw what it meant to the Soviets when they were second. I don't want that position to be the United States' in the event of a future diplomatic crisis.

Two American Presidents, representing our two major political parties, have now recommended to the American people that the United States needs a missile defense system.

The issue now squarely before the country is the Safeguard system. Unlike Sentinel, Safeguard has been modified so that its defensive intent is unmistakable. The first deployment is to cover only two missile sites, the first of which will not be completed before 1973. The President has asked for it in order that he or his successors hopefully will not be placed in a position where they can be blackmailed by our self-proclaimed Communist enemies. I do not want to see President Nixon or any other U.S. President ever placed in a position where he would be subject to blackmail by either the Soviet Union or Red China.

The opponents of Safeguard generally base their arguments on one or more of the following grounds:

First. It will not work.

One of the leading arguments advanced against the deployment of the ABM system is that the complicated array of radar and computer systems required to operate it are of such an involved nature that they will break down in face of an enemy attack.

Much testimony from scientific analysts who support the deployment of the ABM could be adduced against this argument. But perhaps the most graphic argument has just been shown on television screens across the Nation. That is the magnificent—and most highly complicated—American landing of men on the surface of the moon.

But little more than 8 years ago, the vision—and the belief in the scientific and technological capability of the American people—of President John F. Kennedy put in motion the work of going to the moon. At that time, too, there were many skeptics who argued that the thing could not be done, and that further years of research should precede any attempts at actual operational development and deployment of equipment. It is necessary to recall that the exotic array of radars, of computers, of electronic equipment which made the manned moon landing such a success will also constitute the basis for the radar array, the computers, and the sensitive electronic equipment which will go into the ABM system. These systems, too, will work if they are deployed, that is, if the ABM is made an operational system instead of being kept a theoretical, continuing research system.

Can anyone doubt that this vast, this extremely complicated American venture to the moon could ever have been made a reality if we had continued to study the matter, to research it for year after year rather than moving forward vigoously with actual development and deployment of the systems which made this entire great enterprise possible?

The "won't work" argument is seriously flawed on both specific and general grounds. Both the Spartan and Sprint missiles—the prime ingredients of the proposed Safeguard system—already have been successfully flown. These, in turn, are successors to the Nike series of missiles which were successfully employed to knock down other missiles. The prototype missile radar is in test operation at the present time. The initial deployment of the Safeguard missile defense is now necessary to give us further technical, engineering, production, and testing experience to improve the system. We learn by doing.

Safeguard will "work" in the sense it is intended to work. It is a "point" defense. A point defense is easier to achieve than an area defense since the enemy warhead can be usefully engaged at much closer proximity to its target. This, in turn, increases the time allowed the defense to track and react and greatly facilitates the separating out of decoys from the live warheads. Some people may feel that since all missiles may not be destroyed, the system is a failure. They say, "You may knock down nine, but the tenth will get through." But even if this is so, the enemy is forced to greatly multiply his arsenal with highly sophisticated missiles before he would dare to attack. This enormously complicates his offensive problem and adds immeasurably to the deterrent effectiveness of our own offensive missiles.

In a larger sense, however, the United States has amply demonstrated its capacity to produce and operate the most complex communications, electronic, and nuclear warfare systems. It is well to remember that some people declared the hydrogen bomb was impossible or that ICBM's and Polaris missile systems would not work. Moreover, the astonishing technical capacity revealed in the successful Apollo moon program—as I have already indicated—and in the Telstar communications satellites is evidence of what the United States can accomplish.

Throughout the history of warfare, every offense has produced a corresponding defense. To argue that no defense can ever be possible against missiles is to fly in the face of historical precedent. And it is to fly in the face of the opposite conclusions already reached by the Soviet Union. It is doubtful that the Soviets would have devoted the resources they have to ABM if they had concluded that it "won't work."

Second. The scientific critics of the system.

Some of the scientific critics of the ABM system may be compared to the past critics of what could be accomplished in space—an area, of course, intimately related to missile defense. This is brought out very cogently in the July 18, 1969, issue of the London Daily Telegraph which devotes a great amount of space to the American moon landing achievement. States the Daily Telegraph:

> It is only 13 years since Britain's Astronomer Royal described talk of space travel as "utter bilge."

Third. Safeguard is "too costly."

There are two broad subcategories of this argument. One is the technical one relating to the relative costs of defensive systems, and the corresponding offensive weapons needed to penetrate them. The other is that the Nation cannot "afford" missile defense because of the overriding priority of domestic social and economic programs.

On the first point, there are indications that the relative cost-ratios of offense-defense may be approaching parity. For example, D. G. Brennan, former president of the Hudson Institute, made this recent observation:

> Several years ago, it was widely believed that missile defenses were easy to penetrate —so easy that offensive increments costing only one or a few percent of the cost of opposing defense would serve to nullify it. In recent years, however, it has become apparent that cheap forms of decoys and other penetration aids cannot be relied upon to nullify modern defense techniques. A good

defense can be overcome, but it is difficult. This is reflected in the fact that cost exchange ratios for a good defense are now believed to be in the region of one to one—perhaps one-third or two, but not one-tenth or ten. Thus, it is about as expensive to nullify a good defense as to build it.

Even if we accept an estimate that missile defense may be two or three times more expensive than the offsetting attack, appropriate limited deployment could still force the attacker into greater expenditures than have been spent on defense. It is, therefore, of the utmost importance to find out whether effective defense can indeed be established for an expenditure which we can afford. This question cannot be answered by research alone. A limited deployment which may also be considered as a pilot operation is needed.

In weighing the second aspect of the cost question—the matter of national priorities—the American people would do well to consider the ultimate worth of the system which is measured in the safety of millions and the survival of the Nation. Without survival there will be no ghetto to rehabilitate. If we surrender as an independent nation to Soviet nuclear blackmail, it will be Soviet "welfare" programs we will live under and not our own.

Certainly, foes of the Safeguard ABM system should not underestimate the economic capacity of the United States. This capacity is far greater than many people realize. The Soviets have an advantage in the apparent lack of self-confidence among Americans in their own capacity to meet all of the Nation's needs.

Fourth. ABM is unnecessary: Deterrence is assured because U.S. retaliatory power will always be sufficient to destroy the Soviet Union if she attacks us.

The Soviets are serious people and they have long since rejected the hypothesis that a strong offense alone will guarantee deterrence. Their military policy is to create a balance of offensive and defensive power. How each will develop in relation to the other over future years is impossible to judge, they say. I think they make sense. If we counter Soviet ABM progress only by increasing our own offensive missiles, we would be gambling on the assumption that defense technology will not eventually overcome offensive weapons systems.

Additionally, the greater the number and the diversity of offensive and defensive systems the United States has in being at any time, the more difficult it will be for an aggressor to assess the probable effectiveness of a first strike and hence the more effective our deterrent becomes.

Fifth. Development of a U.S. ABM will only stimulate the arms race.

Will the Soviets now cease any further augmentation of their offensive striking power if the United States unilaterally refrains from missile defense? Will they cease their own ABM efforts? The burden of proof for such contentions falls heavily on its advocates. We know that the Soviets have not ceased offensive missile production, even though they have drawn past the United States—they are still building at a rapid rate. And we know from their statements that the Soviet leadership holds that active defense constitutes a vital component of the Nation's military capabilities. It seems only reasonable, then, to conclude that the Soviet leaders would regard U.S. failure to develop an ABM either as a sign of deficient military thinking—one that should be exploited, not followed—or as an indication that we lack the will or the technical ability to go forward with development and deployment.

Sixth. The argument that an American ABM will offend the Russians, that the Russians will consider it to be "provocative," and that it will thus prevent an arms-control agreement.

This argument rests on the thesis that the restoration of nuclear symmetry, through a U.S. ABM to match that of the Soviets, would be more destabilizing than the present asymmetrical situation which is developing between a balanced offensive-defensive U.S.S.R. force and an offensive-only U.S. posture.

To the extent that Safeguard is designed primarily as a defense of our retaliatory forces and not of our people it cannot be construed as indicative of a U.S. intention to attack the Soviets. The "provocative" argument also neglects the fact that the Soviets have deployed their ABM around cities—thus supporting a possible first strike intention—without worrying that this might be "provocative" to the United States.

While it may be true that Dr. Wiesner and Dr. York in the report attributed to them do not believe that an ABM system will work, the Russians most certainly do. Not only that, but they have been stating for the past 2 years or more that it will work, that it is a purely defensive system.

Thus, as long ago as February 23, 1967, Marshal of the Soviet Union Malinovsky, in a key speech in the official Soviet Communist paper Pravda, stated:

New and highly efficient antiaircraft rocket systems and aviation complexes have been deployed and accepted for armament. The various means of combat available to our antiaircraft defense troops insure the reliable destruction of any aircraft *and of many rockets of the enemy.*[1]

And Soviet Prime Minister Kosygin has said flatly that the Soviet ABM system is purely a defensive system, that it is not provocative, and that even though it might be expensive, it will save lives. In developing the concept that the deployment of the Soviet ABM would decrease tensions rather than raise tensions, the interview given by the Soviet Prime Minister deserves to be quoted at some length. Kosygin said:

Which weapon can be termed a factor of tension: An offensive or defensive weapon? I think that defense systems warning against attacks do not cause armament contests, but constitute a factor preventing the killing of people. Certain people—

Kosygin obviously thought of Johnson and McNamara—

think along the following lines: Which is cheaper? Offensive weapons which can destroy cities and entire States, or a defensive weapon which can prevent destruction?

The Chairman of the Soviet Government also replied to the question of "cheapness":

It is possible that an antimissile system costs more than an aggressive one, but it is destined to protect human lives.[2]

Seventh. There should be a moratorium on U.S. ABM deployment while we try negotiations with the U.S.S.R.

The difficulty with this argument is that it concedes to our adversaries the precious commodity of time. The Soviets would stretch out the talks and continue to develop their ABM system while our development of the ABM would be at a standstill. We are probably ahead of the Soviets in the level of our antimissile technology, but how long can we expect this to continue, since Soviet military research and development expenditures are running at a greater rate than ours?

It is unlikely that a U.S. ABM moratorium would be respected by the Soviet Union because, first, the Soviets are committed doctrinally to ABM no matter what the United States does; and, second, there is the complicating factor of Communist China. There are some indicators that the Soviet ABM system is being deployed partially against the potential Chinese threat to the U.S.S.R. If this is so, we cannot in any case expect the Soviets to dismantle or halt their ABM deployment because of any possible agreement with the United States. But if they continue to deploy and perfect their system—even if we were to concede that it was directed entirely against Red China—which is not the case—the Soviets would be in possession of a weapons system which could just as easily be used to neutralize U.S. retaliatory missile forces.

Eighth. The argument that, even though the Soviets have deployed an ABM, their most recent statements, such as that of Foreign Minister Gromyko, indicate a changed attitude.

Gromyko's foreign policy speech of July 10 might, at first glance, have appeared sweetly reasonable. But a more careful analysis indicates that he gave no slightest indication of any flexibility which would help to quiet the troubled situation in the Middle East. Furthermore, actions speak louder than words. What are some recent Soviet actions as opposed to words:

First. From March 1969 onward, the Soviet practice of jamming Voice of America broadcasts to the Soviet Union has been stepped up. In the past, this has been a sign of Soviet hostility.

Second. For the first time in history a Soviet naval squadron is visiting Cuba in an obvious show of force close to American shores. In addition, the Associated Press reported July 31 that this Soviet naval squadron was conducting exercises in the Gulf of Mexico. Further, the press reported on August 1 that the squadron contained a nuclear submarine.

Third. Further hard-line Soviet activities in Czechoslovakia are reported. The London Daily Telegraph, on July 4, 1969,

[1] Pravda, as quoted by Radio Moscow, February 23, 1967.

[2] Interview given in Moscow by Prime Minister Kosygin to the Czech Communist Party newspaper *Rude Pravo* and published February 22, 1967.

stated that Czech leader Husak reported that all "opposition to his tough pro-Russian policies had collapsed." The Daily Telegraph went on to say:

Czech newspapermen voted to make the Press, radio and television into "warriors" for the cause of Communism and to encourage friendship with the Russian occupation troops. They declared themselves to be "Communists first and newsmen afterwards."

Fourth. And a very recent issue of the Daily Telegraph, on July 16, 1969, warns:

Soviet naval activity in the Indian Ocean adds up to a significant display of power politics.

Fifth. Soviet Minister of Defense Andrei Grechko made a sharp attack on the United States about "continued aggression by the United States in Vietnam" and he further announced that the Soviet Union would continue "raising the military might of the army and navy" as reported by the Washington Post on July 28, 1969.

In view of these actions as compared to honeyed words, we may well say a prayer of thanks that the Founding Fathers warned the yet unborn generations of Americans that the most effective deterrence of attack against the American homeland "consists in the best possible state of defence."

THE URGENCY OF THE SAFEGUARD MISSILE DEFENSE SYSTEM

I believe that President Nixon was entirely correct when he said during his campaign for the Presidency:

At this time I do not believe that the United States can afford to accept the concept of parity with the Soviet Union. I believe that we face a potentially dangerous situation . . . to negotiate a de-escalation of trouble points around the world, whether in the Mideast or Vietnam or Western Europe or what have you, if the next President of the United States goes into those conferences with the possibility that the Soviet Union rather than the United States is in a stronger power position, I think that we would not be able to effectively reach the goals that we want to reach. . . . And at any kind of negotiation when one side wants to expand and the other side wants to defend, make sure that the side in that negotiation which is in the defensive position has more strength than the other side. That is why I would restore the strength of the United States, keep it at a proper level at this point, so that we would not be afraid to negotiate.

In the present situation, Mr. President, I believe that there cannot be any substitute for the maintenance of U.S. strategic military superiority. This superiority must be substantial because U.S. policies have always permitted the enemy the first blow. In a nuclear war, an enemy might wipe out a very large percentage of our weaponry—and population—in a first strike. Unless we have enough military strength to survive a first strike and still strike back decisively, the risk of a nuclear war increases.

Avoidance of nuclear war requires that the United States maintain overall nuclear superiority, rather than acceptance of any kind of "sufficiency" which can only be ephemeral and inherently unstable.

For more than two decades, the heart and core of America's strategy has been deterrence of Soviet aggression. This deterrence has been accomplished by establishing and maintaining a nuclear retaliatory strike force that could survive a surprise attack and still retain the capacity to inflict unacceptable damages on the Soviet Union.

If the United States is to continue as a viable and independent society, we should, as a first step, create a missile defense system to protect our nuclear deterrent. Such a system will not, by itself, restore the military superiority which we have now lost. But this essential first step is necessary if we are to reverse the sharp shift—adverse to the United States—now taking place in the world's power balance.

Protecting our retaliatory missiles is important because the United States has no intent of striking the first blow in a global conflict.

Thus, the refusal of the United States to consider a first strike makes it all the more important that our retaliatory force be protected against a Soviet attack. And it is to this end that a Safeguard antiballistic-missile system has been recommended by the President of the United States.

In addition, the Safeguard system is designed—as was the earlier Sentinel concept—to afford defense—of heavily populated areas—against the type of attack Communist China is likely to be able to mount sometime in the 1970's.

From the time the Chinese Communists exploded their first H-bomb—June 17, 1967—their progress in nuclear weapons development has been rapid. Hence, it may well be that they will develop a nuclear ICBM delivery capability sooner than the mid-1970's, the time phase generally estimated by Western analysts.

In this context it may be well to consider the thoughtful words of Secretary of Defense Laird. He testified on May 22, 1969, with reference to the Chinese Communist threat:

The effectiveness of option 2C [of the U.S. ABM] against the Chinese ICBM threat is expected to be very high. If the Chinese deploy a force of only 30 ICBM's on launchers by mid-1976, they could inflict about 15 million fatalities on us—if we had no ABM defense. With option 2C deployed, fatalities could be held to less than 1 million. And, even if they were to deploy as many as 75 ICBM's on launchers by the end of the decade, fatalities could still be held to less than 1 million, particularly if the improved Spartan is deployed. Here again, the deployment of Safeguard would have a very large payoff if the Chinese ICBM threat should, in fact, emerge.

Mr. President, a cursory reading of the press or a casual glance at the television programs might give the impression that the vast mass of the academic community in the United States is enlisted heart and soul on the side of the opposition to the deployment of an ABM defense. It is, of course, quite true that many distinguished scholars are opposed to the ABM. It is right and proper that, living as they do in the country offering the greatest amount of freedom anywhere in the world, these academics should be quite free to form their opinions on the ABM and to write and present freely their views in opposition to the ABM.

It is, however, equally true that a number of distinguished academicians have written cogent arguments in favor of deploying the ABM, among whom are two representatives from among our oldest and most distinguished universities, such as Princeton University and Georgetown University. These men are the outstanding physicists and Nobel Prize winner in Physics, Dr. Eugene P. Wigner of Princeton, and Dr. James D. Atkinson, professor of government at Georgetown and member of the British Institute for Strategic Studies. And there are other distinguished scholars and scientists who have written and spoken in support of the ABM.

Mr. President, the underlying logic of the ABM concept is that an enemy is unlikely to launch a nuclear attack on the United States, or credibly threaten such an attack, if he knows that U.S. retaliatory forces will survive—forces that would result in his own destruction.

ABM is a method of deterrence which will save lives and not destroy them.

I firmly believe than an American ABM system is the soundest insurance for peace and against nuclear war that the United States can buy in 1969 for the 1970's. Far from being an offensive weapon, the ABM is, in reality, insurance against war. It may well be, in fact, the single most important step the United States can take toward peace at this moment in nuclear history.

ORDER FOR RECESS FROM TOMORROW UNTIL WEDNESDAY, AUGUST 6, 1969, at 11 A.M.

Mr. BYRD of West Virginia. Mr. President, I ask unanimous consent that when the Senate completes its business tomorrow, it stand in recess until 11 a.m. on Wednesday, August 6, 1969.

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

ADJOURNMENT UNTIL TOMORROW AT 11 A.M.

Mr. BYRD of West Virginia. Mr. President, if there be no further business to come before the Senate, I move, under the previous order, that the Senate stand in adjournment until 11 o'clock a.m. tomorrow morning.

The motion was agreed to; and (at 6 o'clock and 29 minutes p.m.) the Senate adjourned until tomorrow, Tuesday, August 5, 1969, at 11 a.m.

CONFIRMATIONS

Executive nominations confirmed by the Senate August 4, 1969:

NATIONAL BUREAU OF STANDARDS

Lewis M. Branscomb, of Colorado, to be Director of the National Bureau of Standards.

ST. LAWRENCE SEAWAY DEVELOPMENT CORPORATION

David W. Oberlin, of Minnesota, to be Administrator of the St. Lawrence Seaway Development Corporation.

The following-named persons to be members of the Advisory Board of the St. Lawrence Seaway Development Corporation:

Jacob L. Bernheim, of Wisconsin.

Foster S. Brown, of New York.
William W. Knight, Jr., of Ohio.
Miles F. McKee, of Michigan.
Joseph N. Thomas, of Indiana.

IN THE ENVIRONMENTAL SCIENCE SERVICES ADMINISTRATION

The nominations beginning David M. Wilson, to be lieutenant, and ending John E. Thomasson, to be ensign, which nominations were received by the Senate and appeared in the CONGRESSIONAL RECORD on July 14, 1969; and

The nominations beginning Philip J. Taetz, to be commander, and ending Michael E. Wagner, to be ensign, which nominations were received by the Senate and appeared in the CONGRESSIONAL RECORD on July 18, 1969.

IN THE COAST GUARD

The nominations beginning George A. Blann, to be lieutenant (junior grade), and ending Marcus L. Lowe, to be lieutenant, which nominations were received by the Senate and appeared in the CONGRESSIONAL RECORD on July 14, 1969.

HOUSE OF REPRESENTATIVES—*Monday, August 4, 1969*

The House met at 12 o'clock noon.

The Chaplain, Rev. Edward G. Latch, D.D., offered the following prayer:

Ask, and it shall be given you; seek, and ye shall find; knock, and it shall be opened unto you.—Matthew 7: 7.

O spirit of the living God, arise within us as we bow at the altar of prayer and lift our hearts into Thy presence. In this troubled time lead us beside the still waters where our souls can be restored and our faith renewed. In the quiet of this moment help us to hear Thy still, small voice and hearing it, obey it; and obeying it be led in right paths for Thy name's sake.

Direct and bless these leaders of our Nation that, in seeking to find solutions for the problems of this hour and endeavoring to discover a cure for the distress of our day, they first cleanse their own hearts and then may they see clearly to plan wisely and to move forward to the time when our people shall live together in good will and the nations shall dwell together in peace.

O God, make us good enough for this great day.

In the spirit of Christ we pray. Amen.

THE JOURNAL

The Journal of the proceedings of Friday, August 1, 1969, was read and approved.

NATION NEEDS A SOURCE OF INTEREST CREDIT AT REASONABLE RATES—AN RFC-TYPE AGENCY PROPOSED

(Mr. PATMAN asked and was given permission to address the House for 1 minute and to revise and extend his remarks.)

Mr. PATMAN. Mr. Speaker, this Nation needs a source of funds at reasonable interest rates to meet its vast public needs.

The private money markets—regardless of the reason—are not providing the funds necessary to meet the needs of the school districts, the county, city, and State governments across the land. As a result, we are seeing school construction, water and sewage facilities, parks, roads, and housing fall far behind. We are creating a fantastically huge backlog of unmet public needs because of the lack of credit at interest rates that local governments can afford.

Every one of the 81,299 governmental entities across the country are finding it difficult—if not impossible—to raise the necessary funds. The municipal bond market—the prime source of funds for local governmental improvements—is virtually nonexistent and even huge units—like the State of California—are finding it hard to market bonds. All governmental entities are paying premiums—interest rates of 6 to 7 percent on tax-exempt bonds—and many are simply unable to market bonds at any price.

Mr. Speaker, I am convinced that this Nation must reestablish a Federal credit institution similar to the old Reconstruction Finance Corporation—RFC—that operated so successfully between 1932 and 1954. RFC saved thousands of schools, local governments, and small businessmen in all sections of the Nation by furnishing credit—big blocks of credit—at reasonable terms.

Mr. Speaker, in the near future, I plan to introduce legislation—discussed by me in remarks that appear at another place in today's RECORD—to establish a modern version of the RFC to meet the vast credit needs—at reasonable rates—of our local governmental units and other worthy borrowers. In this way, we can keep the basic needs of the Nation—items like schools, water and sewage facilities, parks—moving forward regardless of what happens in the money markets.

THE PRESIDENT'S TRIP A TREMENDOUS SUCCESS

(Mr. ADAIR asked and was given permission to address the House for 1 minute and to revise and extend his remarks.)

Mr. ADAIR. Mr. Speaker, the President has now returned from a round-the-world mission which—while extremely difficult and very fatiguing—was a tremendous success.

If one reads the statements made by Mr. Nixon in the course of this trip, he readily discovers a common thread of thought which indicates a new dimension in our policy toward Asia. Briefly put, it seems to me that the President has said to friendly Asian nations that they will continue to have our economic support where necessary, but that we expect them to assume a greater share of the burden of developing and defending the free nations in that part of the world.

In the field of military assistance, it seems clear to me that the President is saying we are willing to provide materiel assistance where justified, but that we do expect these nations to provide the manpower for their own defense.

As a part of this policy, the President has indicated that the matter of replacing American soldiers in Vietnam with Vietnamese troops is receiving careful study and that we might expect a further announcement in this connection before the end of this month.

At the same time it is clear that we have made as many concessions to the North Vietnamese and Vietcong as we can under present circumstances. As I have said before, if they truly want peace, then it is high time that they indicate it by some meaningful response. Unless this is done, the world can only judge that the Communist leaders, in fact, do not desire peace, but rather wish a continuation of the bloody conflict.

One is impressed by the unexpectedly small amount of anti-American sentiment expressed toward the President during this historymaking mission. On the contrary, it proved again that there is a vast reservoir of respect, admiration, and good will toward this Nation and its people.

In short, by any standard, the President's trip must be labeled a great success and one which may lead to a proper and timely reevaluation of our policy toward other parts of the world, especially the Asian nations.

PRESIDENT'S TRIP AROUND THE WORLD

(Mr. RIVERS asked and was given permission to address the House for 1 minute and to revise and extend his remarks.)

Mr. RIVERS. Mr. Speaker, I was one of those who heard the report of the President this morning on his trip around the world.

I was very much impressed with his fine report. I was quite fascinated by what the President did do and what he tried to do.

The Nation should know the insuperable task imposed on this man. As we sat there listening to his account of his great odyssey, and it was an interesting one, all of us to a man—and I am sure, Mr. Speaker, you are not the least among those who have given the President your complete support—were determined to give this man our help; indeed, he is going to get our help and our understanding and our sympathy. He made a fine report.

I am not bragging—I happened to be one of those who went out to meet him last night. Seeing the outpouring of people who came out to greet him, and there were many thousands, meant one thing to me, that this country wants this man to succeed and they were with him on this trip around the world in which this country is being attacked in every area.

If the President can bring about a new understanding of America in the world, an understanding of the altruistic feeling of American and the humane efforts of this Congress and of the Nation which have been for a long time dedicated to