SENATE—*Monday, August 11, 1969*

The Senate met at 10 o'clock a.m. and was called to order by the Acting President pro tempore.

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

Descend upon us, O Thou eternal and unchangeable spirit, that we may have a vivid sense of Thy presence with us this day. Take the dimness of our souls away. Make luminous our inner being by Thy light and Thy truth that our lives may glow with a new luster. Because we are aware of Thy presence, help us, O Lord, to deal justly with each other, and to walk humbly with Thee. Help us, we beseech Thee, "to love mercy, to cleave to that which is good, to be kindly affectionate one to another with brotherly love, in honor preferring one another, not slothful in business, fervent in spirit, rejoicing in hope, continuing in prayer, and overcoming evil with good." When the day is done, may we have the sacred memory that we have lived and moved and had our being in Thee, and at night may we rest in peace.

Through Jesus Christ, our Lord. Amen.

THE JOURNAL

Mr. MANSFIELD. Mr. President, I ask unanimous consent that the reading of the Journal of the proceedings of Friday, August 8, 1969, be dispensed with.

The ACTING 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 ACTING 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, after the speeches of the distinguished Senator from West Virginia (Mr. RANDOLPH) and the distinguished Senator from Kansas (Mr. PEARSON).

The ACTING 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.

There being no objection, the Senate proceeded to the consideration of executive business.

The ACTING PRESIDENT pro tempore. The nominations on the Executive Calendar will be stated.

NOMINATIONS PLACED ON THE SECRETARY'S DESK—PUBLIC HEALTH SERVICE

The bill clerk proceeded to read sundry nominations in the Public Health Service which had been placed on the Secretary's desk.

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

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

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

ORDER FOR ADJOURNMENT UNTIL 10 A.M. TOMORROW

Mr. MANSFIELD. Mr. President, I ask unanimous consent that when the Senate completes its business this afternoon, it stand in adjournment until 10 o'clock tomorrow morning.

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

ORDER OF BUSINESS

The ACTING PRESIDENT pro tempore. Under the previous order, the Senator from West Virginia (Mr. RANDOLPH) is recognized.

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

Mr. RANDOLPH. I am happy to yield to the distinguished Senator from Vermont.

Mr. AIKEN. I thank the distinguished Senator from West Virginia for yielding.

EFFECT OF THE TAX REFORM BILL ON FARM COOPERATIVES

Mr. AIKEN. Mr. President, I am deeply concerned over a provision in the House tax reform bill which adversely affects farm cooperatives.

This provision will not raise any additional revenues.

It will not benefit any sector of the economy.

It is a punitive provision, pure and simple.

Worst of all, it is discriminatory, for it would require farmer cooperatives to pay 50 percent of their patronage refunds in cash while business corporations can pay their dividends entirely in stock or other noncash form.

Mr. President, there is no reason for such a provision to be included in a tax reform bill.

The purpose of tax reform is to close some of the loopholes that allow wealthy individuals and large corporations to escape paying their fair share of the taxes.

The other purpose is to bring tax relief to taxpayers in the low- and middle-income brackets—persons who are carrying too large a share of the tax load.

The law at present requires cooperatives to pay 20 percent of their patronage refunds in cash, while the balance may be applied to a revolving reserve. The provision in the new House bill would raise this to 50 percent.

Cooperatives require working capital and reserves just like any other business.

I know about this from long experience with the dairy cooperative movement in New England.

They need capital to guarantee the milk checks of dairy farmers.

They need capital to offset the bankruptcy of a milk company.

This cash comes from the reserve funds, Mr. President.

This reserve is absolutely essential if our cooperatives are going to stay in business and our farmers are going to stay on the farm.

Today we are concentrating, understandably, on the rapidly growing urban America.

But we must not forget that the people in the cities have to have food to eat and milk to drink and clothes to wear.

We must provide incentives to keep people on the farm, and we must not go out of our way to punish them with arbitrary, dictatorial and totally unnecessary penalties such as the provision I have cited in the new tax reform bill.

I sincerely hope that the Senate Finance Committee, in its wisdom, will not include this section in the bill they report to the Senate.

Mr. President, I ask unanimous consent that three letters I have received from dairy cooperative organizations, and a press release I issued recently, be printed in the RECORD at this point.

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

UNITED FARMERS
OF NEW ENGLAND, INC.,
Boston, Mass., August 4, 1969.

Senator GEORGE D. AIKEN,
U.S. Senate Office Building,
Washington, D.C.

DEAR GEORGE: Your opposition to the tax proposal covering cooperatives is most appreciated. As agreed during this morning's telephone converation, the proposed legislation would do nothing to increase tax revenues and would seriously impair the financial strength of cooperatives.

To the best of my knowledge, nearly all cooperatives are financed in large part by retained earnings or rotating capital. In addition, most cooperatives have a certain amount of their capital originating from the sale of stock.

Here in United Farmers, we have a net worth of approximately 2½ million dollars. About 40% of this represents capital stock and the other 60%, earnings of previous years plowed back into the business.

Under the present law, we are allowed to retain earnings providing 20% of the resulting allocations are paid to our members in cash. Our individual members pay on the full allocation according to their individual tax bracket. Under the proposed regulation, 50% of retained earnings would have to be paid out in cash and the member would continue to pay on his full allocation according to his individual tax bracket. The net result would be that United Farmers would have 30% less money to plow back into the business and the total taxes paid by our individual members would remain unchanged.

The ability of our organization to invest in needed facilities in order to remain competitive would be seriously impaired.

I completely agree with you that the objective of the proposed legislation is not to increase tax payments, but to undermine the basic strength of cooperatives.

At various times we have considered possibilities of adopting a system of rotating capital. In a recent study done by the Farmer Cooperative Services of the United States Department of Agriculture involving the possible merger sale of six of our Vermont cooperatives, the adoption of rotating capital was strongly advised as long as such capital did not have a definite due date. It represents an investment. If, as the proposed legislation provides, such rotating capital had a definite due date, it becomes a debt of the business. Under such conditions, I doubt if there would be any bank including the Springfield Bank for Cooperatives that would lend us a lead nickel. It would, in my opinion, pretty definitely block some most promising cooperative mergers in this area and undoubtedly the same situation would prevail in other sections of the country.

Thanks again for your very helpful interest in this matter.

Sincerely yours,

STANLEY W. BEAL,
General Manager.

NEW ENGLAND MILK PRODUCERS' ASSOCIATION,
Boston, Mass., July 31, 1969.

Hon. GEORGE D. AIKEN,
Senate Office Building,
Washington, D.C.

DEAR SENATOR AIKEN: The tax proposal as recommended by the Treasury Department to the House Ways and Means Committee certainly was a surprise to us. As you know, our revolving funds serve as capital to provide financing for the cooperative for capital assets. The percentage refund of 20% is about all that can be paid back and still build reserve funds to operate the cooperative.

For your information, New England Milk Producers' Association guarantees that producers will be paid the blend price for their milk, and, last year, there were three bankruptcies by different corporations, and the association paid out over $600,000 to dairy farmers.

The Whiting Milk Company was in bankruptcy approximately five years ago and, at that time, the association paid out $125,000 to dairy farmers as well as loaning another cooperative—Northern Farms—another $100,000 for payment to their producers.

We have paid back three-quarters of a million dollars already in revolving funds. There would be no tax revenue if the revolving funds were tampered with. This is a financial tool that farmers have, and is important, as you know, in running the cooperative and should not be tampered with at this time.

I certainly would appreciate anything that you can do to prevent this recommendation.

Respectfully yours,

JOHN S. ADAMS,
General Manager.

NATIONAL MILK PRODUCERS FEDERATION,
Washington, D.C., August 4, 1969.

Hon. GEORGE D. AIKEN,
U.S. Senate,
Washington, D.C.

DEAR SENATOR AIKEN: I want to express deep gratification—on behalf of the member cooperatives of National Milk Producers Federation across the nation—for your strong opposition to recommendations by the Ways and Means Committee to change the tax treatment of cooperatives.

Under the committee recommendation, cooperatives would be required to increase current cash payment of patronage refunds from the 20 percent required by the 1962 amendment to 50 percent. The increase would be in stages over a 10-year period. The additional 30 percent could be paid on current patronage refunds or could be used to retire previously allocated patronage refund certificates. The proposal would also require patronage refunds not currently paid in cash, but held in revolving funds, to be paid in cash to patrons within 15 years.

In addition, per-unit retains for capital will be required to be revolved within 15 years.

The proposed changes will not increase Federal revenue from cooperatives or from their patrons. They are, therefore, apparently designed to impair the effectiveness of agriculture cooperatives.

The proposed changes are to be opposed for the following reasons:

(1) The Federal tax laws should not be used to regulate the internal operations of farmers marketing associations.

(2) The changes would undermine the financial structure of cooperatives by changing equity capital to debt and through the limitation on the length of time equity capital could be used.

(3) Under the proposed changes, the ability of cooperatives to acquire additional capital by lengthening the revolving period or by increasing the amount retained would be seriously impaired.

(4) The imposition of a due date on patronage refund certificates or upon per-unit capital retains changes equity capital into debt, thereby limiting the ability of the cooperative to acquire and use borrowed capital.

Dairy farmers have demonstrated their ability over many, many years to develop, finance, and operate cooperative associations, which have proved to be of great value to dairy farmers, without restraints imposed by the Federal government. These farmers have demonstrated their ability to operate their cooperatives in their own best interest and also in the public interest; therefore, their business judgment should not be dictated by tax laws.

We, as representatives of dairy farmers and their cooperatives, warmly commend you for your leadership in this cause. Moreover, we sincerely hope that you can acquaint other members of Congress with the need for their support. It is our hope that they will join you in opposing the proposed change in the tax treatment of cooperatives.

Sincerely,

PATRICK B. HEALY,
Secretary.

FARM COOPERATIVE REFUNDS

Senator George D. Aiken today attacked the House Ways and Means Committee proposal to tax farm cooperative refunds.

He said the plan won't add a dollar to tax revenues but will seriously limit the cooperatives' ability to borrow money.

"Worst of all, the proposal is discriminatory," Senator Aiken charged.

"Congress has never required corporations to pay their dividends in cash. Many corporations pay them in stock or other non-cash forms."

At present the law requires cooperatives to pay 20 percent of their patronage refunds in cash, but under the House Committee proposal this would be increased to 50 percent.

"The Committee proposal would be like cutting off a dog's tail by inches over the next 10 years, for there is a graduated percentage increase—from 20 percent this year to 23 percent next year and so on over the next ten years. At the end of that time the cooperatives would have to pay 50 percent of their refunds in cash," the Senator explained.

This would seriously reduce the cooperatives' ability to generate capital for vitally needed expansion. It would also deny them the capital necessary to guarantee the farmers' milk checks when a milk company goes bankrupt."

"I understand this proposal, in even more drastic form, was recommended by Treasury. On the other hand, I expect the Agriculture Department to come out strongly against any such destructive proposal."

Senator Aiken is known as one of the leading advocates of the farm cooperative movement. Throughout his public career he has advocated large farm cooperatives to give the farmers bargaining strength in the marketplace.

Dairy cooperatives in New England have had his support since the Great Depression of the 1930s when the price of a quart of milk dropped to a nickel. It was after that experience that New England dairy farmers saw the need for cooperatives.

SENATOR RANDOLPH REFUTES CRITICS

Mr. RANDOLPH. Mr. President, shortly after the recess of the Senate, in early September, the Committee on Labor and Public Welfare will bring into this Chamber proposed legislation of landmark proportions which, if passed in approximately the form of the reported measure—perhaps it can be improved in the Senate itself—will bring additional health and safety protection to the local miners who produce this fuel which is so necessary in our economy.

I speak today in reference to certain situations that have developed in my State of West Virginia and in contiguous States in the bituminous coal mining regions of this country.

The people of these coal mining regions in West Virginia, Virginia, and Kentucky, especially the miners and independent operators, are being misled and misinformed by biased persons who are issuing distorted statements concerning the Senate's bill which will deal with improved health and safety conditions for the miners.

Mr. President, it is a time when extremists are abroad in our hill and valley countryside. These extremists are overloading their speeches—there are many—with exaggerations and nonfacts. I refer particularly to comments by a Charleston, W. Va., physician, Dr. Isadore Buff. He is a spokesman for a self-appointed committee of physicians. I refer, also, to Arch Alexander, of Charleston, W. Va. He is a spokesman for the National Independent Coal Operators Association. I include, as well, a re-

cent statement by Cloyd McDowell, of Harlan, Ky., a spokesman for another independent coal operators' group.

Dr. Buff is declaring that the Committee on Labor and Public Welfare has produced a good health and safety measure but the Senator RANDOLPH "tried to kill the bill and tried to weaken the benefits in it for coal miners." On the other hand, the independent operators take the opposite view in a charge leveled by Alexander that I stood by and let this piece of legislation be passed in our committee, and that I failed to raise my voice against the provisions of the bill that they believe are bad. So, a good bill for Dr. Buff is a bad bill for Messrs. Alexander and McDowell and darts are aimed at the Senator from West Virginia by both these extremist points of view.

I ordinarily would not speak in the Senate on a matter of this kind. However, Mr. President, I wish to remind Senators that West Virginia is the leading coal-producing State of the Union. We have more miners—approximately 43,000—gainfully employed today than in any other coal-producing State. For this reason coal is very vital to our economy.

I have taken this time to discuss these matters rather than when the legislation comes to the floor of the Senate, and when I and other members of the Committee on Labor and Public Welfare, including the Senator from New Jersey (Mr. WILLIAMS), chairman of the Subcommittee on Labor, will discuss the provisions of this legislation.

I say very quietly but very honestly that Dr. Isadore Buff and Mr. Arch Alexander are both wrong. JENNINGS RANDOLPH did not miss one of the lengthy and complex hearings. The hearings ran for many, many weeks, and I was there to listen to the testimony of all who came to counsel with us. When the hearings were concluded and we met as a subcommittee to consider the actual language of the legislation, I was present at every subcommittee meeting. Also, after we reported the legislation to the full committee I was present at every meeting. In the executive sessions, the members of the committee labored diligently to bring to the Senate at least by the middle of September, and I hope before that, this legislation. If enacted into law, it will provide a strong, effective, and workable program which will benefit the health and safety of miners without destroying the coal industry and also without damaging extensively many, many coal-related programs which are part of the industrial complex of this country.

If the Senate bill at the beginning was not a perfect measure, this is understandable. If anything close to the Senate committee bill becomes law, the cost to coal mine operators to achieve compliance will be heavy. Make no mistake about it. I also want it understood that benefits to miners in better occupational health and safety conditions will and should be considerable. Some mines—but probably only a few—will not be able to survive the costs and remain economically feasible operations. And miners' health and safety may not be enhanced as much as some of the more emotional advocates of legislation have predicted.

However, I am confident that the comments of Mr. McDowell in a July 31 press release are gross exaggerations when he asserts that the bill will eliminate dangers to the health and safety of coal miners by eliminating the coal mines. Of course, that will not be the result. He implies destruction of the entire coal industry. There will be some dislocation and probably some losses of coal production for a time during adjustment to the safety regulations and health provisions of a new law. Production losses may adversely affect the steel industry and the electric utilities and be reflected in higher rates to consumers.

How much of this the economy will be able to stand, naturally, causes me concern, as it would concern other Members of this body.

Isadore Buff and other advocates of unrealistic health and safety provisions, and the Alexander-McDowell position of health and safety without added costs or operator sacrifices are irreconcilable extremes.

We have attempted to avoid just what these two extreme groups have indicated we have not avoided. We bring here a reasonable and responsible landmark in legislation dealing with a very, very important subject. After months of work by the subcommittee and then the full committee, we reported a much revised version of a mine health and safety bill. We considered, we debated, we negotiated, and we voted within the committee since February to develop a strong, effective, and workable measure. We have done that. Thus, we have an end product which is the distillate of eight separate coal mine health and safety bills.

Three of those bills I introduced for the consideration of the subcommittee and the committee.

Certainly I do not know of anyone who is conversant with the facts who claims the legislation that will come to the floor of the Senate is a perfect measure. Certainly I do not label it perfect, but it met the needs of the urgent problem. This legislation was on my motion, reported unanimously by the committee and will come to the Senate in a few weeks.

The interpretations being given in these speeches, press releases, and statements by Buff, Alexander, and McDowell, I have to speak about today because they move about our countryside, and they distort not only the content of legislation but, also, what they allege were my actions within the subcommittee and the committee. I say this kindly but I say it earnestly: These men do not understand, or do not wish to understand the legislative process under which bills are considered and developed.

Isadore Buff charges that I attempted to kill the bill by introducing one bill in committee. I introduced three bills for the consideration of the committee. They took different viewpoints and they approached the matter in different ways. That is understandable. When he makes the statement that I meant to kill the bill, that is not true. All of these three were introduced "in the light of day" and were referred to the Labor and Public Welfare Committee.

The Senator from New Jersey (Mr. WILLIAMS) introduced, as I did, three bills. They were referred to the committee.

The Senator from New York (Mr. JAVITS), and the Senator from Kentucky (Mr. COOK) each introduced a bill and they were referred to our committee.

Very properly, and understandably, the Senator from New Jersey (Mr. WILLIAMS) chose one of the bills as a vehicle to bring forth the amendments and the legislation itself to the floor.

After receiving counsel from many persons, I felt that some of the provisions of my bills were good; and some, I am frank to say, were less than responsive than provisions in the measures by the Senators from New Jersey, New York, and Kentucky.

In the subcommittee and full committee these matters were discussed and all points of view, including those of the Department of Interior and Bureau of Mines of the Johnson and Nixon administrations, United Mine Workers of America, an organization of coal mine inspectors of coal-producing States, and coal producers associations, were heard, as well as individual Senators.

I have spoken about West Virginia as the leading coal-producing State in the Nation. Its economy is geared largely to the ups and downs of a coal economy.

Thus, it was my responsibility to urge during the hearings and the executive sessions that we deliberate across the board on the potential impact of the legislation we had under study.

It was my duty to see that the viewpoints and recommendations of all sides—labor, management, government, and the public—were given careful consideration.

It was complex legislation. I knew that all points of view certainly could not be fully accommodated on all the points at issue; but at least we could make an attempt to understand the points of view. It is very important not to polarize our thinking, to say an answer is there, or it is there in writing legislation which will be a composite and a distillate of the various points of view.

Accordingly, we hope to improve the health and safety conditions for workers in the underground mines. There are 3,800 such mines in the United States operating today, and I have never lost sight of that fact. I repeat that we have to have effective legislation and it has to be motivated by an understanding of the problems. That, I believe, is the legislative process at work. That is the dialog of democracy, regardless of whether we wear the label of Republican or Democrat, liberal or conservative.

I only wish that Isadore Buff, Arch Alexander, Cloyd McDowell, and others, on both sides of this issue, could really understand this process. I want them to understand.

I hope they will take the remaining weeks before the legislation is brought here to become cognizant of the facts.

Mr. President, I ask unanimous consent to have printed in the RECORD a letter dated August 9, 1969, which I wrote to Dr. Buff in Charleston, W. Va.

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

U.S. SENATE, COMMITTEE ON LABOR AND PUBLIC WELFARE,
Washington, D.C., August 9, 1969.

Dr. I. E. BUFF,
Charleston, W. Va.

MY DEAR DOCTOR: In 25 years of public life I have believed in and followed the principle of open discussion of questions of importance to our State and Nation. In my service in the House of Representatives and Senate I have been involved in many such debates. I always welcome them as an important part of the democratic process.

I would prefer, of course, that my opponents be swayed by the weight of my arguments and join in support of my viewpoint. At the same time I realize that it is not always attainable goal and am willing to accept the fact that there always will be differences of opinion.

I cannot, however, allow attacks on me that are based on half-truths, innuendo and disregard of the facts, to stand unchallenged. I very much regret your recent public statements of my activities concerning coal mine health and safety legislation. The most recent instance is your speech at Charmco, West Virginia, on August 2, 1969, as reported in the Raleigh *Register* and Beckley *Post-Herald*.

The broad generalities and misstatements of fact attributed to you in recent months must be answered to avoid giving them an appearance of truth by permitting their repetition without challenge.

I agree with you on one point, that my record should be examined. My advocacy of coal mine legislation goes back to 1941 when the first Federal coal mine safety act was passed. At that time I was chairman of the Subcommittee on Coal of the House Committee on Mines and Mining, which had a major responsibility for this legislation. I laid before the House a discharge petition to bring the bill to a vote.

I was not a member of the Congress in 1952 when the law was revised, but I was deeply involved in the 1965 and 1966 action that resulted in extension of its coverage to small mines, those employing fewer than 15 men. This was a big step since a significant proportion of West Virginia's miners work in small mines. *At that time, Senator Wayne Morse, manager of the bill, said: "Without his (Randolph) expertise . . . the bill in its present form would not be before the Senate today."*

As to this year, I cannot see how my concern for improved mine health and safety can be seriously questioned. As the ranking Democratic member of the Subcommittee on Labor and its parent Committee on Labor and Public Welfare I participated in the writing of comprehensive new legislation of importance to the people of West Virginia. I did not miss a single hearing or executive meeting of either the subcommittee or the full committee.

By your own admission, the bill reported to the Senate by the committee is a good one. As to my own role, I call your attention to a letter I received on August 4 from *Senator Harrison A. Williams, Jr., Chairman of the Labor Subcommittee, in which he said: "I reiterate my special thanks to you for all of your efforts these past several months in our legislative consideration of Coal Mine Health and Safety."*

Your claim that I tried to weaken the bill has no basis in fact. The bill unanimously reported by the committee, on my motion, is a much refined document, containing some features of each of the eight bills pending before us. There are provisions of the legislation subject to further improvement, and I am sure there will be extensive debate on them in both the Senate and House.

Three of these bills, incidentally, were introduced by me. You complain only of one of them, conveniently ignoring the others. I repeat what I said before that this package of proposals was introduced to place a variety of ideas before the committee. I took no firm stand that any of these measures was the definitive version of mine health and safety legislation that I would like to see passed.

If you have any familiarity, with the legislative process, you know that there are many changes, involving considerable give and take by the responsible parties, before any major bill is completed. It would be naive to suggest that further changes are unlikely, for the effort to pass a good health and safety bill is not completed.

I do not owe primary allegiance to the mine operators. My first loyalty in these matters is to the people of the State of West Virginia, who have demonstrated their trust by electing and reelecting me to the responsible office I hold. I represent mine operators only in the sense that they are citizens of West Virginia and are entitled to be heard just as are miners, bankers, farmers, factory workers or small businessmen.

I have never ignored any segment of my constituency in West Virginia, for together they all compromise the total State which is my primary concern.

I listened to the health and safety views of the operators just as I did the opinions of many others, including yourself. Exposure to as much information as possible and to a wide range of interpretations is essential for the intelligent consideration of legislation as complex as this.

Your only contribution was limited to a single, rather hectic appearance before the subcommittee. Since then you have confined your activities to frenetic public statements and personal attacks. Discussion of the issues is healthy, but your careless accusations have strayed from both the issues and the facts.

I regret that a person with your announced dedication to the cause of better mine health and safety has not made a more meaningful contribution to the legislative process. Your background as a physician and experience as an advocate would have been given proper consideration had you ever sought to discuss them with me. Unfortunately, you chose instead the path of reckless demands and loose accusations.

Your criticism of me concerning other legislation is likewise baffling. The Air Quality Act of 1967 came from the Public Works Committee, of which I am Chairman, and the Subcommittee on Air and Water Pollution, headed by Senator Edmund S. Muskie. It was passed by unanimous votes in both the Senate and House. The Act is generally considered landmark legislation that when fully implemented will do much to reduce the level of air pollution in the United States. Senator Muskie said in the Senate in May of this year: "No one should suggest that the chairman of the Senate Committee on Public Works has weakened the Air Quality Act. He has cooperated with the chairman of the subcommittee and he has given his enthusiastic support to the Air Quality Act. He has played a constructive role in its development. *The results of that act will be a credit to him and to the committee he leads.*"

As for the Medicare program, I spoke in the Senate in support of it and voted on rollcall for the bill which was enacted into law. For a detailed explanation, see the enclosed memorandum.

Finally, I recognize and endorse your right to support anyone you choose for election to any public office. I regret that you do not consider me a worthy recipient of your vote if I should seek another term. I am confused, however, by your political endorsement, inasmuch as it was only a few weeks ago that you were reported critical of an office-seeking associate for injecting politics into the health and safety campaign.

Truly,

JENNINGS RANDOLPH.

ORDER OF BUSINESS

The ACTING PRESIDENT pro tempore. In accordance with the previous order, the distinguished junior Senator from Kansas (Mr. PEARSON) is recognized for 30 minutes.

THE MILITARY-INDUSTRIAL COMPLEX

Mr. PEARSON. Mr. President, a great deal has been said and written about the military-industrial complex since President Eisenhower's historic farewell speech in January 1961. As the volume of military expenditures has increased, the voices of concern have multiplied. And in recent months it has become the subject of a heated and far-ranging national debate.

There are some who see the military-industrial complex as a cabal of willful men and powerful interests controlling the Nation's defense machinery solely for the purposes of self-aggrandizement and profit: a group whose power and influence is so great and so far reaching that it dominates the entire Government, eroding liberty at home and perpetuating wars abroad.

While some of these charges are advanced by sincere and well intentioned individuals, they are, for the most part, the product of sensationalism and radical propagandizing. The captains of our industries and the commanders of our armies do not constitute a demonic clique hellbent on securing war profits and replacing civilian democracy with martial authoritarianism.

But to say as much is by no means to deny the fact that the existence of the military-industrial complex does indeed pose problems of great and serious magnitude. For, while the individuals and interests which make up the complex may not be devils, neither are they angels. And given the magnitude and complexity of today's defense establishment, one could safely ignore its dangers only if it were in fact commanded by angels rather than ordinary men.

Many have written of these dangers, but few have spoken with the cogency and authority of General Eisenhower. I want to quote him at some length because his words are as meaningful today as they were in 1961 and because he has so often been quoted out of context. He states:

> Until the latest of our world conflicts, the United States had no armaments industry. American makers of plowshares could, with time and as required, make swords as well. But now we can no longer risk emergency improvisation of national defense; we have been compelled to create a permanent armaments industry of vast proportions.
>
> This conjunction of an immense military establishment and a large arms industry is new in the American experience. The total influence—economic, political, even spiritual—is felt in every city, every state house, every office of the federal government. We recognize the imperative need for this development. Our toil, resources, and livelihood are all involved so is the very structure of our society.

Mr. President, in these two paragraphs former President Eisenhower has suc-

cinctly identified the reasons for a large and permanent defense apparatus and what this condition means for the American society, he then delivers his oft-quoted warning:

> In the councils of government we must guard against the acquisition of unwarranted influence, whether sought or unsought, by the military-industrial complex. The potential for the disastrous rise of misplaced power exists and will persist.

And so, Mr. President, the central theme of Mr. Eisenhower's message, it seems to me, is this: The modern military-industrial complex poses dangers of a most serious nature simply because of its permanency, its vastness, and its complexity. The modern military-industrial complex is large and permanent by necessity. Thus, the potential for the dangerous misuse of power lies in the very nature of the beast, so to speak, regardless of whether those within the complex are motivated by a nefarious intent.

Before elaborating upon these points, let me just say, Mr. President, that I hope we can continue to have calm and reasoned discussion of the military-industrial complex without such discussion being labeled as a part of an open season on the military or exercises in military baiting.

Mr. President, we have a permanent armaments industry today because of world conditions, our involvement in those conditions, and because of the nature of modern weapons and support systems. We are the most powerful of nations in a bitterly divided world. Whether we like it or not, we have defense responsibilities that extend far beyond our own shores. And because peace on earth remains an elusive goal, there is no foreseeable end to these enormous burdens.

But there is another reason for the permanency of the military-industrial complex. Gone forever are the days when our manufacturing establishment could convert from plowshares to swords in time to meet a threat to our national security. The sophisticated weapons systems of today often require a decade or more to develop and produce.

Thus, even if world conditions were to be improved to the point that would allow a substantial reduction in size of the Military Establishment, we would still have a permanent armament industry. Whatever may be the relative size of the armament industry at any particular time, we must assume that, unlike the period prior to World War II, a rather large number of firms will be permanently engaged in the production of military hardware.

Vastness is another even more significant feature of today's military-industrial complex. And I use the term "vastness" to suggest not only the enormous amount of dollars, people, and hardware involved, but also the extent to which this activity is spread throughout so many of our communities and so much of our economy.

Today we are spending about $80 billion on defense. This represents about 43 percent of the total Federal budget, and is the equivalent of about 10 percent of our gross national product. Since the end of World War II we have spent a trillion dollars on defense-related activity.

There are 22,000 prime contractors and over 100,000 subcontractors involved in defense business. And 76 different industries are classed as defense-oriented. Military and civilian personnel employed by the Defense Department and defense-generated private employment account for about 10 percent of our entire labor force. Hundreds of thousands more work in retail businesses and service industries which draw vital economic nourishment from nearby defense installations. Approximately 5,500 towns and cities have at least one defense plant or company doing business with the Armed Forces. There are about 1,000 DOD, AEC, and NASA installations in this country. Three-fourths of our 435 congressional districts contain one or more major defense installations. And major segments of our economy are partially or totally dependent upon defense expenditures.

Communities, large and small, and individuals ranging from ditchdiggers to college professors thus have a direct economic interest in some aspect of our vast Defense Establishment.

Mr. President, a third significant characteristic of the modern Defense Establishment is its technical complexity.

As noted above the ever-increasing complexity of today's weapon and support systems requires a permanent development and production apparatus. In addition, this sophistication of modern weaponry makes it increasingly difficult for the public and the Congress to judge which systems should be developed and deployed at any particular time. For example, in addition to the question of whether or not it is strategically desirable to deploy an anti-ballistic-missile defense system we were confronted with the enormously difficult question of whether the Safeguard system is technically feasible.

This complexity of the modern weapons of war greatly complicates the defense decisionmaking processes and thus threatens to weaken the control of the Congress and the people. Decisions must be made about proposed weapons which may not be ready for actual use for a decade. The opinion of the scientific expert becomes critically important, at times decisive. And the requirement of secrecy further isolates the entire process from public view and public involvement.

Inevitably there is a tendency, under these circumstances, to buy more defense weaponry than may actually be needed. And at the same time, many citizens are increasingly concerned as to whether democratic civilian control is anything more than a slogan.

A fourth factor which President Eisenhower did not mention specifically in his farewell statement but which he alluded to on other occasions, is the proclivity of the military to ask for more than may actually be needed.

This is not to impute to the military any sinister motives. And in fact excessive requests from the military are rather to be expected. As they are charged with the responsibility of providing the Nation's defense it is inevitable that if there is to be an error in stating defense needs they would prefer it be on the surplus side rather than the deficit side. We want our generals to be generals. We want them to be militarists. We want them to be war planners. We want them to be aggressive in their demands for appropriations. We want them to be dedicated to their profession and confident of their abilities.

But, Mr. President we also expect them to respect civilian authority. And we must be sure that civilian authorities are properly equipped to effectively exercise that authority.

Mr. President, taken together, the four factors just discussed mean that the military-industrial establishment has its own built-in momentum; a momentum which is increasingly difficult to effectively control.

We now have thousands of firms permanently engaged in defense business and for many their survival may depend upon the maintenance of that business and the level of profit they earn from it. Thus from the private sector there is an inevitable pressure for not only a continuation of the present volume of defense spending but for more and more increases.

The managers of defense-oriented corporations are necessarily motivated to strive to keep an existing contract going and/or to seek new ones. Moreover, given the high costs of research and development and given the present system by which the Defense Department buys armaments the managers will also be inclined to seek the maximum possible profit on any given contract as a hedge against that future date when they might fail to secure a sufficient volume of defense business.

But the pressure on the Department of Defense and on Congress comes not only from individual companies but from the communities in which those companies are located. If a defense contractor is forced to curtail production hundreds and even thousands of people may be affected, all the way from the laid-off worker to the homebuilder to the taxicab driver.

The same situation occurs when a naval shipyard, an Air Force base or an Army fort is closed down. Such action may put hundreds, even thousands of workers on the unemployment lists and economically disable an entire community.

Therefore, given our political system, it should surprise no one that Congressmen are often under great pressure to make demands on the Defense Department in behalf of their constituents. In an elective democracy the question, "What have you done for me lately?" is a relevant one. Certainly the Congressman must try to balance local and national interests but if he is to survive he must at least do enough to show the voters and supporters back home that he cares.

The salient point here is that because defense activity has become so embedded in our economy there are pressures to maintain it almost irrespective of whether or not the security needs of the country demand it.

But, Mr. President, to point to the potential dangers inherent to the modern Defense Establishment is nct tc say that

these dangers are immune from control. Instead of simply deploring these dangers we should recognize them for what they are and calmly and responsibly proceed to take those actions necessary to bring them under control. And in this respect, I would suggest that at least two basic types of actions are necessary.

Of first order of importance, Congress must take steps to better equip itself to effectively discharge its oversight and evaluation responsibilities. On other occasions I have suggested that Congress is poorly equipped generally to oversee and evaluate the activities of the executive branch of Government. But nowhere is the weakness more glaring than in defense matters.

In recent years the defense budget has nearly equalled the combined budgets of all the other executive departments and agencies combined, but the committee system, our basic oversight and evaluation mechanism, has not been adjusted accordingly. I submit that under the present conditions it is a simple physical impossibility for the two Armed Services Committees and the two military subcommittees of the appropriations committees to effectively review and evaluate the policy and budgetary requests of the Department of Defense.

Thus it is imperative that Congress act to strengthen its oversight and evaluation capabilities.

Mr. President, a significant step in this direction has already been taken by the Senate Armed Services Committee. The distinguished chairman (Mr. STENNIS) announced recently that the committee had initiated a program on contract surveillance and cost overruns. The Department of Defense will now be required to file quarterly reports setting forth up-to-date information on 31 major weapon systems. Also the committee staff has been augmented by competent investigators from the General Accounting Office.

I want to compliment the distinguished Senator from Mississippi for instituting this new program within the armed services. And I want to urge the Senator to give very careful consideration to substantially expanding this new effort. He can be assured of my full and vigorous support for any request he should make to substantially expand the committee staff.

It would also be highly desirable, I believe, to establish a Joint Committee on National Security Affairs. The distinguished Senator from Texas (Mr. TOWER) introduced legislation—Senate Joint Resolution 50—to create such a committee on February 19 of this year. I wish to commend Senator TOWER for introducing this bill and I would hope that the Senate would act favorably on this proposal at the earliest possible date. The committee, composed of members from the Committee on Foreign Relations, Armed Services, and Atomic Energy of both Houses, would not have legislative authority but would be concerned with broad long-range questions of national security policy and through a program of contract research and investigative hearings could significantly improve the ability of Congress to pass judgment on complex weapon systems. In effect, it would represent a congressional counterpart to the President's National Security Council.

Mr. President, I turn now to the second type of action we must take if we are to eliminate some of the dangers which the military-industrial complex now poses.

As noted above, the powerful self-momentum which now characterizes the military-industrial complex stems in part from the fact that large numbers of industries, businesses, and research enterprises are permanently engaged in defense activity and also from the fact that, due to the great volume and diversity of defense activity, hundreds of communities, millions of individuals, and whole sectors of the economy are caught up in varying degrees of economic dependency upon defense spending.

But the potential dangers here have been greatly magnified because we have never adjusted our thinking and our policies to accept the reality of this vast and permanent defense complex. We are still too much influenced by the outlook of the first half of the century, an outlook which was shaped by isolationism, a belief that world peace was just around the corner, and a conviction that we could mount a great war machine at the drop of a hat and then as soon as the need had passed, which inevitably it would, dismantle it almost overnight.

Without in any way relaxing our efforts to achieve those conditions whereby a reduction in our Defense Establishment is safely possible we must stop viewing the military-industrial complex as an unpleasant but temporary thing which, hopefully, will soon go away.

Mr. President, it is a simple fact that defense spending has enormous impact on our economy, that a significant number of industries and communities have become economically independent on defense business. It is also a simple fact that because of this economic dependency considerable pressures exist to maintain and even to expand that defense business for reasons other than pure calculations of actual national security needs.

These facts have to be accepted for what they are. But instead of simply wringing our hands in despair we must proceed to develop the types of policies which accept the reality of this economic dependency. Only if we do this, can we expect to be able to make progress toward controlling the dangers which are inherent to the present situation.

Several types of policies should be considered. For example, to reduce the dependence of individual firms it might be advisable to award no more new contracts to a company if it already does more than half of its business with the Defense Department. For those firms already heavily dependent upon defense contracts, procedure plans should be adopted which recognize the Governments obligation to the firm and which assure the firm that the resources of the Government will be committed to assisting the firm in making the transition to nondefense business in the event that reductions in defense are ordered.

A Joint Committee on National Security would be well suited to conduct policy studies in this area and to make recommendations to the appropriate standing committees. And certainly the economic impact of defense spending on communities and regions must be more carefully and rationally considered. Local and regional economic factors must be taken into account in awarding defense contracts. The same principle would apply to decisions about defense installations. For example, pressures to maintain a particular installation would be sharply reduced if it were made clear ahead of time that the Federal Government was fully committed to assisting the community in meeting the economic difficulties that the closing of an installation would produce.

Several types of action should be considered. For example, I would urge the Secretary of Defense to act as soon as possible to significantly expand the functions and activities of the Office of Economic Adjustment. This small office was established to provide assistance to communities during the difficult readjustment period following the curtailment or closing out of a defense activity. The Office has had considerable success, but I believe that it is far too small and needs to be substantially expanded.

I would also urge favorable consideration of S. 1285 introduced by Senator MCGOVERN and cosponsored by a bipartisan group of 30 fellow Senators. This bill would establish a National Economic Conversion Commission designed to deal with the economic adjustments which would occur if there were to be a substantial reduction in overall defense spending as would be occasioned by a termination of our military involvement in Vietnam.

I would suggest, however, that the sponsors of this bill consider modifying the proposal to the extent that the Commission would deal not only with the type of economic readjustment which would occur with an overall reduction in defense spending but also with the types of readjustments associated with changing defense needs—changes which are being made regardless of the overall level of defense spending. This Commission should also be designed to deal with the consequences of new defense spending as well as the curtailment of spending. In short, I am suggesting that such a high-level Commission should be designed to deal not not only with the economic problems associated with a reduction in defense spending but also with all phases of the relationship between the ongoing military-industrial complex and the economy. In regards to the general question of conversion to a peacetime economy, I was pleased to hear President Nixon state in his inaugural address:

> We shall plan now for the day when our wealth can be transferred from the destruction of war abroad to the urgent needs of our people at home.

Following up on this pledge, the President has asked a subcommittee of the Council for Economic Policy chaired by Dr. Herbert Stein, to initiate policy planning for converting our economy to a peacetime basis.

Mr. President, over the past few months the military-industrial complex, its meaning and its dangers, has been the subject of far ranging, searching discussion and analysis. On the whole I think this has been healthy. I hope that the debate will continue. However, I also believe that we have reached the stage where we should do more than talk and debate. We should begin to act. And in this respect there are a number of measures which the Congress could adopt in the near future. I have pointed to several such possible measures today. I again urge their favorable consideration by the Senate.

And in closing I would return to President Eisenhower's message. In citing the dangers of the military-industrial complex, President Eisenhower also stressed the fact that the complex was the product of necessity. Thus we cannot control these dangers by destroying the complex as some would seem to suggest. The military-industrial complex is a fact of modern American life. No amount of wishing will make it go away. At the same time all must recognize that although there are dangers inherent to the military-industrial complex these dangers are not inherently uncontrollable. In other words we must keep the military-industrial complex in a proper perspective. We must see both its essentiality and also its potential for abuse. We must have it, but we must control it. We must be vigorous in our efforts to see to it that it is a servant of peace and prosperity rather than the servant of war and destruction.

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

Mr. PEARSON. I am very pleased to yield to my colleague from Kansas.

Mr. DOLE. Mr. President, first of all, I commend my colleague from Kansas for a general review of the so-called military-industrial complex.

I feel that most of us will agree with many things said. I wish to add that we are fortunate in this administration to have a man like Melvin Laird as Secretary of Defense. I know of no one who has gone to the Cabinet level so well equipped.

As my colleague knows, Mr. Laird for 14 years was a member of the House Defense Appropriations Subcommittee.

Mr. Laird was a prober. He was a critic. He was a questioner. But, above all, he understood the Defense Department. He understood its responsibility, he tried to make the Department responsive and responsible when he could do so.

At the outset of this administration, both Secretary Laird and Under Secretary Packard had expressed the philosophy that we should take a close look at all of the programs and reexamine our military requirements and validate the need for any new major weapons system.

I would hope my colleague would agree that in the span of 6, 7, or 8 months, progress has been made by Secretary Laird. I would cite only a few examples of responsible progress under Mr. Laird.

First, Mr. Laird has established a Defense Systems Acquisition Review Council within the office of the Secretary of Defense to advise the Secretary of the current status and the readiness of each major system to proceed to the next phase of efforts in its life cycle.

Second, and I think this very important, there has been the appointment of a blue ribbon defense panel by the Secretary. This is a matter that he pursued with vigor while a Member of the House of Representatives. A blue ribbon defense panel has been appointed to reappraise the Defense Establishment. There has been the cancellation of the manned orbital laboratory. There has been the termination of the Cheyene helicopter program.

There have been new, frank, and candid reports to both the Senate and House Armed Services Committees on major weapons acquisitions.

Mr. Laird has attempted to provide Congress with more information. He has done an excellent job getting facts so that the Senate and the House can make valid adjustments. He has also endorsed as recently as July 31 the establishment of a Commission on Government Procurement. He views the Commission as another positive step in reporting on the methods of military procurement.

There have been numerous improvements in the management of weapons acquisition process.

As recently as Saturday we find the Secretary concurring in the judgment of the Senate concerning chemical and biological weapons. As an addition to the remarks of my colleague from Kansas, I want the record to show that we have a Secretary of Defense who is just as dedicated as anyone in the Senate or anyone in Congress in saving the taxpayers' money, and just as concerned about any so-called military-industrial complex.

The PRESIDING OFFICER (Mr. GRAVEL in the chair). Under the prior unanimous-consent agreement, the Senate will now proceed to other business.

Mr. PEARSON. Mr. President, I ask unanimous consent that I may continue for an additional 5 minutes.

Mr. BYRD of West Virginia. Mr. President, I am constrained to object. This unanimaous-consent request was made last week, as I understand, and Senators were put on notice that debate on the pending McIntyre amendment would be controlled and would last for 1 hour after the unfinished business was laid down.

Mr. PEARSON. Mr. President, I will withdraw the request. I do appreciate the situation of the leadership in this respect, and they were very gracious to give me time this morning. I can respond at another time.

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 PRESIDING OFFICER. Under the previous order, the Chair lays before the Senate the unfinished business, which will be stated.

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 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. The question is on agreeing to the amendment of the Senator from New Hampshire.

Mr. GOLDWATER. Mr. President, will the Senator yield for a question?

Mr. BYRD of West Virginia. I yield 1 minute to the Senator.

Mr. GOLDWATER. Mr. President, this is getting to be a rather unusual procedure, to request unanimous consent for a specific time for a speech and then nobody can make a rebuttal.

The Senator made an excellent speech. I do not agree with it in its entirety. He used President Eisenhower's quotations but he did not use enough of them. If I have to wait until tomorrow or September, the point I want to make will have lost its effectiveness.

I think I am going to start opposing all unanimous-consent requests for this type of presentation.

Mr. BYRD of West Virginia. I thank the Senator.

Mr. President, I ask unanimous consent that a brief quorum call may be had at this time.

Mr. STENNIS. Mr. President, will the Senator withhold his request for a quorum call?

What was the unanimous-consent request? Did the Senator make a unanimous-consent request about limitation?

Mr. BYRD of West Virginia. No. That was made last week.

Mr. STENNIS. I thank the Senator.

Mr. BYRD of West Virginia. Mr. President, I ask unanimous consent that there be a brief quorum call, the time to be equally divided between both sides.

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

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

The PRESIDING OFFICER. The clerk will call the roll.

The assistant legislative clerk proceeded to call the roll.

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

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

Mr. BYRD of West Virginia. Mr. President, I ask unanimous consent that at the conclusion of the vote on the pending amendment, the able chairman of the Committee on Armed Services be recognized.

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

Who yields time?

Mr. NELSON. Mr. President, how much time does the Senator desire?

Mr. McINTYRE. Ten minutes or so.

Mr. NELSON. I yield 10 minutes to the Senator from New Hampshire.

CHEMICAL AND BIOLOGICAL WARFARE

Mr. McINTYRE. Mr. President, the Senate today will consider amendment No. 131, which I introduced last Friday together with Senators YARBOROUGH,

PROXMIRE, HARTKE, PELL, NELSON, MONDALE, STEVENS, GOODELL, and HUGHES.

Had more time been available after the introduction, I am certain many other Senators would have joined in its sponsorship.

On an associated point, Mr. President, may I say that I was particularly pleased with Defense Secretary Melvin Laird's statement Saturday. This statement, expressing his concurrence with the goals of this amendment, reflects an admirable understanding on the part of the Secretary of the need for improved management and control of chemical and biological warfare programs.

Secretary Laird also deserves commendation for recommending a National Security Council study of these matters, and President Nixon deserves much praise for ordering the study.

Most helpful, too, in the present examination of CBW programs has been the consistent, progressive leadership of the distinguished chairman of the Committee on Armed Services, the Senator from Mississippi (Mr. STENNIS).

We are considering today a coordinated effort to deal with a highly complex and unpopular part of our defense structure in such a way as to achieve the kind of congressional control and national understanding we feel is needed, while, at the same time, avoiding involvement of the Senate in the lengthy procedure which would be required were we to take up a number of separate amendments.

Moreover, by bringing together in a single package a number of proposals involving chemical and biological warfare programs, our consideration can be all the more comprehensive.

The amendment introduced Friday did not include a section covering one particular area. The proposal dealing with this particular area was originally put forth by the distinguished Senator from Indiana (Mr. HARTKE). I am happy to say that since Friday we have reached agreement on the language for this section, a section relating to the subject of so-called "back-door financing" of CBW programs.

Mr. President, I send this section to the desk and ask unanimous consent to have it added to amendment No. 131, together with technical changes that have been made to the original amendment, No. 131; and I ask unanimous consent to have it printed at this point in the RECORD.

The PRESIDING OFFICER. Is there objection? The Chair hears none, and it is so ordered.

The modification is as follows:

At the end of amendment No. 131 add a new subsection as follows:

"(g)(1) Except as provided in subsection (g)(2) of this section, no funds authorized to be appropriated by this, or any other later enacted Act may be expended for research, development, test, evaluation, or procurement of any chemical or biological weapon, including any such weapon used for incapacitation, defoliation, or other military operations.

"(g)(2) The prohibition contained in subsection (g)(1) of this section shall not apply with respect to funds authorized to be appropriated by this Act."

On page 4, line 3, insert "will" between "agents" and "be".

On page 4, line 6, change "subsections (e)(1)" to "subsections (d)(1)".

On page 4, line 7, change "(e)(2)" to "(d)(2)".

On page 4, line 21, change "or an other" to "or any other".

On page 5, line 2, insert "of the Public Health Service" after "Surgeon General".

On page 5, line 3, delete "President" and insert "Secretary of Defense".

On page 4, line 22, insert "or any" after "lethal chemical agents,".

Mr. MCINTYRE. Mr. President, a word must be said at this point about the excellent work done by each of the Senators who have contributed sections of this amendment. Their individual research, the honing of their proposals to a remarkable precision of language, and the spirit of cooperation exhibited in their willingness to consolidate their proposals into a single amendment is in the finest tradition of this great body.

As we take up consideration of the amendment, let us keep in mind that already included in the overall legislation before us is a $16 million reduction in the Defense Department's budget for research and development in lethal offensive chemical and biological warfare. This reduction was recommended by my Subcommittee on Research and Development and accepted by the full Armed Services Committee.

I raise this thought so that, as we take up consideration of the amendment, we have a comprehensive picture of the action we can take in regard to CBW programs.

Now let me identify each of the sections of this amendment. I will not go into detail because I know other Members intend to do that.

The first section (402)(a), also developed by our able colleague the Senator from Indiana (Mr. HARTKE), calls for a full and complete semiannual report by the Secretary of Defense to the Congress setting forth in detail the total CBW research, development, test evaluation, and procurement program.

This, of course, would provide Congress with the kind of detailed information Congress and the public need in order to understand the programs and to determine future direction.

The second section (402)(b), developed by the able Senator from Wisconsin (Mr. NELSON), and the able Senator from New York (Mr. GOODELL), provides that no funds can be used for the procurement of any delivery system which is specifically designed to disseminate lethal agents.

This section, Mr. President, makes clear our opposition to the use of lethal CBW agents as offensive weapons and prohibits expenditure of funds for any device designed to deliver these agents.

The third section, (402)(c), expresses the concern of many about the deployment or storage of lethal agents and micro-organisms outside the United States. Recent accounts of unfortunate incidents involving such deployment or storage have prompted new congressional interest in what we may be doing in this area of CBW activity.

This section will provide for a full range of reports to the interested Congressional committees, and will also insure consultation with foreign nations before we deploy CBW agents on their soil.

Mr. President, I believe that in general we accomplish the substance of this proposal, but the section makes unmistakably clear Congress' interest and desires.

This section is another developed by the Senator from Wisconsin, (Mr. NELSON) and the Senator from New York (Mr. GOODELL).

The next section, (402)(d), also proposed by the Senator from Indiana (Mr. HARTKE), relates to recent fears of many about the possible dangers inherent in the rail shipment of lethal chemical and biological agents.

Basically, this section covers three areas. It requires the Surgeon General of the Public Health Service to assure that shipment will not be detrimental to the public health.

It would give advance notice of such shipments to the Congress and civilian agencies.

And finally, it will bring about the detoxification of lethal agents before they are shipped off for disposal. Again, some of this already is being done, but this section makes clear the Congress interest and intent.

I would like to say at this point that while I am completely in agreement with this section I think we should always keep before us the fact that it is not the chemical and biological warfare service alone that transports biological agents around the country, nor is this service the principal shipper of such agents. The National Institute of Health and other public and private health agencies transport an enormous amount of such agents.

We are not dealing with such agencies in this particular legislation, to be true, but we may want to consider this in other legislation. I think a study would show that the amount of potentially dangerous biological agents shipped by CBW is relatively small when measured against the total shipment by all agencies.

The able Senator from Rhode Island (Mr. PELL), proposed the next section 402(e). While the previous section dealt with transportation of lethal chemical and biological agents within the United States, the section of the Senator from Rhode Island, deals with transportation of such agents outside the United States.

It also includes the matter of testing, development, storage and disposal of such agents outside the United States, and it asks for the full consideration of U.S. international responsibilities when lethal CBW agents are moved, tested, disposed of, or developed in foreign areas.

This section places certain responsibilities in the hands of the Secretary of State to assure that we are not likely to violate international law.

The succeeding section 402(f), an additional section developed by the Senator from Wisconsin (Mr. NELSON) and the Senator from New York (Mr. GOODELL) is, perhaps, one of the most significant in the proposal.

I am sure we have all been concerned about incidents of the past several years where outdoor testing of lethal agents and micro-organisms have jeopardized both animal and human life.

This particular section of the amend-

ment would eliminate open air testing except in those instances when the Secretary of Defense, under the direction of the President of the United States, would declare that our national security required such testing, and the Surgeon General of the Public Health Service determined that the public's health would not be endangered.

Furthermore, this section would require that appropriate committees of the Congress would be informed of all proposed open air tests at least 30 days prior to the date on which it is proposed to hold them.

The final section of the amendment, added by unanimous consent today, would become section 402(g)(1) and (2). This section, proposed by the Senator from Indiana (Mr. HARTKE) is another step in congressional control over funds that can be used in CBW efforts.

It would restrict the reprograming of funds from other programs into CBW. I am not aware that so-called backdoor financing of CBW is presently taking place, Mr. President, but with the adoption of this section we would assure that it does not.

In summary, this amendment will serve the obvious public need to better know and understand our chemical and biological programs.

It will provide in-depth information to the Congress in its continuing consideration of this broad, complex, and frequently distasteful matter.

And it comes directly to grips with those incidents that have so disturbed the Nation recently—the severe illness of two dozen CBW workers in Okinawa, the death of the sheep at Dugway, Utah, and the dangers inherent in moving deadly CBW agents across the country.

I conclude, Mr. President, by pledging my determination to make the chemical and biological warfare program a principal item on the agenda of the Research and Development Subcommittee of the Armed Services Committee during the coming year.

We will want to examine in detail every facet of the program.

We will be briefed by a full range of scientists and other experts and receive pertinent material from them.

We will want to hear from other Members of the Senate who have a particular interest in CBW.

And we will want to survey the effects of the actions proposed in this amendment and in other sections of the current authorization bill.

In short, when we return next year to consider the 1971 version of the authorization bill I sincerely believe that the recommendations we will make will enable the Senate to meet problems that may still exist in this program.

In the interim, Mr. President, I strongly urge the adoption of this amendment.

The PRESIDING OFFICER. Who yields time?

Mr. STENNIS. Mr. President, under the agreement, who controls time?

The PRESIDING OFFICER. The minority leader and the majority leader or their designee.

Mr. NELSON. Mr. President, how much time does the Senator from New York desire?

Mr. GOODELL. Mr. President, will the Senator yield to me for 10 minutes.

Mr. NELSON. I yield 10 minutes to the Senator from New York.

Mr. GOODELL. Mr. President, before I begin my formal remarks I wish to offer my commendations to the distinguished Senator from New Hampshire.

I would like to ask the Senator from New Hampshire a question to make sure a technical correction has been made in the amendment. I refer to page 4, line 22, of amendment 131.

Mr. McINTYRE. Is the Senator referring to the technical amendments I offered this morning to the original amendment?

Mr. GOODELL. Yes. I refer to that point where reference is made to "lethal chemical agents, disease-producing biological micro-organisms, or biological toxins." It was my understanding there might be some misinterpretation here because of the words which should read "or any other."

Mr. McINTYRE. Does the Senator refer to page 4, line 22, where the amendment reads, "None of the funds authorized to be appropriated by this or any other act shall be used for the open-air testing of lethal chemical agents, disease-producing biological micro-organisms, or biological toxins"?

What is the question?

Mr. GOODELL. That is the way the amendment reads?

Mr. McINTYRE. That is the way the amendment reads at the present time.

Mr. GOODELL. I simply wanted to clarify that point. I think it is a crucial point. We are requiring this procedure of lethal chemical agents that are tested and all disease-producing biological micro-organisms, or biological toxins. Is that correct?

Mr. McINTYRE. The Senator is correct.

Mr. GOODELL. Mr. President, the omnibus anti-CBW amendment we are presenting here today represents an important break with secrecy over chemical and biological weapons. It is a modest measure to check the vast destruction potential of our CBW arsenal. Still, it is a significant measure.

It is significant for it opens up the secrecy which has cloaked the spiraling gas and germ weapons program. It checks the weapons spiral. It minimizes international repercussions over CBW. It provides for public health and safety by guarding against the perils in transport, storage, and disposal of CBW. It puts up a barrier to future outdoor testing of CBW. It encourages congressional review.

The distinguished chairman of the Committee on Armed Services has called this omnibus anti-CBW amendment a solid start on the problem, and he is quite certainly right.

I should like to commend Senator STENNIS and the members of the Armed Services Committee for taking the first major step in controlling the CBW program. The committee cut $16 million from the Pentagon's request for funds earmarked for research and development on offensive lethal chemical and biological weapons. This significant step has set in motion other steps to control the CBW program.

I would like to start today by considering open-air testing of deadly gas and disease-producing germs. It was with great reluctance that I agreed to modify the "flat ban" amendment originally introduced by the Senator from Wisconsin (Mr. NELSON) and myself. A flat ban on outdoor CBW testing would eliminate the threat that a test cloud of deadly gas and germs might drift from the test site to our cities and towns. The moratorium postpones but does not eliminate this threat. We felt we could make a significant step forward at this time.

On the assurance of the Senator from New Hampshire that his subcommittee was going to look intensively at this entire program we have great confidence he will do so and that we can move forward in the future with greater restrictions consistent with national security.

There are pluses and minuses in the test ban revision. The minus side leaves the option open for future tests. The plus side puts congressional control over testing. The burden of proof is on the Pentagon if any further tests are to take place due to national security. I believe there is agreement here today that no longer will these tests take place on a routine basis. There must be a high-level determination that such tests are directly involved with the national security. That determination must be made by the Secretary of Defense under guidelines prescribed by the President and must be agreed to by the Surgeon General with reference to the procedures to be followed.

It is my view that it should be unnecessary in the future for us to engage in any outdoor testing, but we do leave the door open for the very unusual—and I emphasize very unusual—situation that might arise in the national security.

While we are studying this problem in the next year, such tests might take place under very careful regulations and safeguards. The burden of assurance that no health hazard will result from any test rests with the U.S. Surgeon General. In each case, Congress will have the opportunity for hard questioning. On balance, then, the moratorium is acceptable at this beginning stage of CBW review.

If the moratorium is to be meaningful, we simply must be guided by the principle that the security of this Nation begins with the health and safety of our people. Pentagon requests based on national security simply must be viewed in this context. If not, the moratorium on outdoor testing would be relatively meaningless. If CBW tests are requested, every effort must be made to confine them to the laboratory. This point cannot be emphasized enough. We all know the example at Dugway Proving Grounds in Utah where thousands of sheep were killed. Had the wind shifted farther a large city in the United States would have been engulfed by deadly nerve gas, VX—odorless and colorless. What a disaster that would have been. We must

not engage in such tests without the highest priority given the safety of our people.

One example suffices to explain why CBW testing should be confined to the laboratory. It is an example which clearly demonstrates that hazards from open air tests of chemical and biological weapons are not vague speculations, but grim realities. The example is the now well-known sheep-killing accident last year, caused by an open air test of VX at the Army's Dugway Proving Grounds in Utah. Some say that safety rules for CBW testing are sufficient. Safety rules, they may say, are enough to protect against the fatal results possible when deadly nerve gas is tested in the air. Before the sheep-killing incident and since that time, the Army has announced safety regulations for CBW open air testing.

Are safety rules at the test site sufficient for public safety? I simply cannot accept that they are. A freakish wind shift or a poorly supervised test may never occur. Let us consider, then, what might otherwise happen.

In the 1968 sheep-killing incident, the test at Dugway was to determine how nerve gas VX distributes itself downwind 5 to 25 miles per hour to the northeast. This was the information sought. Under today's safety rules at Dugway, the test would be limited to winds 15 miles per hour. Even so, would this prevent another nerve gas accident? Consider what happened in the sheep-killing incident. The test started. The jet opened its tanks and began spraying nerve gas over the test area. After a few seconds, the tanks were to close and the plane pull up. But the tanks did not close; the tanks stayed open. The plane pulled up with nerve gas still spraying. Then over 6,000 sheep were killed.

Regardless of safety regulations, field testing of biologicals at Dugway, has produced land designated as "permanent biocontaminated area."

What next is in store from such CBW open air testing?

As we debate the wisdom of banning open air testing of lethal gas and any disease-producing bacteria or toxin, the very testing of deadly nerve gasses continues. It is of little comfort to me to hear from the Defense Department that there are no immediate plans to conduct outdoor tests of lethal biological agents. It is of little comfort that the Q-fever field tests at Dugway have been completed and now research will shift to the laboratory to evaluate results.

While the specter of future open air tests for disease-producing bacteria hangs over us; while outdoor testing of such deadly nerve gasses as VX, Tabun—GA—Sarin—GB—and Soman—GD—continues; when any open air test of deadly gas or any disease-producing bacteria takes place, the issue of public safety remains of grave concern.

If just one accidental release of deadly nerve gas or disease-producing bacteria spreads to our cities and towns, the toll in death and sickness would be indefensible. Every precaution must be taken to assure the health and safety of our people. Animals must be protected. Environment must be preserved. All these things must be done regardless of how slight the danger.

Consider the deadly effect of these chemical agents. Consider the vast destruction potential of the disease-producing biologicals. Let us take a look at these agents in deciding whether in terms of public safety alone, we should ban lethal CWB from being tested outdoors.

Mr. President, I ask unanimous consent to have printed in the RECORD a table of chemical and biological agents, together with a table on planned open air testing at various sites including the site at Dugway Proving Ground, Utah, the Deseret Test Center in Utah, and at Edgewood Arsenal in Maryland.

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

TABLE OF CHEMICAL AND BIOLOGICAL AGENTS

THE CHEMICAL AGENTS

Nerve gases

GB: An odorless, colorless, volatile gas that can kill in minutes in dosages of 1 milligram, approximately 1/50 of a drop. In the U.S. arsenal since the late 1940's, it is also known as Sarin. The gas kills by paralyzing the nervous system.

VX: Another odorless gas that, unlike GB, does not evaporate rapidly or freeze at normal temperatures. Because of its low volatility, it is effective for a longer period of time. VX also is capable of killing in 1 milligram doses and, like GB, paralyzes the nervous system in minutes.

Incapacitating agents

BZ: A gas that is either a psychochemical or a strong anesthetic which can produce temporary paralysis, blindness, or deafness in its victims. BZ has also been known to cause maniacal behavior. Its precise makeup is secret.

Riot control gases

CN: A non-lethal gas with a deceptive, fragrant odor similar to apple blossoms. The agent, now in use in Vietnam, is a fast-acting tear gas that also acts as an irritant to the upper respiratory system.

CS: An improved, more toxic tear gas that quickly causes tearing, coughing, breathing difficulty, and chest tightness. Can temporarily incapacitate men in twenty seconds. Heavy concentrations cause nausea. It is now used in Vietnam.

Harassing agents

DM: A pepper-like arsenical gas that causes headaches, nausea, vomiting, chest pains for up to two or three hours. It can be lethal in heavy doses and has been blamed for some deaths since its first use in Vietnam in 1964. DM is widely known as adamsite and was used in World War I.

HD: A pale yellow gas with the odor of garlic, popularly known as mustard gas. Causes severe burns to eyes and lungs and blisters skin after exposure, but onset of symptoms is delayed from four to six hours. Can kill in heavy concentrations. Mustard, like VX, is not volatile and is usually effective for days after its use. It caused one-fourth of the U.S. gas casualties in World War I.

Defoliants and herbicides

2,4-D: A weed-killing compound known as dichlorophen-oxyacetic acid that has relatively short persistence in the soil and a relatively low level of toxicity to man, if properly dispersed. Heavier concentrations can cause eye irritations and stomach upsets, however. Dangerous to inhale. Usually used in Vietnam along with 2,4,5-T (trichlorophenoxyametic acid), which has similar—although somewhat more toxic—properties. Effective against heavy jungle.

Cacodylic Acid: An arsenic-base compound used against rice plants and tall grass. Strong plant killer that gives quick results. One serious restriction on its use is the possibility that heavy concentrations will cause arsenical poisoning in humans. Widely used in Vietnam. It is composed of 54.29 per cent arsenic.

BIOLOGICAL AGENTS

Anthrax: An acute bacterial disease that is usually fatal if untreated when it attacks the lungs (pulmonary anthrax). Death can result in twenty-four hours. Found naturally in animals, which must be buried or burned to prevent contamination. Symptoms include high fever, hard breathing, and collapse. Also known as woolsorters' disease.

Brucellosis: Bacterial disease usually found in cattle, goats, and pigs. Marked by high fever and chills in humans. Also known as undulant fever. Fatal in up to 5 per cent of untreated cases. Symptoms can linger for months.

Encephalomyelitis: Highly infectious viral disease that appears in many forms and gradations: it can be simply debilitating or fatal. Venezuelan equine encephalomyelitis (VEE) kills less than 1 per cent of its victims and lasts as few as three days; Eastern equine encephalomyelitis (EEE) is fatal about 5 per cent of the time, if untreated, and can seriously cripple the central nervous system of survivors.

Plague: Acute, usually fatal, highly infectious bacterial disease of wild rodents found in two forms—bubonic and pneumonic. Sympptoms of bubonic plague include small hemorrhages, and the black spots that led the disease to be commonly known as the "black death" during the massive epidemics of the past. Pneumonic plague is highly infectious because it is spread from man to man via coughing. Symptoms include, fever, chills, rapid pulse and breathing, mental dullness, coated tongue, and red eyes.

Psittacosis: Viral infection in birds that is transmissible to man, with symptoms of high fever, muscle ache, and disorientation. Disease can be mild, and last less than a week, or can cause death in upwards of 40 per cent of those afflicted. Complete convalescence may take months.

Q-fever: Acute, rarely fatal rickettsial disease usually found in ticks, but also found in cattle, sheep, goats, and some wild animals. The Q-fever organism can remain alive and infectious in dry areas for years. Rarely fatal but the resulting fever may last up to three months.

Rift Valley Fever: Viral infection of sheep, cattle, and other animals that can be transmitted to humans, usually to the male. Symptoms include nausea, chills, headaches, and pains, but the disease is mild: despite the severity of symptoms deaths are rare and acute discomfort lasts only a few days. Also believed to be more virulent among Asians.

Rocky Mountain Spotted Fever: An acute rickettsial disease transmitted to man by the tick. One of the most severe of all infectious diseases. Can kill within three days. Fevers range up to 105 degrees F. Often found in northwestern United States, but susceptibility to the disease in general. Highly responsive to treatment.

Tularemia: A bacterial disease marked by high fever, chills, pains, and weakness. Acute period can last two to three weeks. Sometimes causes ulcers in mouth or eyes, which multiply. Untreated, its mortality rate is between 5 and 8 per cent. Highly infectious, and usually found in animals, fowls, and ticks. Also known as rabbit fever.

Source: Chemical and Biological Warfare, America's Hidden Arsenal, by Seymour H. Hersh (Doubleday Co. 1969).

PLANNED OPEN AIR TESTING—MARCH 1968–MAY 1969, DUGWAY PROVING GROUND, UTAH

Item	Agent	Agent amount	Quantity
M139 bomblet	GB		1 round per trial (5 trials).
E139 bomblet	GB		1 item per trial (8 trials).
105 millimeter projectile	GB	1.5 pounds per round	1 round per trial (3 trials).
BLU 19/B23	GB		1 round per trial (1 trial).
M55 rocket	GB		1 round per trial (4 trials).
Spray boom (truck)	GB	2 gallons per trial	3 trials.
8-inch howitzer shell	VX	14¾ pounds per round	1 round per trail (5 trials).
Spray boom (truck)	VX	2 gallons per trail	2 trials.

PLANNED TESTING, FOURTH QUARTER, FISCAL YEAR 1969: APRIL–JUNE 1969

Item	Agent	Agent quantity per item	Number of items to be tested
Deseret Test Center, Utah (Dugway Proving Ground, Utah):			
United States Army:			
8 inch shell, 50 foot release	VX	15.4 pounds	4
E139 bomblet	GB		4
Do	GB		4
M55 rocket warhead	GB		4
M23 land mine	VX		6
Test fixture, ground release [1]	VX	10 pounds	3
Test fixture, ground release [1]	HD	do	3
155-millimeter shell, ground release [1]	GD	12.5 pound	10
Test fixture, ground release [1]	GA	1.2 pounds	16
United States Navy:			
Bomblet	G-type	3 pounds	6
Defense system challenge, ground release [1]	GB or VX	do	3
United States Air Force: BLU–19 bomblet	GB		4
Edgewood Arsenal, Md.—all Army:			
155 mm shell, ground release [1]	VX	6.5 pounds	[2] 8
Test fixture	EA 1356	100 grams	[2] 24
Do	GB	50 grams	[2] 20
E139 bomblet (EOD test)	GB		1
M23 land mine	VX		3
E139 bomblet	GA		[2] 14
	GB		8
	GD		[2] 30
Test munition	VX	10 pounds	2
Fort McClellan, Ala: [3]			
Bulk agent, poured on a suitable surface for detection and decontamination exercises.	HD	2 gallons	1
	HD	1 gallon	5
	HD	160 centimeters	1
	HD	120 centimeters	1
	HD	80 centimeters	6
	HD	40 centimeters	5
	GB	42 centimeters	5
	VX	42 centimeters	5
	VX	42 centimeters	8

LETHAL AGENT, OPEN-AIR TESTS SCHEDULED, FIRST QUARTER, FISCAL YEAR 1970—JULY–SEPTEMBER 1969

Item	Height of release	Agent	Agent quantity per item	Quantity of item to be tested
Deseret Test Center, Utah (Dugway Proving Ground):				
United States Navy: V Bomblet	Ground	VX	1 pound	3
United States Army:				
55-gallon drum—portable water	do	GB	Less than 2 pounds.	5
		HD		
		VX		
M2XR		XR		75
155 M121 projectile		GB		28
155 M121 projectile		VX		28
155 M121 projectile		GB		6
155 M121 projectile		VX		6
4.5-inch mortar	Ground	HD	6 pounds	148
		HT		
155	do	G	12 to 14 pounds	30
M23 Land mine		VX		12
M56 Warhead (M55 rocket)		GB		10
United States Air Force:				
Test fixture	Ground	HD	8 pounds	7
Edgewood Arsenal, Md. (All Army tests):				
155 Howitzer shell	Ground	VX	6.5 pounds	7
Test fixture	do	EA1356	100 grams	24
Do	do	EA1356	11 pounds	3
Do	do	GB	50 grams	20
E139 bomblet (EOD) test)		GB		1
Test bomblet	do	VX	1 pound	8
M23 land mine		VX		3
155 Howitzer canister	do	VX	3 pounds	9
Test spray	1 meter	GA	1.3 pounds	16
Fixture		GB	1.3 pounds	8
		GD	1.3 pounds	16
		VX	10 pounds	2
		GB		4
E139 bomblet		GD		8

[1] Ground releases are statically detonated or functioned.
[2] To be conducted this quarter or next quarter, depending on availability of facilities.
[3] Chemical agent decontamination and detection exercises are conducted to train chemical specialists in techniques for these operations. The specialists are subsequently assigned to Army divisions and decontamination teams.

Source: Subcommittee on Conservation and Natural Resources, Committee on Government Operations, U.S. House of Representatives.

Note: Recent exchanges between Representative Henry Reuss, chairman of the House Conservation and Natural Resources Subcommittee and Army Secretary Stanley Resor give some idea of the scheduling of open air tests of chemical agents, including nerve gas.

The unclassified data above lists item-by-item outdoor testing for the periods March 1968 to May 1969 at Dugway Proving Ground, Utah; April to June 1969 at Deseret Test Center, Utah (Dugway Proving Ground, Utah); at Edgewood Arsenal, Md.; and at Fort McClellan, Ala.; July to September 1969 at Deseret Test Center, Utah (Dugway Proving Ground, Utah) and at Edgewood Arsenal, Md.

Mr. GOODELL. Mr. President, let us suppose that VX again escaped from a testing site. Suppose instead of drifting to a field of sheep, the nerve gas drifted to a city or town of people. The deadly nerve gas VX is colorless and odorless. The protection required against its very rapid fatal effect is a gas mask and protective clothing. First aid suggested is atropine. What chances under these circumstances would our people have of surviving?

A ban on outdoor testing of lethal chemical agents, including VX, would prevent such circumstances from arising.

I simply cannot accept accidental death, contaminated land, and the spread of disease as a price for adding still more to the already vast offensive capability of our CBW arsenal.

Mr. President, on Saturday, Secretary of Defense Laird said that a chemical warfare deterrent and a biological research program are essential to national security. He said that research and testing of CBW agents should continue.

If I rightly understand, we can expect Pentagon requests to break the proposed "moratorium" on CBW open air tests. If such Pentagon requests be made and agreed to, I fear we will be back again where we started. That is, we will be back with peril to the public health and peril from a spiraling CBW program.

Mr. President, why, in view of the nuclear, and other deterrents, are chemical warfare deterrence and an offensive biological research program essential to national security?

To date, research in biological warfare has already produced biological warheads for the Sergeant; research has brought germ warfare to the missile age.

Chemical deterrence has also found shelter in the Sergeant. Still, we are told by the Pentagon that research and testing should continue.

What are we really contributing to when we stockpile munitions filled with lethal gas and disease-producing bacteria? Do we not contribute to that eerie sense of doomsday? What do we mean to accomplish with gas and germ weapons? To prevent use? But what if the net result is to proliferate use?

Mr. President, anything so infamous as germ warfare should be deterred ultimately by eliminating germ weapons. Some will say that this is a dream. Some will say that it cannot be achieved. I cannot accept this reasoning to justify germ weapons. Today, I call for the day when we will dismantle our germ arsenal. I look forward to the day, when the United States will eliminate the means by which civilizations of the world could plunge into the abyss of epidemic and mass death. I urge today, that we fight

germs with medicine; not with germ weapons. Medical protection against germs is reasonable, it is sane. To protect against germs with germ weapons is folly; it is madness.

Deterrence with defensive equipment, such as gas masks and vaccines, is more reasonable than the deterrence offered by military science and by hardware which places gas and germs in grenades and in nuclear warheads. Deterrence with defensive equipment has the added advantage of beneficial "spin-offs" for peacetime medical applications gained by gas and germ research. It is still unclear to me *why* medical research of this kind is done by the Defense Department when such research can be done by the Public Health Service.

Deterrence with weapons has the negative side effect of arms race competition with other nations or indeed, with our own self. Unilateral armament may be the net effect, or perhaps is the goal of our CBW program. Still, we cannot ignore our contributions to proliferation of CBW throughout the world.

Mr. President, how does our national security benefit from CBW proliferation? We have spent years to check nuclear proliferation to nonnuclear nations. If we succeed in nuclear nonproliferation, then few nations will pose a nuclear threat to the cities of this country. Chemical and biological weapons are a way that many nations can threaten our cities.

Do we and should we encourage foreign nations to build up gas and germ weapons as a deterrent to a potential enemy? Should we train foreign officers in gas and germ warfare? Should we have CBW courses at Fort McClellan and invite foreign officers to attend?

Mr. President, many people are unaware that in the past 20 years, concerning CBW, and prior to 1951, we even had a foreign officer training program which trained military officers from Egypt and Yugoslavia in the use of chemical and biological agents. It has been charged that, subsequent to that time, Egypt used deadly gases in Yemen. We have a share of the responsibility for this tragic development in the history of mankind.

Some 35 nations have received foreign officer training in how to use CBW weapons. This is truly a significant rung up the balance-of-terror ladder for the world, because chemical and biological agents can be produced cheaply by countries with very small resources.

Unlike nuclear weapons, chemical and biological weapons which can wipe out mankind can be produced by small countries. We must move forward—certainly our country must—and should not be a party to escalating an arms race in this area of CBW.

Certainly it is difficult to look back at different countries' activities in the past 20 years with any confidence that we have done anything but contribute to greater escalation.

It is particularly distressing to me that our CBW program includes a foreign officer training program in CBW. The Army offers two courses in CBW open to foreign officers at Fort McClellan. One course is for a period of 9 weeks. The other is for a period of 9 months. Since 1951, the Pentagon has provided CBW training to officers from over 35 foreign countries.

Mr. President, I ask unanimous consent to have printed in the RECORD two charts showing the countries which have participated in the Army's CBW training program.

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

ARMY'S CBW FOREIGN OFFICER TRAINING PROGRAM—PARTICIPATING COUNTRY LIST, FROM 1951 TO PRESENT

FOREIGN OFFICERS TRAINING PROGRAM—9 WEEK COURSE

	Fiscal year—	
	1969	1970
Japan		
Korea		
Philippines		
Taiwan		
Thailand		
South Vietnam		
Iran		1
Lebanon		
Pakistan		
Saudi Arabia	5	4
France		
Germany	2	2
Greece	5	4
Italy		
Netherlands		
Norway		
Spain		
Sweden		
United Kingdom	3	3
Yugoslavia		
Canada	1	2
Argentina		
Mexico		
Australia	2	

Source: Department of Defense

FOREIGN OFFICERS TRAINING PROGRAM—36 WEEK COURSE

	Fiscal year	
	1969	1970
Australia		1
Japan		
Korea	2	1
Philippines		1
Taiwan	1	
Thailand	1	1
South Vietnam		2
Iran		
Iraq		
Jordan		
Lebanon		
Pakistan		
Egypt[1]		
Austria		
Denmark		1
Germany		
Greece		
Italy		
Norway		
Switzerland		
Turkey		
Yugoslavia[1]		
Canada		
Argentina		
Brazil		
Venezuela		
Israel		1

[1] Terminated since early 1950's.

Source: Department of Defense.

Mr. GOODELL. Mr. President, officers have come here to learn about CBW. They have come from Europe, from Latin America, from the middle East and from Southeast Asia. This year, emphasis has been given to training officers from Vietnam, Thailand, Korea, Taiwan, and the Philippines.

I am concerned that such training of foreign officers could inspire an appetite for acquisition of these insidious weapons of war. I am disturbed that knowledge and acquisition of CBW could propel nations of the world to use CBW in war. Have we learned nothing from Yemen? Indeed, sharp review of this foreign officers training program in CBW is long overdue.

I urge that the Senate Armed Services Committee make a complete review of this aspect of the CBW program. The question to be faced is whether these study courses should be continued or abandoned in the name of reason.

If we fail to halt chemical and biological weapons spread and build-up now, what will be in store for future generations? While we now pause on the present rung of the CBW balance-of-terror ladder, we see that we are in a near perfect model of weapons escalation. If we have "overkill" in nuclear weapons; we have "superkill" in chemical and biological weapons. If the Pentagon has asked us to deploy an ABM for defense against nuclear attack, it is just a matter of time that the Pentagon will ask us for funds to deploy an ACBM, an anti-chemical and biological monitoring system?

We simply must guard against the dangers inherent in the very existence of chemical and germ weapons. There is danger in any outdoor testing of lethal gas and any disease-producing bacteria and toxin. There is danger in CBW escalation and proliferation. There is danger in the use of gas and germs in warfare.

Today, we can start to check the dangers posed by CBW by acting favorably on the omnibus anti-CBW amendment. We can begin today with what promises to be a very long and difficult road to additional review and further control of chemical and biological weapons both in this country and throughout the world.

Yet to be done is a review by the whole Congress of many general areas of inquiry:

Why do we have a gas and germ arsenal? Is the Pentagon's retaliation in kind a valid justification given the nuclear deterrent?

How does our CBW program contribute to the proliferation of CBW throughout the world?

What is the U.S. policy on use of these weapons in combat?

What steps are the United States willing to take in CBW arms control?

Let us give deep consideration to the grave moral issues which arise when we stockpile munitions filled with lethal gas and disease-producing bacteria. Let us think deeply on this as we move further in our review of CBW from the standpoints of deterrence, proliferation, use in combat, and targets for further disarmament.

More steps can be taken to control chemical and biological weapons. These include:

Presentation of the Geneva Protocol by the President to the Senate for ratification. The United States signed, but never ratified, the 1925 Protocol outlawing use of gas and germs in war.

A report by a nongovernmental Scientific and Medical Advisory Committee on CBW. This report could focus on scientific, medical, and arms-control aspects of chemical and biological weapons. The

report should be presented to both the President and to Congress. Paralleled with congressional examination and that of the National Security Council, such a report could be an important contribution in options for charting a long-range course of action on gas and germ weapons.

These are some more steps we can take to control CBW in addition to the omnibus anti-CBW amendment we are considering today.

Mr. President, I am not completely satisfied with the compromise, but I think it is a significant breakthrough.

I want to commend particularly the Senator from Wisconsin (Mr. NELSON) for his cooperation in working with me and others in developing these amendments, particularly the three originally cosponsored by us. I would also like to commend the Senator from New Hampshire for his continuing concern and interest in this area, and for his cooperation in working out the amendment which we expect will be carried through in conference and not diluted further.

Mr. McINTYRE. Mr. President, will the Senator from Wisconsin yield me 1 minute?

Mr. NELSON. Mr. President, how much time remains to me?

The PRESIDING OFFICER. Four minutes remain to the Senator from Wisconsin.

Mr. NELSON. I yield 1 minute to the Senator from New Hampshire.

The PRESIDING OFFICER. The Senator from New Hampshire is recognized for 1 minute.

Mr. McINTYRE. Mr. President, I should like to respond to the Senator from New York and commend him for the fine work he has done in this area of CBW, and to commend also the Senator from Wisconsin (Mr. NELSON) and others, and their staffs, for their close cooperation and the fine work they have done in trying to bring together and consolidate the thinking on control matters concerning the CBW program.

To this point I would say that all of these Senators have cooperated. The compromise may not please everyone; but, as the Senator from New York stated, it represents a beginning of control that Congress should have over this program.

Mr. NELSON. Mr. President, I thank the Senator from New Hampshire. As chairman of the subcommittee, along with other Senators and their staffs, they did a superb job in working out the combined amendment.

I should like to mention that a number of us have offered amendments of various kinds to the budget. It is appropriate to mention that the original budget on January 14 was $23,151,660,000. That was reduced by Secretary Laird's recommendations to $21,963,060,000. And then through the efforts of the chairman, the Senator from Mississippi (Mr. STENNIS), the budget was cut another almost $2 billion, down to $20,059,500,000.

It should not go unnoted that the chairman and his committee did an excellent job in reducing the budget. The fact that a number of us have other amendments should not cause us to ignore the fact that the chairman did a fine and conscientious job.

Mr. President, I ask unanimous consent to have printed in the RECORD a news story from the Washington Post of yesterday, Sunday, August 10, 1969, on a statement by the Secretary of Defense, Mr. Laird, as well as the statement by Mr. Laird made on August 9, 1969, regarding the CBW amendment pending.

There being no objection, the news article and statement were ordered to be printed in the RECORD, as follows:

[From the Washington (D.C.) Post, Aug. 10, 1969]

CBW CURB ENDORSED BY LAIRD

The Defense Department announced unexpectedly yesterday that it would support efforts for strict congressional controls on the testing and production of chemical and germ warfare weapons.

The announcement by Defense Secretary Melvin R. Laird virtually insures Senate approval Monday of a revised but still broad amendment drawn up by critics of the Pentagon's past activities in the CBW field. It would, among other restrictions, ban most open air testing of the lethal agents.

If approved, the CBW amendment would be the second major victory for critics of the Pentagon since they failed by two votes last week to block initial deployment of the Safeguard anti-ballistic missile system.

The Senate's liberal bloc won approval Thursday of a potentially far-reaching amendment that would give the General Accounting Office greater powers to audit defense contracts.

"I am in agreement with the goals of the (CBW) amendment," Laird said yesterday in a statement released by the Pentagon.

"I believe this revised amendment will allow us to maintain our chemical warfare deterrent and our biological research program, both of which are essential to national security," the statement said.

Senate Armed Services Committee Chairman John Stennis (D-Miss.) said Friday he would probably support the amendment and predicted its approval.

The compromise language, which the original supporters—said would not harm the amendment, would allow open air testing of CBW agents only when the Secretary of Defense certified that it was necessary for national security, the U.S. Surgeon General certified that it would not be hazardous to health or the environment and congressional committees had been notified in advance.

There are no restrictions on such testing now. The original amendment would have flatly banned it.

The compromise version was worked out Friday in a meeting between Dr. John S. Foster, Pentagon research director, and Sen. Thomas J. McIntyre (D–N.H.), chairman of an Armed Services subcommittee that had already recommended deletion of all funds for development of offensive CBW weapons.

CONCERN CITED

Laird said that when he took office in January he "became concerned with the management and control of our chemical warfare and biological research programs" and "felt that improvements were needed in the management and control of these programs."

One result of this concern, he said, was President Nixon's directive in April ordering the National Security Council to make a thorough study of CBW activities.

"Pending the completion of the NSC study," Laird said, "I believe it is prudent that we act jointly with Congress and take actions, wherever possible, to improve the management and control of chemical warfare and biological research programs."

Laird emphasized that research and testing of CBW agents should continue even though the United States has stated it would use them only in self-defense, because "failure to maintain an effective chemical warfare deterrent would endanger national security."

The amendment would also require semiannual reports to Congress on CBW spending and would bar procurement of further CBW delivery systems, CBW activities found by the Secretary of State to violate with international law, most shipments of CBW agents within the United States and transport to foreign countries without approval of the foreign nation and notification to Congress.

$2.5 BILLION SPENT

Since 1960, the Pentagon has spent about $2.5 billion on CBW activities with little congressional scrutiny or public knowledge.

The amendment would be attached to the $20-billion military procurement bill, which has been on the Senate floor for five weeks. Nearly a dozen other amendments are awaiting action and Senate leaders said Friday the bill would probably not come to a final vote until September.

Sen. Gaylord Nelson (D-Wis.), a sponsor of the CBW amendment, released this list of colleges and universities engaged in Pentagon CBW contracts:

"Boston Univ., Brooklyn College, Buffalo Univ., Univ. of California at Berkeley, Univ. of California at Los Angeles, Univ. of Chicago, Univ. of Connecticut, Cornell Univ., Delaware, George Peabody College, George Washington Univ., Georgia Institute of Technology, Hahnemann Medical College, Harvard, Univ. of Illinois at Urbana, Illinois Institute of Technology.

Also, Indiana Univ. Foundation, Iowa State Univ., Johns Hopkins, Kansas State Univ., Univ. of Maryland and its medical and dental schools, Univ. of Massachusetts, Massachusetts Institute of Technology, Univ. of Michigan, Univ. of Minnesota, Univ. of North Carolina, Ohio State Univ., Univ. of Oklahoma, Univ. of Oregon, Univ. of Pennsylvania, Univ. of Pittsburgh, Polytechnic Institute of Brooklyn.

"Also, Rutgers, St. Louis Univ., Stanford Research Institute, Univ. of Tennessee, Univ. of Texas at Austin, Texas A&M, Univ of Utah, Utah State Univ., Medical College of Virginia, Univ. of Washington, Washington State Univ., Western Reserve Univ., College of William and Mary, Univ. of Wisconsin and Yale."

MEMORANDUM FOR CORRESPONDENTS, AUGUST 9, 1969

Secretary of Defense Melvin R. Laird today issued the following statement in response to queries about the DoD position on the pending McIntyre amendment.

On assuming the office of Secretary of Defense in January, I became concerned with the management and control of our chemical warfare and biological research programs. I felt that improvements were needed in the management and control of these programs. That is why in April I requested and the President ordered a National Security Council study of these matters. This study is in progress.

Pending the completion of the NSC study, I believe it is prudent that we act jointly with Congress and take actions, wherever possible, to improve the management and control of chemical warfare and biological research programs.

Members of my staff, principally Dr. John S. Foster, Jr., Director of Research and Engineering, have been working in recent days with Senator Thomas J. McIntyre of New Hampshire, and with other members of the Senate Armed Services Committee, on a revised amendment to the pending Defense Authorization Bill.

I am in agreement with the goals of the new amendment, which the Senate is scheduled to consider on Monday.

I believe this revised amendment will allow us to maintain our chemical warfare deterrent and our biological research program both of which are essential to national security.

The history of the use of lethal chemical warfare agents has demonstrated on three notable occasions in this country that the only time military forces have used these weapons is when the opposing forces had no immediate capability to deter or to retaliate. This was true early in World War I, later in Ethopia and more recently in Yemen. Clearly, failure to maintain an effective chemcial warfare deterrent would endanger national security.

Because it would not always be possible to determine the origin of attack by biological agents, the deterrent aspects of biological research are not as sharply defined. A continued biological research program, however, is vital on two other major counts.

First, we must strengthen our protective capabilities in such areas as vaccines and therapy.

Secondly, we must minimize the dangers of technological surprise.

It is important that the American people be informed of why we must continue to maintain our chemical deterrent, conduct biological research, and how we propose to improve the management and control of these programs.

Mr. NELSON. Mr. President, how much time do I have left?

The PRESIDING OFFICER. The Senator from Wisconsin has 2 minutes remaining.

Mr. NELSON. Mr. President, I ask unanimous consent to have printed in full in the RECORD the report of the Secretary General on chemical and bacteriological weapons and the effects of their possible use.

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

LETTER OF TRANSMITTAL

JUNE 30, 1969.

DEAR MR. SECRETARY-GENERAL: I have the honour to submit herewith a unanimous report on chemical and bacteriological (biological) weapons which was prepared in pursuance of General Assembly resolution 2454 A (XXIII).

The Consultant Experts appointed in accordance with the General Assembly resolution were the following:

Dr. Tibor Bakacs, Professor of Hygiene, Director-General of the National Institute of Public Health, Budapest.

Dr. Hotse C. Bartlema, Head of the Microbiological Department of the Medical-Biological Laboratory, National Defense Research Organization TNO, Rijswijk, Netherlands.

Dr. Ivan L. Bennett, Director of the New York University Medical Center and Vice-President for Medical Affairs, New York University, New York.

Dr. S. Bhagavantam, Scientific Adviser to the Minister of Defense, New Delhi.

Dr. Jiri Franek, Director of the Military Institute for Hygiene, Epidemiology and Microbiology, Prague.

Dr. Yosio Kawakita, President of the University of Chiba, Professor of Bacteriology, Chiba City, Japan.

M. Victor Moulin, *Ingénieur en chef de l'armement, Chef du Bureau Défense chimique et biologique, Direction technique des armements terrestres,* Saint Cloud, France.

Dr. M. K. McPhail, Director of Chemical and Biological Defense, Defense Chemical, Biological and Radiation Laboratories, Defense Research Board, Ottawa.

Academician O. A. Reutov, Professor of Chemistry at the Moscow State University, Moscow.

Dr. Guillermo Soberon, Director, *Institute de Investigaciones Biomedicas, Universidad Nacional Autonoma de Mexico, Mexico City.*

Dr. Lars-Erik Tammelin, Chief of Department for Medicine and Chemistry, Research Institute for National Defense, Stockholm.

Dr. Berhane Teoume-Lessane, Medical Co-Director and Head of Department of Viruses and Rickettsiae, Imperial Central Laboratory and Research Institute, Addis Ababa.

Colonel Zbigniew Zoltowski, Professor of Medicine, Epidemiologist and Scientific Adviser to the Ministry of National Defense, Warsaw.

Sir Solly Zuckerman, Chief Scientific Adviser to the Government of the United Kingdom, Professor Emeritus, University of Birmingham.

The report was drafted during sessions held in Geneva between 20 and 24 January and between 16 and 29 April, and finalized at meetings held in New York between 2 and 14 June 1969.

The Group of Consultant Experts wish to acknowledge the assistance they received from the World Health Organization, the Food and Agriculture Organization, the International Committee of the Red Cross, the Pugwash Conference on Science and World Affairs (Pugwash) and the International Institute for Peace and Conflict Research (SIPRI), all of which submitted valuable information and material for the purposes of the study.

The Group of Consultant Experts also wish to express their gratitude for the valuable assistance they received from members of the United Nations Secretariat.

I have been requested by the Group of Consultant Experts, as their Chairman, to submit their unanimous report to you on their behalf.

Yours sincerely,

WILLIAM EPSTEIN,
Chairman, Group of Consultant Experts on Chemical and Bacteriological (Biological) Weapons.

QUESTION OF GENERAL AND COMPLETE DISARMAMENT

[Illustrations not printed in the RECORD]

(Report of the Secretary-General on chemical and bacteriological (biological) weapons and the effects of their possible use)

Pursuant to General Assembly resolution 2454 A (XXIII) of 20 December 1968, the Secretary-General has the honour to transmit herewith to the General Assembly the report on chemical and bacteriological (biological) weapons and the effects of their possible use, prepared with the assistance of qualified consultant experts.

In accordance with paragraph 4 of the resolution, the report is also being transmitted to the Security Council (S/9292) and the Conference of the Eighteen-Nation Committee on Disarmament[1] as well as to the Governments of Member States.

FOREWORD BY THE SECRETARY-GENERAL

During the past few years, I have become increasingly concerned by developments in the field of chemical and bacteriological (biological) weapons and have given expression to this concern on several occasions. A year ago, I stated publicly that "the international community was not sufficiently conscious of the dangers inherent in this new type of weapon of mass murder", and that "due attention had not been focused on this very serious problem". In the introduction to my annual report on the work of the Organization, in September 1968, I stated:

"While progress is being made in the field of nuclear disarmament, there is another aspect of the disarmament problem to which I feel too little attention has been devoted in recent years. The question of chemical and biological weapons has been overshadowed by the question of nuclear weapons, which have a destructive power several orders of magnitude greater than that of chemical and biological weapons. Nevertheless, these too are weapons of mass destruction regarded with universal horror. In some respects, they may be even more dangerous than nuclear weapons because they do not require the enormous expenditure of financial and scientific resources that are required for nuclear weapons. Almost all countries, including small ones and developing ones, may have access to these weapons, which can be manufactured quite cheaply, quickly and secretly in small laboratories or factories. This fact in itself makes the problem of control and inspection much more difficult. Moreover, since the adoption, on 17 June, 1925, of the Geneva Protocol for the Prohibition of the Use in War of Asphyxiating, Poisonous or Other Gases and of Bacteriological Methods of Warfare, there have been many scientific and technical developments and numerous improvements, if that is the right word, in chemical and biological weapons, which have created new situations and new problems. On the one hand, there has been a great increase in the capability of these weapons to inflict unimaginable suffering, disease and death to ever larger numbers of human beings; on the other hand, there has been a growing tendency to use some chemical agents for civilian riot control and a dangerous trend to accept their use in some form in conventional warfare.

"Two years ago, by resolution 2162 B (XXI), the General Assembly called for the strict observance by all States of the principles and objectives of the Geneva Protocol of 1925, condemned all actions contrary to those objectives and invited all States to accede to the Protocol. Once again, I would like to add my voice to those of others in urging the early and complete implementation of this resolution. However, in my opinion, much more is needed. . . ."

At its twenty-third session, by resolution 2454 A (XXIII), the General Assembly requested me to prepare, with the assistance of qualified consultant experts, a report on chemical and bacteriological (biological) weapons in accordance with the proposal contained in the introduction to my annual report on the work of the organization (A/7201/Add. 1), and in accordance with the recommendation contained in the report of the Conference of the Eighteen-Nation Committee on Disarmament of 4 September 1968 (A/7189).

In pursuance of this resolution, I appointed the following group of fourteen consultant experts to assist me in the preparation of the report: Dr. Tibor Bakacs, Professor of Hygiene, Director-General of the National Institute of Public Health, Budapest; Dr. Hotse C. Bartlema, Head of the Microbiological Department of the Medical-Biological Laboratory, National Defence Research Organization TNO, Rijswijk, Netherlands; Dr. Ivan L. Bennett, Director of the New York University Medical Center and Vice-President of Medical Affairs, New York University, New York; Dr. S. Bhagavantam, Scientific Adviser to the Minister of Defence, New Delhi; Dr. Jiri Franek, Director of the Military Institute for Hygiene, Epidemiology and Microbiology, Prague; Dr. Yosio Kawakita, President of University of Chiba, Professor of Bacteriology, Chiba City, Japan; M. Victor Moulin, *Ingénieur en chef de l'armement, Chef du Bureau Défense chimique at biologique, Direction technique des armements terrestres,* Saint Cloud, France; Dr. M. K. McPhail, Director of Chemical and Biological Defence, Defence Chemical, Biological and Radiation Laboratories, Defence Research Board, Ottawa; Academician O A. Reutov, Professor of Chemistry at the Mos-

[1] By a letter dated 1 July 1969 from the Secretary-General to the Co-Chairmen of the Conference.

cow State University, Moscow; Dr. Guillermo Soberon, Director, *Instituto de Investigaciones Biomedicas, Universidad Nacional Autonoma de Mexico*, Mexico City; Dr. Lars-Erik Tammelin, Chief of Department for Medicine and Chemistry, Research Institute for National Defence, Stockholm; Dr. Berhane Teoume-Lessane, Medical Co-Director and Head of Department of Viruses and Rickettsiae, Imperial Central Laboratory and Research Institute, Addis Ababa; Colonel Zbigniew Zoltowski, Professor of Medicine, Epidemiologist and Scientific Adviser to the Ministry of National Defence, Warsaw; Sir Solly Zuckerman, Chief Scientific Adviser to the Government of the United Kingdom, Professor Emeritus, University of Birmingham.

Mr. William Epstein, Director of the Disarmament Affairs Division, Department of Political and Security Council Affairs, served as Chairman of the Group of Consultant Experts. Mr. Alessandro Corradini, Chief of the Committee and Conference Services Section, acted as Secretary of the Group. He was assisted by members of the Disarmament Affairs Division.

After giving due consideration to the terms of the resolution and to the views expressed and the suggestions made during the discussion of the question at the twenty-third session of the General Assembly, I reached the conclusion that the aim of the report should be to provide a scientifically sound appraisal of the effects of chemical and bacteriological (biological) weapons and should serve to inform Governments of the consequences of their possible use. Within this over-all framework, the report would furnish accurate information in a concise and readily understandable form on the following matters: the basic characteristics of chemical and bacteriological (biological) means of warfare; the probable effects of chemical and bacteriological (biological) weapons on military and civil personnel, both protected and unprotected; the environmental factors affecting the employment of chemical and bacteriological (biological) means of warfare; the possible long-term effects on human health and ecology; and the economic and security implications of the development, acquisition and possible use of chemical and bacteriological (biological) weapons and of systems for their delivery.

The consultant experts to whom I conveyed these terms of reference accepted them as the basis for their study.

It was my intention that the Group of Consultant Experts should survey the entire subject from the technical and scientific points of view, so that the report could place these weapons in proper perspective. It was also my hope that an authoritative report could become the basis for political and legal action by the Members of the United Nations.

As the report was to be made available by 1 July 1969, very concentrated efforts by the consultant experts were required in order to cover this extensive field. The members of the Group, acting in their personal capacities, carried out this demanding task at three sessions between January and June 1969.

The Group had the benefit of valuable submissions from the World Health Organization, the Food and Agriculture Organization, the International Committee of the Red Cross, the Pugwash Conference on Science and World Affairs (Pugwash) and the International Institute for Peace and Conflict Research (SIPRI). I wish to express my grateful appreciation to all the consultant experts for their dedicated work and to the organizations and bodies who co-operated in the preparation of the study.

The Group has submitted to me a unanimous report embodying its findings and conclusions. I wish to avail myself of this opportunity to express my gratification for the very high level of competence with which the consultant experts have discharged their mandate. In a very short period of time, they have produced a study, which, in spite of the many complex aspects of the subject matter, is both concise and authoritative. It is a document which, I believe, provides valuable insights into the grave dangers that are posed by the production and possible use of these dreaded weapons.

I am particularly impressed by the conclusion of the consultant experts wherein they state:

"The general conclusion of the report can thus be summed up in a few lines. Were these weapons ever to be used on a large scale in war, no one could predict how enduring the effects would be, and how they would affect the structure of society and the environment in which we live. This overriding danger would apply as much to the country which initiated the use of these weapons as to the one which had been attacked, regardless of what protective measures it might have taken in parallel with its development of an offensive capability. A particular danger also derives from the fact that any country could develop or acquire, in one way or another, a capability in this type of warfare, despite the fact that this could prove costly. The danger of the proliferation of this class of weapons applies as much to the developing as it does to developed countries.

"The momentum of the arms race would clearly decrease if the production of these weapons were effectively and unconditionally banned. Their use, which could cause an enormous loss of human life, has already been condemned and prohibited by international agreements, in particular the Geneva Protocol of 1925, and, more recently, in resolutions of the General Assembly of the United Nations. The prospects for general and complete disarmament under effective international control, and hence for peace throughout the world, would brighten significantly if the development, production and stockpiling of chemcial and bacteriological (biological) agents intended for purposes of war were to end if they were eliminated from all military arsenals.

"If this were to happen, there would be a general lessening of international fear and tension. It is the hope of the authors that this report will contribute to public awareness of the profoundly dangerous results if these weapons were ever used, and that an aroused public will demand and receive assurances that Governments are working for the earliest effective elimination of chemical and bacteriological (biological) weapons."

I have given the study prepared by the consultant experts my earnest consideration and I have decided to accept their unanimous report in its entirety, and to transmit it to the General Assembly, the Security Council, the Eighteen-Nation Committee on Disarmament and to the Governments of Member States, as the report called for by resolution 2454 A (XXIII).

I also feel it incumbent upon me, in the hope that further action will be taken to deal with the threat posed by the existence of these weapons, to urge that the Members of the United Nations undertake the following measures in the interests of enhancing the security of the peoples of the world:

1. To renew the appeal to all States to accede to the Geneva Protocol of 1925;

2. To make a clear affirmation that the prohibition contained in the Geneva Protocol applies to the use in war of all chemical, bacteriological and biological agents (including tear gas and other harassing agents), which now exist or which may be developed in the future;

3. To call upon all countries to reach agreement to halt the development, production and stockpiling of all chemical ond bacteriological (biological) agents for purposes of war and to achieve their effective elimination from the arsenal of weapons.

INTRODUCTION

1. In accordance with the resolution of the General Assembly 2454 A (XXIII) the Secretary-General was asked to prepare, with the assistance of qualified consultant experts, a report on chemical and bacteriological (biological) weapons and on the effects of their possible use. Specifically the experts were asked to provide a scientific appraisal of the characteristics of the chemical and bacteriological (biological) weapons which could be used in warfare; of the effects they could have on military personnel and civilians; as well as of their long-term effects on healtn and our physical environment. They were also asked to provide a statement about the economic and security implications of the development, acquisition and possible use of such weapons and associated weapon systems. The report which follows is confined to these objectives.

2. No form of warfare has been more condemned than has the use of this category of weapons. The poisoning of wells has been regarded from time immemorial as a crime incompatible with the rules of war. "War is waged with weapons, not with poison" (*"Armis bella non venenis geri"*), declared the Roman jurists. As the destructive power of arms increased over the years, and with it the potential for the widespread use of chemicals, efforts were made to prohibit through international understandings and by legal means the use of chemical weapons. The Brussels Declaration of 1874 and the Hague Conventions of 1899 and 1907 prohibited the use of poisons and poisoned bullets and a separate declaration of the Hague Convention of 1899 condemned "the use of projectiles the sole object of which is the diffusion of asphyxiating or deleterious gases".

3. The fear today is that the scientific and technological advances of the past few decades have increased the potential of chemical and bacteriological (biological) weapons to such an extent that one can conceive of their use causing casualties on a scale greater than one would associate with conventional warfare. At the moment most of our knowledge concerning the use of chemical weapons is based upon the experience of World War I. Gas was first used in 1914 and the first big attack in 1915 claimed 5,000 human lives. It is estimated that from then until the end of the war in 1918, at least 125,000 tons of toxic chemicals were used, and according to official reports gas casualties numbered about 1,300,000, of which about 100,000 were fatal. The agents which were used in this war were much less toxic than those, in particular nerve agents, which could be used today, and they were dispersed by means of relatively primitive equipment as compared with what is now available, and in accordance with battlefield concepts of a relatively unsophisticated kind.

4. It is true that a considerable effort has also been made to develop chemical agents which have as their purpose not to kill but to reduce a man's capacity to fight. Such agents are used by civil authorities of a number of countries in order to suppress disorders and to control riots, but when used in warfare they would inevitably be employed as an adjunct to other forms of attack, and their over-all effect might be lethal.

5. Since World War II, bacteriological (biological) weapons have also become an increasing possibility. But because there is no clear evidence that these agents have ever been used as modern military weapons, discussions of their characteristics and potential threat have to draw heavily upon experimental field and laboratory data, and on studies of naturally occurring outbreaks and epidemics of infectious disease, rather than on direct battlefield experience. Their potential importance in warfare can be sensed when one remembers that infectious disease even as late as World War II caused numerous casualties.

6. The greater threat posed by chemical

weapons today derives from the discovery and manufacture of new, more toxic compounds. On the other hand, bacteriological (biological) agents already exist in nature and can be selected for use in warfare. Some of these agents, notably bacteria, have been known for several decades, but there is a vast number of other possible agents, especially viruses, which have been discovered only recently, and some of these also possess characteristics which make their use possible in war. Increases in potency of these various types of agents have been made possible by scientific and technological advances in microbial genetics, experimental pathology and aerobiology.

7. As is well known, the use of toxic gases in World War I generated so powerful a sense of outrage that countries were encouraged to adopt measures prohibiting both chemical and bacteriological (biological) weapons. The result was the Geneva Protocol of 17 June 1925, which prohibits the use in war of asphyxiating, poisonous or other gases and of all analogous liquids, materials or devices, as well as bacteriological methods of warfare. This established a custom and hence a standard of international law, and in practice most States have adhered to the principle that no one should resort to the use of such weapons. But despite the abhorrence in which they have always been held by civilized peoples, chemical weapons have none the less on occasion been used. For example, mustard gas was used in Ethiopia in 1935–36, causing numerous casualties amongst troops and a civilian population which was not only completely unprotected, but which lacked even the most elementary medical services. It should also be noted that the existence of the Geneva Protocol of 1925 may have helped as a deterrent to the use of chemical or bacteriological (biological) weapons in World War II, even though the belligerents in that conflict had developed, produced and stockpiled chemical agents for possible use. The International Tribunal at Nuremberg brought into the open the fact that amongst the new agents which had been produced and stockpiled during the course of the war were such highly lethal agents as Tabun and Sarin. Since then the validity and effectiveness of the Geneva Protocol have been reinforced by the approval, by the General Assembly of the United Nations, without a single dissenting voice, of resolutions 2162 B (XXI) of 5 December 1966 and 2454 A (XXIII) of 20 December 1968, calling for "strict observance by all States of the principles and objectives" of the Geneva Protocol, and inviting all States to accede to it.

8. It is simple to appreciate the resurgence of interest in the problems of chemical and bacteriological (biological) warfare. Advances in chemical and biological science, while contributing to the good of mankind, have also opened up the possibility of exploiting the idea of chemical and bacteriological (biological) warfare weapons, some of which could endanger man's future, and the situation will remain threatening so long as a number of States proceed with their development, perfection, production and stockpiling.

9. The report, as is noted in the General Assembly resolution, is designed to submit to peoples and governments, in a form easily understood by them, information on the effects of the possible use of chemical and bacteriological (biological) weapons, as well as to promote a further consideration of problems connected with chemical and bacteriological (biological) weapons. Information about the nature of chemical and bacteriological (biological) weapons, about their increase and diversification as technology has advanced, about their long-term effects on human beings, animals and vegetation, and about environmental factors which condition these effects, is provided in Chapters I to IV of the Report. In Chapter V, which deals with the economic and security implications of chemical and bacteriological (biological) warfare, the experts have interpreted the word "security" to mean both security in the narrow military sense, and security in terms of the adverse and long-term effects which these weapons, given they were ever used, could have on the framework of civilized existence.

10. As the present report shows, the outstanding characteristics of this class of weapons, and particularly of bacteriological (biological) weapons, is the variability, amounting under some circumstances to unpredictability, of their effects. Depending on environmental and meteorological conditions, and depending on the particular agent used, the effects might be devastating or negligible. They could be localized or widespread. They might bear not only on those attacked but also on the side which initiated their use, whether or not the attacked military forces retaliated in kind. Civilians would be even more vulnerable than the military. The development, acquisition and deployment of chemical and bacteriological (biological) weapons—quite apart from questions of protection—constitutes a real economic burden which varies in extent for different countries. Above all their acquisition could not possibly obviate the need for other weapons.

11. As chapters I and V of the report indicate, it would be enormously costly in resources, and administratively all but impossible, to organize adequate protection for a civilian population against the range of possible chemical agents. Even military personnel, if locally engaged in a particular operation in which chemical and/or bacteriological (biological) weapons were used and where they had the advantage of protective measures, would be unlikely to escape the wider-spread and longer-term effects on their country at large. These might arise, for example, from the impracticability of protecting soil, plants, animals and essential food crops against short and long-term effects.

12. To appreciate the risks which bacteriological (biological) warfare could entail, one has only to remember how a natural epidemic may persist unpredictably, and spread far beyond the initial area of incidence, even when the most up-to-date medical resources are used to suppress the outbreak. The difficulties would be considerably increased were deliberate efforts made, for military reasons, to propagate pathogenic organisms. Mass disease, following an attack, especially of civilian populations, could be expected not only because of the lack of timely warning of the danger, but also because effective measures of protection or treatment simply do not exist or cannot be provided on an adequate scale.

13. Once the door was opened to this kind of warfare, escalation would in all likelihood occur and no one could say where the process would end. Thus the report concludes that the existence of chemical and bacteriological (biological) weapons not only contributes to international tension, but that their further development spurs the arms race without contributing to the security of any nation.

14. The present report will, in accordance with resolution 2454 A (XXIII), be submitted to the Eighteen-Nation Committee on Disarmament to the Security Council and to the General Assembly at its twenty-fourth session. We hope that it will contribute to the implementation of measures which, in the final analysis, will eliminate chemical and bacteriological (biological) weapons from all military arsenals.

CHAPTER I. THE BASIC CHARACTERISTICS OF CHEMICAL ANC BACTERIOLOGICAL (BIOLOGICAL) MEANS OF WARFARE

15. Since World War I, when chemical warfare was first resorted to on a large scale, the variety and potency of chemical and bacteriological (biological) weapons has grown steadily, and there has been a corresponding increase in the capacity to deliver them to a target area. The particular threat posed by chemical weapons today derives from the existence of new, and far more toxic, chemical compounds than were known fifty years ago. Since bacteriological (biological) agents exist naturally, their increased potency as weapons has resulted from a process of selection rather than from the production of entirely new agents. As is explained in later sections of this report, selection has been made possible by advances in our knowledge of the genetics of microbes, and through advances in experimental aerobiology.

16. The most significant result of these technical developments is the great variety of injurious effect which these agents can induce, and the consequent increase in the number and types of situation in which there might be a temptation to use them for military purposes.

A. Characteristics of chemical and bacteriological (biological) weapons

17. For the purposes of this report, chemical agents of warfare are taken to be chemical substances, whether gaseous, liquid, or solid, which might be employed because of their direct toxic effects on man, animals and plants. Bacteriological (biological) agents of warfare are living organisms, whatever their nature, or infective material derived from them, which are intended to cause disease or death in man, animals or plants, and which depend for their effects on their ability to multiply in the person, animal or plant attacked.

18. Various living organisms (e.g. rickettsiae, viruses and fungi), as well as bacteria, can be used as weapons. In the context of warfare all these are generally recognized as "bacteriological weapons". But in order to eliminate any possible ambiguity, the phrase "bacteriological (biological) weapons" has been used throughout to comprehend all forms of biological warfare.

19. All biological processes depend upon chemical or physio-chemical reactions, and what may be regarded today as a biological agent could, tomorrow, as knowledge advances, be treated as chemical. Because they themselves do not multiply, toxins, which are produced by living organisms, are treated in this report as chemical substances. We also recognize there is a dividing line between chemical agents of warfare in the sense we use the terms, and incendiary substances such as napalm and smoke, which exercise their effects through fire, temporary deprivation of air or reduced visibility. We regard the latter as weapons which are better classified with high explosives than with the substances with which we are concerned. They are therefore not dealt with further in this report.

20. Finally, we recognize that both chemical and bacteriological (biological) agents are designated either as lethal agents, that is to say, agents which are intended to kill, or as incapacitating agents, that is to say, agents which are intended to cause disability. These terms are not absolute, but imply statistical probabilities of response which are more uncertain with bacteriological (biological) than with chemical agents. Not all individuals will die from an attack with a given lethal agent, whereas some, for example infants and people weakened by malnutrition, disease or old age, as well as a high proportion of individuals in special circumstances, for example following irradiation, might succumb to an attack with incapacitating chemical or bacteriological (biological) agents. With a few chemical agents, notably some tear gases (lachrymators), there is a negligible probability of any fatal outcome, and these have been used by many Governments to quell riots and civil disorders. When used in this way they are called riot control agents. Lachrymators

have also been widely used in warfare as harassing agents, in order to enhance the effectiveness of conventional weapons, or to facilitate the capture of enemy personnel.

1. Differences Between Chemical and Bacteriological (Biological) Warfare

21. Although there are some similarities between chemical and bacteriological (biological) agents regarded as weapons of war, they differ in certain important respects. These differences are related to (1) potential toxicity; (2) speed of action; (3) duration of effect; (4) specificity; (5) controllability; and (6) residual effects.

Potential toxicity

22. Although more toxic than most well-known industrial chemicals, chemical warfare agents are far less potent on a weight-for-weight basis than are bacteriological (biological) agents. The dose of a chemical agent required to produce untoward effects in man is measured in milligrams (1/1,000 of a gram), except for toxins which may be in the microgram (1/1,000 of a milligram) range. The corresponding dose for bacteriological (biological) agents is in the picogram (1/1,000,000 of a microgram) range.

23. This difference reflects the fact that bacteriological (biological) agents, being alive, can multiply, and its significance is that, weight-for-weight, bacteriological (biological) weapons could be expected to inflict casualties over very much more extensive areas than could chemical weapons.

24. Being living organisms, bacteriological (biological) agents are also very much more susceptible to sunlight, temperature, and other environmental factors than are chemical agents. A bacteriological (biological) agent disseminated into a given environment may retain its viability (ability to live and multiply) while losing its virulence (ability to produce disease and injury).

Speed of action

25. As a class, chemical agents produce their injurious effects in man, animals or plants more rapidly than do bacteriological (biological) agents. The time between exposure and significant effect may be minutes, or even seconds, for highly toxic gases or irritating vapours. Blister agents take a few hours to produce injury. Most chemicals used against crops elicit no noticeable effect until a few days have elapsed. On the other hand, a bacteriological (biological) agent must multiply in the body of the victim before disease (or injury) supervenes; this is the familiar "incubation period" of a disease, the time which elapses between exposure to infection and the appearance of symptoms of illness. This period is rarely as short as one or two days, and may be as long as a few weeks or even longer. For both chemical and bacteriological (biological) agents the speed of action is affected by the dose (i.e., the quantity absorbed) but this secondary factor does not obscure the basic difference between the two classes of agents in the time they take to manifest their effects.

Duration of effect

26. The effects of most chemical agents which do not kill quickly do not last long, except in the case of some agents such as phosgene and mustard, where they might continue for some weeks, months or longer. On the other hand, bacteriological (biological) agents which are not quickly lethal cause illness lasting days or even weeks and on occasion involve periods of prolonged convalescence. The effects of agents which act against plants and trees would last for weeks or months and, depending on the agent and the species of vegetation attacked, could result in death.

Specificity

27. While both classes of agents can be used to attack men, animals or plants, individual biological agents have in general a much greater degree of host specificity. Influenza, for example, is essentially a disease of man; foot-and-mouth disease mainly affects cloven-hoofed animals; and rice blast is a disease confined to rice only. On the other hand, some diseases (for example, brucellosis and anthrax) occur both in man and animals. However, chemical agents are much less specific: nerve agents can affect mammals, birds and invertebrates (e.g., insects).

Controllability

28. By controllability is meant the ability to predict the extent and nature of the damage which chemical and bacteriological (biological) agents can cause. This is a most important consideration in their use as weapons. The most likely means of delivering chemical and bacteriological (biological) agents is by discharge into the atmosphere, relying on turbulent diffusion and wind currents to dilute and spread the agent over the area being attacked. Control is thus possible only to the extent that the meteorological situation can be predicted.

29. Because they infect living organisms, some bacteriological (biological) agents can be carried by travellers, migratory birds, or animals, to localities far from the area originally attacked.

30. The possibility of this kind of spread does not apply to chemical agents. But control of contamination by persistent chemical agents could be very difficult. Should large quantities of chemical agents penetrate the soil and reach underground waters, or should they contaminate reservoirs, they might spread hundreds of kilometres from the area of attack, affecting people remote from the zone of military operations. Although we know of no comparable substance likely to be used as a chemical warfare agent, the spread of DDT over the globe illustrates, in an extreme form, how man-made chemicals can spread. This chemical insecticide is now found in the tissues of creatures in all parts of the world, even in places in which it has never been used. For example, as a result of its transfer through food chains, it is even found in the tissues of the penguins which live in Antarctica.

Residual effects

31. In circumstances which favour their persistence, herbicides, defoliants and perhaps some other chemical agents, might linger for months, stunting the growth of surviving or subsequent plant life, and even changing the floral pattern through selection. Following repeated use, certain chemical agents could even influence soil structure. The risk of residual effects with some bacteriological (biological) agents is potentially greater, mainly because they could lead to disease, which might become epidemic if man-to-man transmission occurred readily. Bacteriological (biological) agents might also find unintended hosts in the animals and plants of an area, or be transported by infected individuals over great distances to new environments.

2. Technology of Chemical and Bacteriological (Biological) Warfare

32. The technological problems associated with chemical and bacteriological (biological) warfare are of two kinds; (1) those associated with the production of the agents and the weapons needed for their dissemination and (2) those which concern the provision of the protective equipment and defenses necessary to protect military forces and civilian populations. Any nation whose chemical, pharmaceutical and fermentation industries are well advanced could produce chemical and bacteriological (biological) agents on a scale commensurate with its other military capabilities. The assurance of safety in the production of bacteriological (biological) agents, problems associated with the synthesis of complex chemical agents, and deciding on the best weapons to disseminate them, are examples of some of the relevant technological difficulties. A special problem associated with the development and maintenance of an offensive capability in bacteriological (biological) warfare relates to the fact that some agents are viable for only a short time (a few days) after manufacture. This period can be extended by refrigeration of the agent or by freeze-drying it before storage. The drying processes, however, are very complex and difficult where large quantities of highly pathogenic agents are involved. The problems which relate to defence are far more difficult, for as with most weapons, effective defence calls for much more stringent training, and demands far more manpower and monetary resources than does the offence. For example, alarm systems against chemical attack are very complex electromechanical devices whose production demands a highly technologically based industry. They cannot be maintained except by expert and highly trained personnel.

3. Chemical and Bacteriological (Biological) Weapons Systems

33. The use in warfare, and the possible military effectiveness, of chemical and bacteriological (biological) agents cannot be appreciated if they are thought of simply as poisons and plagues. They need to be considered in the context of the weapon systems of which they would be part.

34. A weapon system comprises all the equipment and personnel, as well as the organizational structure, required to maintain and operate a military device. By itself, for example, a cannon is not a weapon system. Only when it is integrated into an artillery battery, together with trained crew, ammunition, vehicles, supplies, spare parts, firing table, forward observer, communications and command organization does it constitute a weapon system. Correspondingly, artillery shells filled with mustard gas or nerve agents and guns to fire them, or an aircraft with a spray tank filled with a bacteriological (biological) agent, are not by themselves weapon systems.

35. Many complex technological problems have to be overcome in transforming a chemical or bacteriological (biological) "agent" into a "weapon system". A "weapon" is of little military value if it is not dependable and if it cannot be delivered to a target with certainty. This means that in the development of a chemical and bacteriological (biological) weapon system it is not only necessary to consider matters such as mass production, storage, transportation, and means of delivery, but also the limitations on use set by terrain and weather prediction.

36. In addition, considerations affecting defense need to be taken into account. Masks, protective clothing, detection alarms, special medical supplies, augmented logistic facilities and, above all, thoroughly trained military and civilian personnel, are necessary parts of chemical and bacteriological (biological) weapon systems. The concept of a fully developed chemical or bacteriological (biological) weapon system is thus exceedingly complex, and implies as much technical capability and as high a degree of training as does the operation of any other advanced weapon systems. While chemical and bacteriological (biological) weapon systems are cheaper and more readily attained than nuclear weapons, and while they may in some circumstances be more effective militarily than conventional weapons, they are highly complex systems which for their development and operation call for sizeable resources and considerable expertise. But the possibility always exists that by choosing a single agent and a simple means of delivery, a nation could equip itself relatively cheaply to attack a limited area with a reasonable chance of success.

B. Concepts of the use of chemical and bacteriological (biological) weapons in war

1. Chemical Weapons

37. Chemical weapons could be used either within the zone of contact of opposing forces; or against military targets such as

airfields, barracks, supply depots, and rail centres well behind the battle-area itself; or against targets which have no immediate connexion with military operations; for example, centres of population, farm land, and water supplies. The circumstances in which they could be used within a zone of contact are many and varied—for example, to achieve a rapid and surprise advantage against a poorly trained, ill-equipped military force which lacked chemical protective equipment; to overcome troops in dug-outs, foxholes, or fortifications where they would be otherwise protected against fragmenting weapons and high-explosive; to remove foliage, by means of chemical herbicides so as to improve visibility and to open up lines of fire, and to prevent ambush; to create barriers of contaminated land on or in the rear of the battlefield to impede or channel movement; or to slow an enemy advance by forcing them to use protective clothing and equipment. Such equipment undoubtedly restricts mobility and impedes normal activities. It is thus highly probable that once one of two well-equipped sides had been attacked with chemical weapons, it would retaliate in kind, in order to force its opponent to suffer the same penalties of restriction. In all such operations civilians who had not fled from the battle-area might become casualties, as they also would if, while not in the battle-zone, vapours or aerosols drifted towards them with the wind, or if they strayed at a latter date into areas contaminated with a persistent agent. The risk of civilian casualties would obviously be greater if chemical attacks were made on military targets well in the rear of the zone of contact, and would be very serious in the case of attacks on centres of population.

2. Bacteriological (Biological) Weapons

38. There is no military experience of the use of bacteriological (biological) agents as weapons or war and the feasibility of using them as such has often been questioned. One issue which has frequently been raised concerns the validity of extrapolations made from laboratory experience to military situations in the field. Some recent investigations under field conditions throw light on this point.

39. In one field trial, zinc cadmium sulfide (a harmless powder) was disseminated in particles two microns (one micron is 1/1,000,000 of a metre in diameter, from a ship traveling 16 kilometres offshore. About 200 kilograms were disseminated while the ship travelled a distance of 260 kilometres parallel to the coastline. The resulting aerosol traveled at least 750 kilometres, and covered an area of over 75,000 square kilometres.

40. This observation provides an indication of the size of area which might be covered by a windborne aerosol, but it does not tell whether the bacteriological (biological) agents which might be spread in an aerosol would still retain the ability to produce disease. All bacteriological (biological) agents lose their virulence or die progressively while travelling in an aerosol and the distance of effective travel of the cloud would depend on the rate of decay of the particular agent in the particular atmospheric conditions prevailing.

41. Some idea of the relative size of areas which can be covered by bacteriological (biological) and chemical aerosols can be gained from this same experiment. Had the particles that were carried been a bacterial or viral agent, they would not have caused casualties over as large an area as the one covered, because of decay of the agent while in the aerosol state. However, depending on the organism and its degree of hardiness, areas of 5,000 to 20,000 km² could have been effectively attacked, infecting a high proportion of unprotected people in the area. If the same means are applied to a hypothetical chemical attack using the most toxic chemical nerve agent, then about 0.8 kg of agent would have been released per km. The downwind hazard from this, in which some casualties might be expected, would not have extended more than one kilometre, and probably less, unless meteorological conditions were extremely favourable (see chapter III). The area covered by such a chemical attack might thus have been 50 to 150 km², as compared with the 5,000 to 20,000 km² for the bacteriological (biological) attack.

42. For purposes of sabotage or covert (secret, as in sabotage actions behind enemy lines) operations, small aerosol generators for bacteriological (biological) agents could be built, for example, into fountain pens or cigarette lighters. It is also possible to conceive of the distribution of bacteriological (biological) agents by hand to poison either water supplies or ventilation systems, especially in a situation of breakdown of sanitary facilities due, say, to military mobilization, or to a nuclear attack. In addition to producing casualties, such an attack could produce severe panic. If half a kilo of a culture of Salmonella (a group of bacteria, many species of which produce severe intestinal infections, including gastro-enteritis, food ("ptomaine") poisoning, paratyphoid fever and typhoid fever) had been added to a reservoir containing 5 million litres of water, and complete mixing had occurred, severe illness or disability would be suffered by anyone drinking 1 decilitre (about 3 ounces) of untreated water.

43. The same degree of poisoning as would be produced by half a kilo of Salmonella culture could be achieved with 5 kilos of botulinum toxin (see chapter II), 7 kilos of staphylococcal enterotoxin (see chapter II), or 50 kilos of V-nerve agent, or in the case of common industrial chemicals, with five tons of sodium fluoroacetate (used as a rodenticide) or ten tons of potassium cyanide.

C. Chemical and bacteriological (biological) agents

Chemical Agents

44. Chemical agents are usually described in terms of their physiological effects and are characterized as follows:

Agents affecting man and animals

Nerve agents are colourless, odourless, tasteless chemicals, of the same family as organophosphorus insecticides. They poison the nervous system and disrupt vital body functions. They constitute the most modern war chemicals known; they kill quickly and are more potent than are any other chemical agents (except toxins).

Blister agents (vesicants) are oily liquids which, in the main, burn and blister the skin within hours after exposure. But they also have general toxic effects. Mustard gas is a good example. Blister agents caused more casualties than any other chemical agent used in World War I.

Choking agents are highly volatile liquids which, when breathed as gases, irritate and severely injure the lungs, causing death from choking. They were introduced in World War I and are of much lower potency than the nerve agents.

Blood agents are also intended to enter the body through the respiratory tract. They produce death by interfering with the utilization of oxygen by the tissues. They, too, are much less toxic than nerve agents.

Toxins are biologically produced chemical substances which are very highly toxic and may act by ingestion or inhalation.

Tear and harassing gases are sensory irritants which cause a temporary flow of tears, irritation of the skin and respiratory tract, and occasionally nausea and vomiting. They have been widely used as riot control agents, and also in war.

Psycho-chemicals are drug-like chemicals intended to cause temporary mental disturbances.

Agents affecting plants

Herbicides (defoliants) are agricultural chemicals which poison or dessicate the leaves of plants, causing them to lose their leaves or die. The effectiveness of different chemical warfare agents against man, animals and plants is shown in table I. The various specific chemical agents are listed and described in chapter 2.

Methods of delivery

45. Chemical munitions are designed to fulfill three objectives: (1) to provide a container for the agent so that the agent/munition combination can be delivered to its target; (2) to attain an effective distribution of agent over the target area; and (3) to release the agent in active form. In the case of incapacitating and riot control agents, it is necessary that the munition itself should not cause injury or death, and that it should not start fires. This is particularly important for devices used in the control of riots.

46. The munitions to be used would depend on the method of delivery, the shape and size of the target area, and other variables. Ground-to-ground munitions include grenades, shells, rockets; and missile warheads; air-to-ground munitions include large bombs, dispensers, spray tanks, and rockets; emplaced munitions include generators and mines.

47. *Ground-to-ground munitions.* Small ground-to-ground munitions (grenades, shells and small rockets) function much like their conventional counterparts. Upon impact in the target area, they would either explode or burn, and so expel the agent to form a cloud which would diffuse and drift downwind, resulting in an elongated elliptical area within which casualties would occur. This represents a point source of dissemination (chapter II).

TABLE I.—CATEGORIES OF CHEMICAL WARFARE AGENTS AND THEIR CHARACTERISTICS

	Physical state at 20° C.	Persistency	Main state of aggregation in target	Effective route of entry	Effective against
Nerve agents	Liquid	Low to high	Vapour, aerosol, liquid	Lungs, eyes, skin	Man, animals.
Blister agents	Liquid, soild	High	do	do	Do.
Choking agents	Liquid	Low	Vapour	do	Do.
Blood agents	Liquid, vapors	do	do	Lungs	Do.
Toxins	Solid	do	Aerosol, liquid	Lungs, intestinal tract	Do.
Tear and harassing gases	Liquid, solid	do	Vapor, aerosol	Lungs, eyes	Do.
Incapacitants	do	do	Aerosol, liquid	Lung , skin	Do.
Herbicides (defoliants)	do	Low to high	do	Foliage and roots	Plants.[1]

[1] Some herbicides, particularly those containing organic arsenic are also toxic for man and animals.

48. Small rockets would frequently be fired in "ripples", and artillery shells in salvos, resulting in a group of impacts over the target area. This would constitute an area source of dissemination (chapter II).

49. Large ground-to-ground (as well as aerial munitions and missile warheads) might carry a number of small submunitions as well as agent in bulk. The parent munition, upon functioning, would disperse the submunitions over the target area. These would then disseminate the agent over a wide area rather than a single point of impact, as in the case of bulk munitions.

50. Another military concept is to use large warheads filled with several hundred kilos of an agent of low vapour pressure. Such a warhead, burst at a suitable altitude would produce a shower of droplets, effectively contaminating everything on which it fell. A number of such weapons could be used to assure that the target was covered.

51. *Air-to-ground munitions.* Bombs dropped from aircraft are larger than most shells, and consequently would result in a higher concentration of the chemical near the point of ground impact. Bombs bursting close to the ground could be used to achieve a wider dissemination of the agent, especially with chemical agents.

52. A dispenser is a container for submunitions, which, after opening, could remain attached to the aircraft. The submunitions could be released simultaneously or in succession.

53. Small rockets or missiles could also be used to deliver chemical agents from aircraft. The pattern of dispersal would be much the same as that produced by ground-to-ground rockets or missiles.

54. *Ground-emplaced munitions.* Ground-emplaced munitions comprise generators and mines. The generator is a tank containing a chemical agent, a source of pressure, and a nozzle through which the agent is forced. Generators would be placed upwind of the target, and then activated by a suitable device.

55. Chemical mines would be placed in areas of anticipated enemy activity, and would be activated by pressure or trip wires.

2. Bacteriological (Biological) Agents

56. Like chemical agents, bacteriological (biological) agents may also be classified in terms of their intended use, whether designed to incapacitate or to kill human beings, to incapacitate or kill food and draft animals, or to destroy food plants and industrial crops.

57. Bacteria, viruses, fungi, and a group of microbes known as rickettsiae are by far the most potent agents which could be incorporated into weapon systems. There is no assurance, however, that other living organisms may not in the future become more important as potential agents for warfare.

The selection of agents for use in warfare

58. The number of bacteriological (biological) agents which could potentially be used in warfare is far fewer than those which cause naturally-occurring disease. To be effective for this purpose they should:

(a) be able to be produced in quantity;

(b) be capable of ready dissemination in the face of adverse environmental factors;

(c) be effective regardless of medical counter-measure;

(d) be able to cause a large number of casualties (this would imply that any agent chosen would be highly infectious, but whether the agent chosen would also be easily transmissible from man-to-man, would depend upon an intent to initiate an epidemic spread).

Agents affecting man

59. All the diseases under consideration occur naturally, and the causative organisms with few exceptions, are known to scientists throughout the world. Incapacitating agents are those which, in natural outbreaks, cause illness but rarely death. If the natural disease has an applicable mortality, the agent is regarded as a lethal one. However, these agents when used as aerosol weapons might cause more severe disease than occurs naturally.

60. Different populations have varying degrees of resistance to the diseases produced by bacteriological (biological) agents. An infectious disease which might be only mildly incapacitating in one population might prove disastrous to another. For example, when measles was first introduced into the Hawaiian Islands, it caused far more deaths than in the relatively resistant populations of Europe. A bacteriological (biological) weapon which might be intended only to incapacitate could be highly lethal against a population where resistance had been lowered as a result of malnutrition. Conversely, a weapon which was intended to spread a lethal disease might only cause occasional mild illness in people who had been given a protective vaccine or who had become immune as a result of natural infection. The history of epidemiology is rich with surprises.

61. *Viruses* are the smallest forms of life. Most of them can be seen only with the electron microscope, and must be grown on living tissue (tissue cultures, fertile eggs, etc.) Genetic manipulation of the whole virus or chemical manipulation of its nucleic acid, might be used to acquire strains of higher virulence or greater stability to environmental stresses.

62. *Rickettsiae* are intermediate between the viruses and bacteria. Like the viruses, they grow only in living tissue. Judging by the scientific literature, research into the genetics of rickettsiae has been less intense than into that of viruses and bacteria.

63. *Bacteria* are larger than viruses, ranging in size from 0.3 micron to several microns. They can be easily grown on a large scale employing equipment and processes similar to those used in the fermentation industry, but special skills and experience would be needed to grow them in quantity in the particular state in which they readily cause disease. Although many pathogenic (disease-producing) bacteria are susceptible to antibiotic drugs, antibiotic-resistant strains occur naturally, and can be selected or obtained through the use of suitable methods of genetic manipulation. Similarly, it is possible to select strains with increased resistance to inactivation by sunlight and drying.

64. *Fungi* also produce a number of diseases in man, but very few species appear to have any potential in bacteriological (biological) warfare.

65. *Protozoa* are one-celled microscopic organisms which cause several important human diseases, including malaria. Because of their complex life cycles, they too appear to have little significance in the present context.

66. Parasitic *worms* such as hook-worm, and the filarial worms have very complicated life cycles. They cause illness and disability only after long exposure and repeated infection, and would be extremely difficult to produce in quantity, to store, to transport, or disseminate in a weapon. Insects are also difficult to conceive of as weapons. Some, such as the mosquito and the tick are transmitters of disease, and as "vectors", have to be looked upon as having potential military significance. Higher forms of life, such as rodents and reptiles can be dismissed in the context of the present discussion.

Agents affecting animals

67. Bacteriological (biological) anti-animal agents, such as foot-and-mouth disease and anthrax would be used primarily to destroy domestic animals, thereby indirectly affecting man by reducing his food supply.

68. Outbreaks of contagious disease in animal populations, knows as epizootics, may spread much more readily than do epidemics among human beings. Viral infections are probably more serious for animals than those caused by other classes of micro-organisms.

69. Most of the bacterial diseases of animals which could probably be used in warfare are also transmissible to man. Human beings would be expected to get the disease if they were affected by the attacking aerosol cloud, and occasional individuals might contract the disease from infected animals.

Agents affecting plants

70. The natural occurrence of devastating plant diseases such as the blight of potatoes in Ireland in 1845, the coffee rust of the 1870s in Ceylon, the chestnut blight of 1904 in the United States of America, and the widespread outbreaks today of cereal (especially wheat) rusts has suggested that plant pathogens might be used for military purposes. There are four major requirements for the deliberate development of a plant disease into epidemic (epiphytotic), proportions: large amounts of the host plant must be present in the region; the agent should be capable of attacking the particular varieties of host plant that are grown; adequate quantities of the agent must be present; and the environmental conditions within the region should be favorable for the spread of the disease. An epiphytotic cannot develop if any one of the above requirements is not satisfied.

Methods of delivery

71. Bacteriological (biological) agents can, in principle, be loaded into the same type of munitions as can chemical agents. Other than for covert or "special-purpose missions", bacteriological (biological) weapons, if developed for military purposes, would in all probability be delivered by aircraft or by large ballistic missiles. Aircraft (including cruise missiles and drones) could drop a large number of bomblets from high altitude, or spray from a low altitude. Because a small amount of agent will cover relatively large areas, bombs would probably be small (1 kilo or less) and dispersed over as wide an area as possible. They could be released from clusters or from dispensers in the manner of chemical weapons, but probably from a higher altitude.

72. An aircraft could establish a line of agent which, as it traveled downwind, would reach the ground as a vast elongated infective cloud (see chapter II). The effectiveness of such a procedure would be highly dependent on weather conditions, but the larger the area, the larger the weather front involved, the greater the chances that the predicted results would be achieved. A small relative error might, however, involve a country not in the conflict.

73. It is conceivable that bacteriological (biological) weapons, probably bomblets, could be packaged in a ballistic missile. The bomblets could be released at a predetermined altitude to burst at ground level. The effect would be the same as bomblet delivery by aircraft except that it would be more costly.

74. Unless transmitted by insects, bacteriological (biological) agents have little power to penetrate the intact skin. Infections through the respiratory tract by means of aerosols is by far the most likely route which could be used in warfare.

75. Many naturally-occurring diseases (e.g. influenza, tuberculosis) are spread by the aerosol route, and some of them, notably influenza, can generate into large epidemics. When an infected person sneezes, coughs, or even speaks, an aerosol is formed which contains particles ranging widely in size. The larger particles are usually of little importance because they fall to the ground. But small particles (3 microns or less in diameter) dry out rapidly in the air, and are the

most infectious. They may remain suspended in the atmosphere for a long time. Animal experiments have shown that a great many infectious agents (including many which are transmitted otherwise in nature) can be transmitted to animals by aerosols of small particle size. Laboratory accidents and experiments on volunteers have confirmed the effectiveness of the aerosol route of infection for man.

76. If bacteriological (biological) warfare ever occurred, the aerosol technique would thus be the one most likely to be used, simply because the respiratory tract is normally susceptible to infection by many micro-organisms; because of the wide target area which could be covered in a single attack; and because ordinary hygienic measures are ineffective in preventing the airborne route of attack. Since the particle size of an aerosol is crucial to its ability to penetrate into the lung (see chapter III for detailed discussion), the method for aerosolizing a bacteriological (biological) agent would have to be controllable so as to assure the dissemination of a large proportion of particles less than 5 microns in diameter.

77. Aerosols of bacteriological (biological) agents could be formed by three general methods. Agents could be disseminated by explosive means in much the same way as chemical agents. However, the size of the resulting particle is hard to control by this method, and much of the agent may be destroyed by the heat and shock of the exploding munition. Particles could also be formed by using pressure to force a suspension of the organisms through a nozzle. Particle size is determined by the amount of pressure, the size of the discharge orifices, the physical characteristics of the agent, and atmospheric conditions. Size control of solid particles (dry form of agent) can be achieved by "pre-sizing" before dissemination. Aerosol particles could also be produced by a spray by releasing the agent in liquid suspension into a high velocity air stream. This principle can be applied to spray devices for use on high performance aircraft.

D. Defence of man against chemical and bacteriological (biological) agents

78. A comprehensive defensive system against attacks by chemical or bacteriological (biological) agents would have to provide for detection and warning, rapid identification of agents, protection of the respiratory tract and skin, decontamination, and medical prophylaxis and treatment. Some aspects of such a system could be dealt with by fairly simple equipment. Others would necessitate highly sophisticated apparatus. But the whole complex would necessitate a very effective organization manned by well-trained personnel. While military units and small groups of people could be equipped and trained to protect themselves to a significant extent, it would be impracticable for most (if not all) countries to provide comprehensive protection for their entire civil population.

1. Medical Protection

Chemical attacks

79. No general prophylactic treatment exists which could protect against chemical attacks. Antidotes (atropine and oximes) to nerve agents of value if administered within half an hour before or within a very short time after exposure. Atropine is itself toxic, however, and might incapacitate unexposed individuals given large doses. Skin can be protected from the vapours of blister agents by various ointments, but they are not effective against liquid contamination.

Bacteriological (biological) attacks

80. Vaccination is one of the most useful means of protecting people from natural infective disease, and the only useful means available for prophylaxis against bacteriological (biological) attacks. The protective value of vaccines against small-pox, yellow fever, diphtheria, and other diseases is fully established, although the protection they afford can be overcome if an immunized individual is exposed to a large dose of the infectious agent concerned. It is probable, however, that even those existing vaccines which are effective in preventing natural infectious diseases might afford only limited protection against respiratory infection by an agent disseminated into the air in large amounts by a bacteriological (biological) weapon. Moreover, whole populations could not be vaccinated against all possible diseases. The development, production, and administration of so many vaccines would be enormously expensive, and some vaccines might produce undesirable or dangerous reactions in the recipients.

81. This picture is not significantly altered by certain new developments in the field of vaccination: e.g. the use of living bacterial vaccines against tularemia, brucellosis and plague; or aerosol vaccination, which is particularly relevant to vaccination of large numbers of people. There have been recent advances in the control of virus diseases, but at present none of these is practicable for the protection of large populations against bacteriological (biological) warfare.

82. Prophylaxis against some diseases can also be provided by the administration of specific anti-sera from the blood of people or animals previously innoculated with micro-organisms, or products derived from them, to increase the anti-body levels (immunity) in their blood. Tetanus anti-toxin is used in this manner, and until more effective methods replaced them, such anti-sera were used for many diseases. It would, however, be impossible to prepare specific anti-sera against all possible bacteriological (biological) agents and to make them available for large populations.

83. Other possibilities, for example the use of therapeutic materials before symptoms appear, are equally remote from practical realization. They include immune serum, gammaglobulin, or drugs such as antibiotics or sulfonamide drugs. The use of gammaglobulin to prevent, or mitigate the severity of, disease may be useful for individuals known to have been exposed. But since gammaglobulin is made by separation from human blood, stocks could never be available except for isolated cases. In theory, chemoprophylaxis (the use of drugs and antibiotics to prevent infection) might also be useful in the short term for small groups operating at especially high risk. But it would only be prudent to assume that the bacteriological (biological) agents which an enemy might use would be those which were resistant to such drugs.

2. Detection and Warning

84. The requirement is to detect a cloud of a chemical or a bacteriological (biological) agent in the air sufficiently quickly for masks and protective clothing to be donned before the attack can be effective. Usually the objective would be to try and detect the cloud upward of the target so that all those downwind could be warned. There are also requirements for the detection of ground contamination with chemical agents and for detection equipment to enable those under attack to decide when it would be safe to remove their protective equipment.

Chemical attacks

85. In World War I it was possible to rely upon odour and colour as the primary means of alerting personnel that a chemical attack had been launched. The newer more toxic chemical agents cannot be detected in this way. On the other hand, presumptive evidence that such weapons had been used would none the less still be of value as warning. Once an enemy had used chemical weapons, each subsequent attack would necessarily have to be presumed to be a possible chemical attack, and protective measures would have to be instituted immediately. Individuals would have to mask not only in the air attack in which spray was used, or when there was smoke or mist from an unknown source, or a suspicious smell, or when they suffered unexpected symptoms such as a runny nose, choking and tightness in the chest, or disturbed vision, but whenever any bombardment occurred. But because of the uncertainty, it would be clearly desirable to devise and provide a system of instruments which can detect the presence of toxic chemicals at concentrations below those having physiological effects, and which would give timely and accurate warning of a chemical attack. It would also be advantageous to have test devices, collectors and analytical laboratory facilities in order to determine whether the environment was safe, as well as to identify accurately the specific chemical agent used in an attack.

86. The first and essential component of a defensive system would be an instrument which could detect low concentrations of a chemical agent. However low the concentration, a person could inhale a toxic amount in a short time because he breathes 10–20 litres of air per minute. Since the human body can eliminate or detoxify very small amounts of many toxic materials, there is no need to consider very long periods of exposure—the concern is with the exposures of only a few hours. This is often referred to technically as the Ct (concentration time) factor. Essential requirements of a method of detection suitable for use by military or civil defence personnel are that it be simple, specific, sensitive and reliable. Typical detector kits contain sampling tubes and/or reagent buttons, papers, etc. After being exposed to particular chemical agents, these detectors change colour or exhibit some other changes easily observable without special instruments. Chemical detection kits could also be used to decide when it is safe to remove protective masks or other items of protective clothing. Obviously, laboratories, whether mobile or fixed, can perform more elaborate chemical analyses than can detection kits.

87. Warning devices which have been devised incorporate sensitive detectors that actuate an automatic alarm which alerts individuals to take protective action before a harmful dose of agent is received. They are of two trends: point sampling devices, which sample the air at one location by means of an air pump, and area scanning devices, which probe a specific area for chemical agents. The disadvantage of point source alarms is that they must be placed upwind of the area that has to be protected, and a rather large number may be needed. If the wind shifts, they have to be repositioned. Successful area scanning alarms have not yet been developed.

88. It must be recognized that in spite of instrumental warning systems, personnel near the point of dissemination of a chemical agent might still not have sufficient time to take protective action.

Bacteriological (biological) attacks

89. Unlike chemical weapons, bacteriological (biological) weapons cannot readily be distinguished from the biological "background" of the environment by specific chemical or physical reactions, and much lower aerosol concentrations of bacteriological (biological) agents are dangerous than of chemical agents. The problem of early detection and warning is thus even more difficult than for chemical weapons. A partial solution to the problem has been achieved with certain non-specific but very sensitive physical devices such as particle-counters and protein detectors (protein is a typical constituent of micro-organisms). Presumptive evidence of a bacteriological (biological) attack might be obtained if there is an unusual deviation from the normal pattern of material in the air recorded by the instruments. The eleva-

tion of such a deviation, however, would necessitate intensive and prolonged study of the normal pattern in a given location. This subject is discussed further in annex A.

3. Physical Protection

90. The primary objective is to establish a physical barrier between the body and the chemical and bacteriological (biological) agents, and especially to protect the skin and the respiratory tract. Without this no warning system, however effective, has the slightest value. Protection could be achieved by using various types of individual protective equipment or by means of communal shelters.

Individual protection

91. Protective masks are the first line of defense against all chemical and bacteriological (biological) agents. Although protective masks differ in appearance and design, they have certain features in common: a fitted facepiece, made of an impermeable material soft enough to achieve an effective seal against the face, and some means of holding it in place, such as a head strap, and a filter and absorption system, in canister or other form, which will remove particulate (aerosol) agents by mechanical filtration. The canister also contains activated charcoal, sometimes impregnated to react with agents in the vapour state, but which in any case will absorb toxic vapours. Some masks are made so as to permit the drinking of water while the individual is masked, or attempts at resuscitation measures on casualties without unmasking them. Civil defense masks are often less elaborate versions of the military mask. Gas proof protectors can be provided for infants.

92. A protective mask, properly fitted and in good working condition, will provide complete respiratory protection against all known chemical and bacteriological (biological) agents. However, a certain percentage of masked personnel can be expected to become casualties because of lack of training, failure to keep the mask in good condition, growth of beard, or because facial injuries prevent a good fit, etc. The amount of leakage that can be tolerated with bacteriological (biological) agents is much less because of their greater potency.

93. Since mustard gases and the nerve agents of low or intermediate volatility can penetrate the unbroken skin, even through normal clothing, the whole body surface must be protected by some form of special clothing, of which there are two kinds, one which is impermeable to liquid agents, and the other which, though permeable to air and moisture, has been treated so as to prevent chemical agents from getting through. Rubber coated fabrics, made into protective suits, constitute the first, while normal clothing, treated with chlorimides or absorbents, is an example of the second. In addition, some form of impermeable cover, ground sheet or cape, can be used to protect against gross liquid contamination. Feet and hands are usually protected by special gloves, and either by boot covers or treated boots.

94. Together with a mask, protective clothing, properly worn and in good condition, will afford excellent protection against known chemical and bacteriological (biological) agents. The greatest degree of protection is provided by the impermeable type but when worn continuously it becomes very burdensome because of heat stress, particularly in warm environments. Permeable clothing allows somewhat greater activity, but even so, physical activity is impaired.

Collective or communal protection

95. Collective protection takes the form of fixed or mobile shelters capable of accommodating groups of people, and has been devised not only for civilians but also for special groups of military personnel (e.g. command posts, field hospitals). Collective protection is the most effective physical means of protection against all forms of attack. Sealing or insulating the shelter will provide protection only for a limited time, because of lack of ventilation. Sealing plus a supply of oxygen and a means of eliminating carbon dioxide is better, but once again the time of occupancy is limited. The shelter could be none the less safe even though surrounded by fire or high concentrations of carbon monoxide. The best kind of shelter provides ventilation with filtered air to maintain a positive pressure relative to that outside. This positive internal pressure prevents the penetration of airborne agents, and permits entry or exit of personnel and equipment without contamination of the interior of the shelter. Extended periods of occupancy are possible.

96. These principles of collective protection as applicable to all enclosures arranged for human or animal occupancy. They have been used to provide protection by: hastily constructed or improvised field shelters, mobile vans and armoured vehicles, and permanent or fixed shelters designated for housing civilian or military personnel.

97. Once a bacteriological (biological) attack had been suspected or detected, it would be necessary to identify the specific agents involved so that proper protective measures could be taken and chemo-prophylaxis and treatment planned. Identification would also help to predict the incubation period and hence the time available for remedial measures to be taken. At present the only means of identifying specific micro-organisms is by normal laboratory procedures. Many routine laboratory methods of identification require as long as two to five days, but some recent developments have reduced this time appreciably. It is possible to collect the particles from large volumes of air and concentrate them in a small amount of fluid. Bacteria can then be trapped on special filters and transferred to nutrient media, where sufficient growth may take place to permit identification of some kinds of bacteria within fifteen hours. Another method, the fluorescent antibody technique, can be highly specific, and is applicable to bacteria and some viruses. In some cases, it allows of specific identification within a few hours. But despite all these recent developments, laboratory identification of biological agents is still a complicated and unsatisfactory process.

4. Decontamination

Chemical agents

98. Prolonged exposure to weather and sunlight reduces or eliminates the danger of most chemical agents, which are slowly decomposed by humidity and rain. But one could not rely on natural degradation to eliminate the risk and, in general, it would be essential to resort to decontamination. This would reduce the hazard but it is a time-consuming process and would greatly hamper military operations.

99. A wide range of chemicals could be used as decontaminants, the choice depending on the particular agent which has to be neutralized, the type of surface that needs to be treated, the extent of contamination, and the amount of time available. Decontaminants range from soap and detergent in water, to caustic soda, hypochlorite and various organic solvents, and their successful use calls for large numbers of people, a copious supply of water, and appropriate equipment.

100. Decontaminating solutions, powders, applicators and techniques have been developed for decontaminating skin, clothing, personal equipment and water. These would need to be used immediately after an attack.

101. Unless food has been stored in metal cans or other containers which were impermeable to chemical agents, it would have to be destroyed. Decontamination of complex equipment and vehicles is a difficult and time-consuming procedure. Special pressurized sprayers to disseminate powdered and liquid decontaminants have been developed for this purpose, as have paints or coatings to provide a smooth impermeable surface to preclude the penetration of chemical agents.

102. Decontamination might even need to be extended to roads and selected areas. This would involve the removal of contaminated soil by bulldozing, or covering it with earth, using explosives to spread a powdered decontaminant over a wide area.

Bacteriological (biological) agents

103. Decontamination procedures for biological agents are similar to those used for toxic chemical agents. Aeration and exposure to strong sunlight will destroy most micro-organisms, as will also exposure to high temperatures. Thoroughly cooking exposed food, and boiling water for at least fifteen minutes will kill almost all relevant micro-organisms. Calcium hypochlorite and chlorine can also be used to purify water. Certain chemical compounds, such as formaldehyde, ethylene oxide, calcium and sodium hypochlorites, sodium hydroxide and betapropiolactone, can be used to decontaminate materials and work areas. A hot, soapy shower is the best way to decontaminate human beings.

E. Protection of domestic animals and plants against chemical and bacteriological (biological) attacks

1. Chemical Attacks

104. The widespread protection of domestic animals and plants from chemical attack would be impracticable. Once a crop had been attacked with herbicides there is no effective remedial action. The damage could be made good only by a second planting of either the same or another crop, depending on the season.

2. Bacteriological (Biological) Attacks

Animals

105. Animals or flocks could be protected by collective shelters, although the cost would be great and, in the absence of automatic warning devices, it would be impossible to assure that the creatures would be sheltered at the time of attack.

106. The ideal means of protection for animals would be vaccination. Vaccines have been developed, and many are routinely produced, for foot-and-mouth disease, rinderpest, anthrax, Rift Valley fever, hog cholera, Newcastle disease and others. Vaccination of animal herds by aerosols is a promising area of investigation.

Plants

107. The only hopeful approach would be to breed disease resistant plants. This is a regular part of most national agricultural programmes, and has as its object the increase of crop yields. But unless the exact identity of the bacteriological (biological) agent which might be used were known well in advance (possibly years), it would not be feasible to apply this principle to provide protection to crops against this kind of attack.

108. Efforts devoted to spraying fungicides and similar preparations to reduce loss after attack do not appear to be economically effective. In most cases the best procedure is to utilize available manpower and machines in planting second crops.

ANNEX A: EARLY WARNING SYSTEMS FOR AIRBORNE BACTERIOLOGICAL (BIOLOGICAL) AGENTS

An ideal automatic system for early warning against an attack with bacteriological (biological) agents would comprise the following components:

(1) a device to collect large volumes of air and concentrate the particulate matter obtained, in a small volume of fluid or on a small surface;

(2) a device to quantify and identify the collected material;

(3) a mechanism to assess the results and to initiate an alarm if necessary.

To collect and identify bacteriological (biological) agents and to initiate an alarm so that protective measures can be taken in sufficient time to be useful is extremely difficult. This is so because, firstly, identification of agents is generally time-consuming and, secondly, large and fluctuating quantities of bacterial and other organic materials exist in the atmosphere at all times. Thus if pathogens from a cloud released by an aggressor were collected, the device would need, not only to determine whether the quantity collected was significantly above the normal amounts that might occur, but also what the agent was, or at least that, in the amount collected, it was highly dangerous to man.

At present, warning devices are available which are sensitive but non-specific and these, unfortunately, would give an unacceptably high proportion of false alarms. Others are being developed which attempt to incorporate both rapid response with high specificity, but none to date is in the production stage. Research on this important problem is being continued and some of the approaches and techniques that are being used in this study are listed below.

Classification of automated biodetection approaches *

General category: Physical particle detection.

Suggested approach: magnification, light scattering, volume displacement.

General category: key biochemical components.

Suggested approach: antigen detection by fluorescent labelling, dyes and staining, bioluminescence and fluorescences, optical activity, pyrolysis products detection, ATP detection, proteins, nucleic acids, or others.

General category: Biological activity.

Suggested approach: Growth (increase in cell mass or numbers), CO_2 evolution, phosphatase activity, substrate change (pH, Eh, O_2 interchange), Pathogenic effects.

CHAPTER II. THE PROBABLE EFFECTS OF CHEMICAL AND BACTERIOLOGICAL (BIOLOGICAL) WEAPONS ON MILITARY AND CIVILIAN PERSONNEL, BOTH PROTECTED AND UNPROTECTED

A. The effects of chemical agents on individuals and populations

109. The effects of chemical warfare agents on humans, animals and plants depend on the toxic properties of the agent, the dose absorbed, the rate of absorption and the route by which the agent enters the organism. Toxic agents may enter the body through the skin, the eyes, the lungs, or through the gastro-intestinal tract (as a result of eating contaminated food or drinking contaminated liquids).

110. For a given agent absorbed under the same conditions, the effect will be proportional to the dose absorbed. This is why it is possible to define for each agent certain characteristic doses, such as the dose which, under given conditions, will on average, cause death in 50 per cent of the individuals exposed (the 50 per cent lethal dose, or "LD 50"), or the dose which will cause 50 per cent non-fatal casualties, or the dose which will have no appreciable military effect. These are expressed in milligrams of agent, with reference to a healthy adult of average weight. They may also be given in terms of milligrams per kilogram of body weight.

111. For purposes of evaluation it is convenient to express the same idea somewhat differently in the case of gases, vapours and aerosols absorbed through the respiratory passages. Here the absorbed dose depends on the concentration of the agent in the air, on the respiration rate of the subject, and on the duration of the exposure. If, for the sake of illustration, it is assumed that the average respiration rate for groups of individuals engaged in various activities remains relatively constant, it follows that the dose, and therefore the effect produced, will be directly proportional to the product of the concentration of the agent in the air (C in milligrams/cubic metre) and the exposure time (t in minutes). This is called the dosage (or Ct factor), certain characteristic values of which (for example the LD 50) are used in particular situations for quantitative estimates of the effects produced.

112. For toxic agents acting on or through the skin, the dose absorbed by contact will often be related to the "contamination rate," expressed in grams/square metre, which indicates to what extent surfaces are contaminated by the liquid.

113. The consequences of an attack on a population are a combination of the effects on the individuals in it, with both the concentration of agent and the susceptibility of individuals varying over the whole area exposed to risk. Different individuals would respond differently to an attack, and might have different degrees of protection. Possible long-term contamination of personnel from chemical warfare agents persisting on the ground and vegetation may add to the immediate, direct effects.

114. Protective masks, protective clothing and shelters and, to a certain extent, decontamination when applicable, give substantial protection against all chemical warfare agents. But, as already emphasized, the mere possession of a means of protection by no means constitutes an absolute safeguard against contamination by poisons. Alarm and detection equipment is important, sometimes vital, because without it timely warning, which is essential to the proper use of protective equipment, would be lacking. Since protective measures are most effective when performed by trained personnel working effectively in units, military personnel are more likely to be provided with adequate protection than a civilian population. In any event, the civilian population in most countries is simply not provided with protection against chemical warfare.

115. Several chemical warfare agents which were known during World War I, and others developed since, have been reported on in the scientific literature. However, the effects of the more lethal modern chemical weapons have not been studied under conditions of actual warfare. Furthermore, no complete and systematic field studies of the use of defoliants, herbicides and riot control agents are available. The following descriptions of the probable effects of chemical weapons, based both upon evidence and on technical judgment, must therefore be regarded as somewhat conjectural.

1. Effects of Lethal Chemical Agents on Individuals

116. Table 1 provides a classification of the most important lethal chemical agents, and notes some of their characteristics in terms of the effects they produce. More details are given in annex A.

TABLE 1.—GENERAL CHARACTERISTICS OF LETHAL CHEMICAL AGENTS

Type	Mechanism	Time for onset of effects	Examples
Nerve agent G	Interferes with transmission of nerve impulses.	Very rapid by inhalation (a few seconds).	Tabun, Sarin, Soman.
Nerve agent V	Interferes with transmission of nerve impulses.	Very rapid by inhalation (a few seconds); Relatively rapid through skin (a few minutes to a few hours).	VX.
Blister agent	Cell poison	Blistering delayed hours to days; eye effects more rapid.	Sulfur mustard. Nitrogen mustard.
Choking agent	Damages lungs	Immediate to more than three hours	Phosgene.
Blood agent	Interferes with all respiration.	Rapid (a few seconds or minutes)	Hydrogen cyanide.
Toxin	Neuromuscular paralysis	Variable (hours or days)	Botulinum toxin.

117. Lethal chemical agents kill in relatively small doses, and as a rule the amount that causes death is only slightly greater than that which causes incapacitation. Death may occasionally be caused by high doses of presumed incapacitating agents and, conversely, minor effects could be caused by low doses of lethal agents. Blister agents are considered with the lethal agents, since a small but significant fraction of the personnel attacked with such agents may die or suffer serious injury.

Nerve agents

118. These lethal compounds are readily absorbed through the lungs, eyes, skin and intestinal tract without producing local irritation, and they interfere with the action of an enzyme (cholinesterase) essential to the functioning of the nervous system. The nerve-agent casualty who has been exposed to a lethal dose will die of asphyxiation within a few minutes if he is not treated swiftly by means of artificial respiration and drugs such as atropine or oximes. Otherwise recovery is generally rapid and complete. Occasionally, it may take several weeks, but will be complete unless anoxia or convulsions at the time of exposure were so prolonged as to cause irreversible brain damage.

119. The route of entry of the agent into the body has some influence on the appearance of symptoms. These develop more slowly when the agent is absorbed through the skin than when it is inhaled. Low dosages cause a running nose, contraction of the pupil of the eye and difficulty in visual accommodation. Constriction of the bronchi causes a feeling of pressure in the chest. At higher dosages, the skeletal muscles are affected—weakness, fibrillation, and eventually paralysis of the respiratory muscles occurring. Death is usually caused by respiratory failure, but heart failure may occur. It is estimated that the most toxic nerve gases may cause death at a dosage of about ten mg min/m³.* Less toxic ones are lethal at dosages of up to 400 mg min/m³.

Blister agents or vesicants

120. Mustard is a typical blister agent which, like other members of this class, also has general toxic effects. Exposure to concentrations of a few mg/m³ in the air for several hours results at least in irritation and reddening of the skin, and especially irritation of the eyes, but may even lead to temporary blindness. Exposure to higher concentrations in the air causes blisters and swollen eyes. Severe effects of this kind also occur when liquid falls on the skin or into the eyes. Blistering with mustard is comparable to second degree burns. More severe lesions, comparable to third degree burns, may last for a couple of months. Blindness may be caused, especially if liquid agent has entered the eyes. Inhalation of vapour or

*Adapted from Greene, V. W. "Biodetecting and Monitoring Instruments Open New Doors for Environmental Understanding", *Environmental Science Technology*, February 1968, pp. 104–112.

*A dosage of one mg min/m³ consists of an exposure of one minute to gas at a concentration of one milligram per cubic metre.

aerosol causes irritation and pain in the upper respiratory tract, and pneumonia may supervene. High doses of blister agents cause a general intoxication, similar to radiation sickness, which may prove lethal.

121. The first step in treating a person who has been exposed to a vesicant or blister agent, is to wash it out of the eyes and decontaminate the skin. Mild lesions of the eyes require little treatment. The blisters are treated in the same way as any kind of second-degree burn.

Other lethal agents

122. *Phosgene* and compounds with similar physiological effects were used in World War I. Death results from damage to the lungs. The only treatment is inhalation of oxygen and rest. Sedation is used sparingly.

123. *Hydrogen cyanide* in lethal doses causes almost immediate death by inhibiting cell respiration. Lower doses have little or no effect.

124. Most of the so-called blood agents contain cyanide, and all act rapidly. The casualty would either die before therapy could begin, or recover soon after breathing fresh air.

125. *Botulinum toxin* is one of the most powerful natural poisons known, and could be used as a chemical warfare agent. There are at least six distinct types, of which four are known to be toxic to man. Formed by the bacterium *Clostridium botulinum*, the toxin is on occasion accidentlly transmitted by contaminated food. The bacteria do not grow or reproduce in the body, and poisoning is due entirely to the toxin ingested. It is possible that it could be introduced into the body by inhalation.

126. Botulism is a highly fatal poisoning characterized by general weakness, headache, dizziness, double vision, dilation of the pupils, paralysis of the muscles concerned in swallowing, and difficulty of speech. Respiratory paralysis is the usual cause of death. After consumption of contaminated food, symptoms usually appear within twelve to seventy-two hours. All persons are susceptible to botulinum poisoning. The few who recover from the disease develop an active immunity of uncertain duration and degree. Active immunization with botulinum toxoid has been shown to have some protective value, but antitoxin therapy is of limited value, particularly where large doses of the toxin have been consumed. Treatment is mainly supportive.

2. Effects of Lethal Agents on Populations

127. As already indicated, the possible effects of an attack on populations with lethal chemical warfare agents would depend upon the agent used, upon the intensity of the attack, whether the population was mainly under cover or in the open, on the availability of protective facilities, on the physiological state of the individuals affected, and upon the meteorological conditions, which might differ from what had been predicted, and alter during the course of an attack.

128. The importance of meteorological conditions on the spread of agent from its point or area of release is illustrated by Figures 1(a), 1(b) and 1(c) which show in an idealized diagramatic form the type of dosage contours to be expected from a point source, from multiple sources and from a linear aerial source respectively when exposed to the effects of wind.

129. Figure 1 (a) shows the shape of the zone travelled by the chemical cloud produced by a point source (for example, one isolated munition), at the far left of the innermost cigar-shaped figure under conditions of a strong wind (say, 5-20 km/h) in the direction indicated.

130. The number on each line indicates the dosage (Ct = concentration times time) on the line. The dosage at any point inside the area delimited by the curve is greater than the number indicated. On the basis of these data, it is possible to estimate the casualties when the characteristic dosages of the agent used are known. For example, if the LD 50 value of the agent were 30 milligram-minutes/cubic metre, there would be more than 50 per cent fatalities in the area inside the contour marked 30.

131. This figure applies to a volatile agent such as Sarin, which is usually released in the form of a vapour or an aerosol cloud. In the case of a non-volatile liquid released in the form of droplets which fall onto the ground and contaminate it, a corresponding map could be drawn for the level of contamination of the soil (expressed in milligrams/square metre).

132. Figure 1 (b) shows the same phenomenon in relation to an area source such as would result, for example, from attack by a missile warhead filled with small bombs or by an artillery salvo.

133. In the case of a volatile agent released in the form of a vapour or aerosol, the resulting cloud, carried downwind, covers a zone whose general shape is the same as in the case of a point source (Figure 1 (a)), but its dimensions are obviously much larger and the dosage values are also larger.

134. If a non-volatile agent were released in the form of droplets, the hazard would be very great in the impact area because all surfaces (skin, clothing, vehicles, equipment, vegetation, etc.) would be contaminated. The downwind hazard caused by the drift of the most minute particles would extend over a much smaller area than in the previous case because only a relatively small number of minute particles would be carried by the wind.

135. Figure 1(c) shows the zone covered by a linear aerial source, as in the case of dissemination of a non-volatile agent from an aircraft.

136. The emitted cloud is carried by the wind and does not touch the ground until it has travelled some distance away from the line of flight of the disseminating aircraft; this depends on the altitude of the aircraft and on the wind velocity. Since the cloud has already been subjected to the influence of turbulent diffusion before reaching the ground, the dosage values or contamination rates will be highest some distance away from the zone boundary nearer the source.

137. Because of meteorological and other variables, it is impossbile to make general statements about the quantitative effects of chemical weapons on populations. The following hypothetical examples, therefore, are intended merely to illustrate what might happen and the degree to which protective measures could reduce casualties. To provide representative illustrations, the examples chosen include the different hazards created by nerve agents used in a battle zone, on military targets in the rear and on civilians in a town.

Effects of nerve gas on protected troops in combat

138. A heavy attack with air-burst munitions dispersing non-volatile liquid nerve agent would create concentrations on the the ground that could rage from one-tenth of a gram to ten grams of liquid per square metre, giving a mean value of about five grams. This would be extremely hazardous. At the same time, aerosol concentrations would be created over almost the entire impact area (dosages about twenty mg. min/m^3). This would produce casualties even if there were no liquid hazard.

139. To counter this type of attack, protective measures of a very high order of efficiency, including protective masks, light protective clothing, means for decontamination, detection systems, antidotes and medical care, would have to be available. Protective clothing and rapid utilization of gas masks would give a certain measure of protection. But in this case, subsequent decontamination and medical care would be necessary to avoid heavy lethal losses.

Effects of nerve gas on a military target in the rear

140. An attack from the air with a volatile nerve agent against a military installation in a rear area would cause an intense liquid and vapor hazard in the installation itself, and a vapour hazard downwind in the surrounding area. As suggested in figure 1(b), the impact area would be very heavily contaminated; gas dosages inside and close to the impact area would be very high. Further downwind the gas concentration would decrease gradually, and finally become innocuous. A general picture of the way casualties would occur in a downwind area is indicated in figure 1(a).

141. After an attack in which tons of Sarin were used against an area of one square kilometre, the impact area and the area immediately downwind from it would be highly lethal to all unprotected personnel. Lethal casualties would occur at dosages above eighty mg. min/m^3 and severe casualties down to thirty mg. min/m^3. Some very light casualties would result at dosages around five mg. min/m^3. The distance between the impact area and the area of lowest effective dosage would depend on the local topography and on weather conditions, but would rarely exceed a few tens of kilometres.

142. Personnel provided only with gas masks, but not wearing them at the moment of the attack, would suffer substantial losses in and close to the impact area, both because of the effects of the liquid and because of the high gas concentration inhaled before they could don their masks. Further downwind, masks would give essentially complete protection if warning were provided reasonably quickly.

Effects of a nerve gas attack on a town

143. The population density in a modern city may be 5,000 people per square kilometre. A heavy surprise attack with non-volatile nerve gas by bombs exploding on impact in a wholly unprepared town would, especially at rush hours, cause heavy losses. Half of the population might become casualties, half of them fatal, if about one ton of agent were disseminated per square kilometre.

144. If such a city were prepared for attack, and if the preparations included a civil defence organization with adequately equipped shelters and protective masks for the population, the losses might be reduced to one half of those who would be anticipated in conditions of total surprise.

145. Although it would be very difficult to achieve, if there were a high level of preparedness, comprising adequate warning and effective civil defence procedures, it is conceivable that most of the population would be sheltered at the time of the attack, and that very few would be in the streets.

146. Given a town with a total population of 80,000, a surprise attack with nerve gas could thus cause 40,000 casualties, half of them fatal, whereas under ideal circumstances for the defence, fatalities might number no more than 2,000. It is inconceivable, however, that the ideal would ever be attained.

3. Effects of Incapacitating Chemical Agents

147. Incapacitating chemicals, like tear gases and certain psychochemicals, produce in normal health people a temporary, reversible disability with few if any permanent effects. In your children, old people and those with impaired health, the effects may sometimes be aggravated. They are called incapacitating because the ratio between the lethal and incapacitating doses is very high. The types which could have a possible military use are limited by requirements of safety, controlled military effectiveness and economic availability.

Tear and harassing gases

148. Many chemical compounds fall into this category, of which ω-chloracetophenone (CN), ortho-chlorobenzylidenemalononitrile (CS), and adamsite (DM) are probably the most important. They are solids when pure, and are disseminated as aerosols.

149. Either as vapour or in areosol, tear and harassing gases rapidly produce irritation, smarting and tears. These symptoms disappear quickly after exposure ceases. The entire respiratory tract may also be irritated, resulting in a running nose and pain in the nose and throat. More severe exposures can produce a burning sensation in the trachea. As a result, exposed persons experience difficulty in breathing, attacks of coughing and occasionally, nausea and headaches.

150. Extremely high dosages of tear and harassing gases can give rise to pulmonary edema (fluid in the lungs). Deaths have been reported in three cases after extraordinary exposure to ω-chloracetophenone (CN) in a confined space.

151. The effects of adamsite (DM) are more persistent. Nausea is more severe and vomiting may occur.

152. Results of experiments on various species of animals (see annex B) and some observations of human responses lead to the following tentative conclusions First, CS is the most irritating of these gases followed by adamsite (DM) and ω-chloracetophenone (CN). Second, the tolerance limits (highest concentration which a test subject can tolerate for one minute) of DM and CS are about the same. Third, the least toxic of the tear gases is CS, followed by DM and then CN. Fourth, human beings vary in their sensitivity to, and tolerance of, tear and harassing gases. And finally, the toxicity of these gases varies in different animal species and in different environmental conditions.

153. The symptoms caused by tear gases disappear, as tears wash the agent from the eyes, and if the victim gets out of the tear gas atmosphere. Some, however, cause reddening or rarely even blistering of the skin when the weather is hot and wet.

Toxins

154. Staphylococcus toxin occurs naturally in outbreaks of food poisoning—which is the only medical experience with this toxin. The symptoms have a sudden, sometimes violent, onset, with severe nausea, vomiting and diarrhea. The time from ingestion of the toxin to the onset of symptoms is usually two to four hours, although it may be as short as a half hour. Most people recover in 24–48 hours and death is rare. Treatment is supportive and immunity, following an attack, is short-lived. The toxin is resistant to freezing, to boiling for thirty minutes, and to concentrations of chlorine used in the treatment of water. Staphylococcus toxin could be considered as an incapacitating chemical warfare agent. Symptoms can be produced in animals by intravenous injection, and the toxin may also be active by the respiratory route.

Psychochemicals

155. These substances have been suggested for use in war as agents which could cause temporary disability by disrupting normal patterns of behavior. The idea cannot be accepted in its simple form, since these substances may lead to more permanent changes, particularly in individuals who are mentally unbalanced or who are in the early stages of a nervous and mental disease. Moreover, very high doses, which would be difficult to exclude during use in war, can cause irreversible damage to the central nervous system or even death. Psychochemicals could also have particularly severe effects on children.

156. Compounds such as LSD, mescaline, psilocybin, and a series of benzilates which cause mental disturbance—either stimulation, depression or hallucination—could be used as incapacitating agents. Mental disturbance is, of course, a very complex phenomenon, and the phychological state of the person exposed to a psychochemical, as well as the properties of the agent, would profoundly influence its manifestations. But, despite the variation in responses between individuals, all those affected could neither be expected to act rationally, nor to take the initiative, nor make logical decisions.

157. Psychochemicals do more than cause mental disturbance. For example, the general symptoms from the benzilates are interference with ordinary activity; dry, flushed skin; irregular heartbeat; urinary retention; constipation; slowing of mental and psychical activity; headache, giddiness; disorientation; hallucinations; drowsiness; occasional maniacal behaviour; and increase in body temperature. While these effects have not been fully studied, there would be a significant risk of affected individuals, particularly military personnel, becoming secondary casualties due to unco-ordinated behaviour. A single dose of 0.1 to 0.2 mg LSD25 will produce profound mental disturbance within half an hour, the condition persisting for about ten hours. This dose is about a thousandth of the lethal dose.

158. Treatment of the symptoms of psychochemicals is mainly supportive. Permanent psychotic effects may occur in a very small proportion of individuals exposed to LSD.

159. It is extremely difficult to predict the effects which an attack with psychochemical agents would produce in a large population. Apart from the complication of the varying reaction of exposed individuals, there could be strange interactions within groups. A few affected individuals might stimulate their fellows to behave irrationally, in the same way as unaffected persons might to some extent offset the reactions of those affected. Since the probability of fatal casualties resulting directly from exposure is low, some normal group activity might be sustained. Protective masks would probably provide complete protection since practically all potential psychochemical agents, if used as offensive weapons, would be dessiminated as aerosis.

4. Other Effects of Chemical Agents

Effects on animals

160. The effects of lethal chemical agents on higher animals are, in general, similar to those on man. The nerve agents also kill insects.

Effects on plants

161. A variety of chemicals kill plants, but as already indicated, little is known about their long-term effects. The effective dose ranges of defoliants vary according to the particular species of plant attacked, its age, the meteorological conditions and the desired effect: e.g., plant death or defoliation. The duration of effect usually lasts weeks or months. Some chemicals kill all plants indiscriminately, while others are selective. Most defoliants produce their effects within a few weeks, although a few species of plant are so sensitive that defoliation would occur in a period of days.

162. An application of defoliating herbicide* of approximately 3 gallons (32 pounds) per acre (roughly 36 kg per hectare) can produce 65 per cent defoliation for six to nine months in very densely forested areas, but in some circumstances some species of trees will die. Significantly lower doses suffice for most agricultural and industrial uses throughout the world. Defoliation is, of course, a natural process—more common in trees in temperate zones than in the tropics. Essentially what defoliants do is trigger defoliation prematurely.

163. Desiccation (the drying out) of leaves results in some defoliation, although usually the leaf-drop is delayed, and the plant would not be killed without repeated application of the chemical. Chemical desiccants cause a rapid change in colour, usually within a few hours.

B. The effects of bacteriological (biological) agents on individuals and populations

164. Mankind has been spared any experience of modern bacteriological (biological) warfare, so that any discussion of its possible nature has to be based on extrapolation from epidemiological knowledge and laboratory experiment. The number of agents which potentially could be used in warfare is limited by the constraints detailed in chapter I. On the other hand, the variability which characterizes all living matter makes it conceivable that the application of modern knowledge of genetic processes and of selection could remove some of these limitations. Some species of micro-organisms consist of a number of strains characterized by different degrees of virulence, antigenic constitution, susceptibility to chemotherapeutic agents, and so on. For example, strains of tularaemia bacilli isolated in the United States are generally much more virulent in human beings than those found in Europe or Japan. Foot-and-mouth disease virus is another well-known example of an organism with various degrees of virulence. The situation with bacteriological (biological) weapons is thus quite different from that of chemical weapons, where the characteristics of a given compound are more specific.

1. Effects on Individuals

165. Bacteriological (biological) agents could be used with the intention of killing people or of incapacitating them either for a short or a long period. The agents, however, cannot be rigidly defined as either lethal or incapacitating, since their effects are dependent upon many factors relating not only to themselves but also to the individuals they attack. Any disease-producing agent intended to incapacitate may, under certain conditions, bring about a fatal disease. Similarly, attacks which might be intended to provoke lethal effects might fail to do so. Examples of naturally occurring lethal disease are shown in table 2 and representative incapacitating diseases in table 3. A detailed list of possible agents, with a brief description of their salient characteristics is given in annex C.

166. A number of natural diseases of man and domestic animals are caused by mixed infections (e.g., swine influenza, hog cholera). The possible use of two or more different organisms in combination in bacteriological (biological) warfare needs to be treated seriously because the resulting diseases might be aggravated or prolonged. In some instances, however, two agents might interfere with one another and reduce the severity of the illness they might cause separately.

167. The effects of some forms of bacteriological (biological) warfare can be mitigated by chemotherapeutic, chemoprophylactic and immunization measures (for protection see chapter I and annex C of this chapter). Specific chemotherapeutic measures are effective against certain diseases, but not against those caused by viruses. But it may not always be possible to apply such measures, and they might not always be successful. For example, with some diseases early therapy with antibiotics is usually successful, but relapses may occur. Moreover, resistance against antibiotics may develop in almost all groups of micro-organisms, and resistant strains may retain full virulence for man as well as for animals.

*For example, the commonly used "2,4–D" and "2,4,5–T" which are the butyl esters of (2,4-dichlorophenoxy) acetic acid and (2,4,5-trichlorophenoxy) acetic acid.

TABLE 2.—EXAMPLES OF AGENTS THAT MIGHT BE USED TO CAUSE DEATH

Agents	Diseases	Incubation period (days)	Effect of specific therapy	Likelihood of spread from man to man
Viruses	Eastern equine encephalitis	5 to 15	Nil	Nil.[1]
	Tick-borne encephalitis	7 to 14	do	Do.
	Yellow fever	3 to 6	do	Do.
Rickettsiae	Rocky Mountain spotted fever	3 to 10	Good	Do.
	Epidemic typhus	6 to 15	do	Do.
Bacteria	Anthrax	1 to 5	Moderate	Low.
	Cholera	do	Good	High.
	Plague, pneumonic	2 to 5	Moderate	Do.
	Tularaemia	1 to 10	Good	Low.
	Typhoid	7 to 21	do	High.

[1] Unless vector present.

TABLE 3.—EXAMPLES OF AGENTS THAT MIGHT BE USED TO CAUSE INCAPACITATION

Agents	Diseases	Incubation period (days)	Effect of specific therapy	Likelihood of spread from man to man
Viruses	Chikungunya fever	2 to 6	Nil	Nil.[1]
	Dengue fever	5 to 8	do	Do.
	Venezuelan equine encephalitis.	2 to 5	do	Do.
Rickettsiae	Q-fever	10 to 21	Good	Low.
Bacteria	Brucellosis	7 to 21	Moderate	Nil.
Fungi	Coccidioidomycosis	7 to 21	Poor	Do.

[1] Unless mosquito vector present.

Possible bacteriological (biological) agents

168. Victims of an attack by bacteriological (biological) weapons would, in effect, have contracted an infectious disease. The diseases would probably be known, but their symptoms might be clinically modified. For example, apart from the deliberate genetic modification of the organism, the portals of infection might be different from the natural routes, and the disease might be foreign to the geographical area in which it was deliberately spread. Possible bacteriological (biological) agents representing diseases caused by the main groups of relevant micro-organisms are:

169. *Anthrax:* Under natural conditions, anthrax is a disease of animals, the main source of infection for man being cattle and sheep. Its vernacular synonym "wool sorter's disease" indicates one way men used to contract the disease. Depending on the mechanism of transmission, a cutaneous (skin) form (contact infection), an intestinal form (alimentary infection), or pulmonary form (airborne infection) may develop. The lung or respiratory form is most severe, and unless early treatment with antibiotics is resorted to, death ensues within two-three days in nearly every case.

170. Antibiotic prophylaxis is possible, but would have to be prolonged for weeks, since it has been shown that monkeys exposed to anthrax aerosol die if antibiotic treatment is discontinued after ten days. In certain countries, several types of vaccines are employed, but their value has not been fully evaluated.

171. The anthrax bacillus forms very resistant spores, which live for many years in contaminated areas, and which constitute the most dangerous risk the disease presents. From epidemiological observations, the inhalation, infectious dose for man is estimated at 20,000 spores. Experiments on animals show that anthrax can be combined with influenza infection or with some noxious chemical agent, and that the susceptibility of the animal to airborne anthrax infection is then markedly enhanced.

172. With suitable expertise and equipment large masses of anthrax bacilli can be easily grown, and heavy concentrations of resistant anthrax spore aerosols can be made. Such aerosols could result in a high proportion of deaths in a heavily exposed population. Immunization could not be expected to protect against a heavy aerosol attack. The soil would remain contaminated for a very long time, and so threaten live-stock farming.

173. *Coccidioidomycosis:* This disease, which is also called desert fever, is caused by a fungus found in the soil of deserts in the United States, South America and the USSR. The spores of the fungus are very stable, and can easily be disseminated as an aerosol. If they are inhaled, pneumonia with fever, cough, ague and night-sweating, and muscle pains follow after an incubation period of one-three weeks. In most cases, recovery from the disease occurs after some weeks of illness. An allergic rash sometimes breaks out during the first or second week of the illness, and can be significant for proper diagnosis. Treatment presents great difficulties.

174. *Plague:* Under natural conditions, small rodents, from which the disease is transmitted by fleas, are the main source of human infection with plague. This is how "bubonic" plague develops. If the plague microbes are inhaled, pneumonic plague develops after a three-to-five-day incubation period. The patient suffers from severe general symptoms and if untreated, normally dies within two to three days. A patient with pneumonic plague is extremely contagious to contacts.

175. Preventive vaccination is moderately effective against bubonic, but not pneumonic, plague. If administered early, streptomycin treatment may be successful.

176. In a study of experimental pulmonary plague in monkeys, it was found that an average dose of only 100 bacteria caused fatal disease in half the animals tested. Animal experiments have also shown that particles of 1 micrometre diameter (1.25,000 of an inch), containing single microbial cells, can cause primary pneumonia, with a rapid and fatal outcome. If the aerosol is formed by larger particles (5–10 micrometres diameter) microbial cells are deposited in the nose and other regions of the upper respiratory tract, and primary foci of the disease develop in the corresponding lymphatic nodes. A fatal generalized infection may then follow.

177. A large mass of plague bacteria could be grown, and probably lyophilized (freeze-dried) and kept in storage. The agent is highly infectious by the aerosol route and most populations are completely susceptible. An effective vaccine against this type of disease is not known. Infection might also be transmitted to urban and/or field rodents and natural foci of plague may be treated.

178. *Q-fever*: Under natural conditions, Q-fever is a disease of animals, the main sources of infection to man being sheep, goats and cattle. The infection is transmitted most frequently by the air route.

179. An incubation period of two to three weeks follows the inhalation of the infectious material. A severe attack of influenza-like illness follows, with high fever, malaise, joint and muscle pains, which may be followed in five to six days by pneumonia. In untreated cases, the illness lasts two to three weeks; the patient feels exhausted and is unable to do normal work for several weeks. But the disease can be successfully treated with broad spectrum antibiotics (tetracyclines). Prophylactic vaccines have been prepared in some countries, but have not yet been proved suitable for large-scale use.

180. The agent causing the disease is a rickettsia, and is extremely infectious for man. An epidemic of Q-fever once occurred due to contaminated dust which was carried by the wind from a rendering plant some ten kilometers away. Q-fever is also a common and significant laboratory hazard, even though it is only rarely transmitted from man to man. The high susceptibility of humans to this agent has been demonstrated in volunteers.

181. Q-fever rickettsiae are extraordinarily resistant to environmental factors such as temperature and humidity. Very large amounts can be produced in embryonated chicken eggs (20,000 million mirco-organisms par millilitre) and can be stored for a long period of time. A Q-fever aerosol could produce an incapacitating effect in a large proportion of the population of an attacked area. The infective agent could persist in the environment for months and infect animals, possibly creating natural foci of infection.

182. *Tularaemia:* Under natural conditions, tularaemia is a disease of wild animals, the source of human infection being rodents, especially rabbits and hares. When it occurs naturally in human beings, who are very susceptible to the disease, skin lesions with swelling of the lymph nodes are its usual manifestation (infection by contact with sick and dead animals, or by way of ticks and other vectors). Infection can also occur through the eye and the gastro-intestinal tract. The pulmonary form (airborne infection) is the more serious. Pulmonary tularaemia is associated with general pain, irritant cough, general malaise, etc., but in Europe and Japan mortality due to this form of the disease was never higher than 1 percent even before antibiotics became available. American tularaemia strains in the other epidemics have been associated with a mortality rate as high as 20 percent despite antibiotic treatment. Usually treatment with streptomycin or tetracycline is highly effective. A tularaemia vaccine developed in the Soviet Union is also highly effective.

183. The agent causing the disease is a microbe which *is very sensitive* to common disinfectants, but which is able to survive for as long as a few weeks in contaminated dust, water, etc.

184. Aerosols of tularaemia have been tested on volunteers. The inhalation infectious dose for man is about ten to twenty-five microbes, and the incubation period five days. By increasing the inhaled dose a hundred times, the incubation period shortens to two to three days. Owing to its easy aerosol transmission, tularaemia has often infected laboratory workers.

185. The microbiological characteristics are similar to those of the plague bacillis (although antibiotic treatment and vaccination prophylaxis are effective). Both lethal and incapacitating effects are to be expected. The disease is not transferred from man to man, but long-lasting natural foci might be created.

186. *Venezuelan equine encephalitis virus (VEE)*: In nature, VEE is an infection of animals (equines, rodents, birds) transmitted to man through mosquitos which have fed on infected animals.

187. The disease has sudden onset, with headache, chills and fever, nausea and vomiting, muscle and bone pains, with encephalitis occurring in a very small proportion of cases. The mortality rate is very low and recovery is usually rapid after a week, with residual weakness often persisting for three weeks. No specific therapy is available. The vaccine is still in the experimental stage.

188. Numerous laboratory infections in humans have been reported, most of them airborne. In laboratory experiments, monkeys were infected with aerosolized virus at relatively low concentrations (about 1,000 guinea pig infectious doses).

189. Since the virus can be produced in large amounts in tissue culture or embryonated eggs, and since airborne infection readily occurs in laboratory workers, concentrated aerosols could be expected to incapacitate a very high percentage of the population exposed. In some areas, persistent endemic infection in wild animals would be established.

190. *Yellow fever:* In nature, yellow fever is primarily a virus disease of monkeys, transmitted to man by a variety of mosquitos (*Aedes aegypti, Aedes simpsoni, Hamagogus* species, etc.). After an incubation period of three-six days, influenza-like symptoms appear with high fever, restlessness and nausea. Later the liver and the kidneys may be seriously affected, with jaundice and diminished urinary excretion supervening. The very severe forms end in black vomitus and death. In a non-immune population. mortality rates for yellow fever may be as high as 30–40 per cent, There is no specific treatment, but prophylactic vaccination, being highly effective is widely used in yellow fever endemic areas.

2. Effects on Populations

191. Other than for sabotage, the use of aerosol clouds of an agent is the most likely form of attack in bacteriological (biological) warfare. For example, material can be produced containing infective micro-organisms at a concentration of 10,000 million per gram. Let us suppose that an aircraft were to spray such material so as to produce an aeronsol line source 100 kilometres in length across a 10 kilometre per hour wind. Then, assuming that 10 per cent of organisms survived aerosolization, and that subsequent environmental stresses caused them to die at a rate of 5 per cent per minute, about 5,000 square kilometres would be covered at a concentration such that 50 per cent of the unprotected people in the area would have inhaled a dose sufficient to infect them, assuming that the infective dose is about 100 micro-organisms per person. This particular calculation is valid for agents such as those which cause tularaemia, plague, as well as for some viruses. The decay rate of the cauative agents of Q-fever, anthrax and some other infections is much lower and the expected effect would be still greater.

192. The effects of bacteriological (biological) attacks would obviously vary according to circumstances. Military personnel equipped with adequate protective measures, well trained in their use and provided with good medical services could, if warned of an attack, be able to protect themselves to a considerable degree. But effective early warning and detection systems do not yet exist. On the other hand, attacks on civil populations are likely to be covert and by surprise and, at present no civilian populations are protected. Unprotected military or civilian personnel would be at complete risk, and panic and irrational behaviour would complicate the effects of the attack. The heavy burden which would be imposed on the medical services of the attacked region would compound disorganization, and there would be a major risk of the total disruption of all administrative services.

193. In view of the extensive anti-personnel effects associated with agents of the kind with which this report is concerned, it is useful to view them against the area of effect of a one-megaton nuclear explosion, which as is well recognized, would be sufficient to destroy utterly a town with a population of a million. It should of course be emphasized that direct comparisons of the effects of different classes of weapons are, at best, hypothetical exercises. From the military point of view, effectiveness of a weapon cannot be measured just in terms of areas of devastation or numbers of casualties. The final criterion will always be whether a specific military objective can be achieved better with one than another set of weapons. The basic hypotheses chosen for the comparison are rather artificial; and in particular, environmental factors are ignored. But despite this limitation, table 4 gives data that help to place chemical, bacteriological (biological) and nuclear weapons in some perspective as to size of target area, numbers of casualties inflicted, and cost estimates for development and production of each type of weapon. The figures speak for themselves.

TABLE 4.—COMPARATIVE ESTIMATES OF DISABLING EFFECTS OF HYPOTHETICAL ATTACKS ON TOTALLY UNPROTECTED POPULATIONS USING A NUCLEAR, CHEMICAL, OR BACTERIOLOGICAL (BIOLOGICAL) WEAPON THAT COULD BE CARRIED BY A SINGLE STRATEGIC BOMBER

Criterion for estimate	Type of weapon		
	Nuclear (1 megaton)	Chemical (15 tons of nerve agent)	Bacteriological (biological) (10 tons [1])
Area affected	Up to 300 km [2]	UP to 60 km [2]	UP to 100,000 km [2].
Time delay before onset of effect.	Seconds	Minutes	Days.
Damage to structures	Destruction over an area of 100 km.[2]	None	None.
Other effects	Radioactive contamination in an area of 2,500 km.[2] for 3-6 months.	Contamination by persistence of agent from a few days to weeks.	Possible epidemic or establishment of new endemic foci of disease.
Possibility of later normal use of affected area after attack.	3-6 months after attack	Limited during period of contamination.	After end of incubation period or subsidence of epidemic.
Maximum effect on man	90 percent deaths	50 percent deaths	50 percent morbidity; 25 percent deaths if no medical intervention.
Multiyear investment in substantial research and development production capability.[2]	$5,000–10,000 million	$1,000–5,000 million	$1,000–5,000 million.

[1] It is assumed that mortality from the disease caused by the agent would be 50 percent if no medical treatment were available.
[2] It is assumed that indicated cumulative investments in research and development and production plants have been made to achieve a substantial independent capability. Individual weapons could be fabricated without making this total investment.

3. Effects on Animals

194. The way bacteriological (biological) weapons might be used against stocks of domestic animals would probably be the same as that used in attacks against man. Representative diseases and their characteristics are shown in table 5.

195. Viral infections probably cause the most important diseases of domestic animals and could have more devastating effects than diseases produced by other types of pathogens. Since many of the organisms which cause infectious diseases in domestic animals are also pathogenic for man, and since some of them may also be readily transmitted from animals to man, either directly or by vectors, such attacks might also affect the human population directly. Attacks upon livestock would not only result in the immediate death of animals, but also might call for compulsory slaughter as a means of preventing the spread of infection.

196. Covert bacteriological (biological) attack during peacetime directed against domestic animals could give rise to serious political and economic repercussions if large numbers of stock were affected. For example, African swine fever occurs endemically on the African continent as a subclinical disease of warthogs. In 1957 it was accidentally brought from Angola to Portugal, and then in 1960 to Spain. Despite strict and extensive veterinary measures that were enforced, losses in pig breeds were estimated to amount within a single year to more than $9,000,000.

197. Isolated attacks against stocks of domestic animals during wartime would have only a nuisance value. However, if a highly infectious agent (e.g., foot-and-mouth disease) were used, even a local attack could have very widespread effects because of spread by the normal commercial movement of animals, particularly in highly developed countries. Extensive attacks with travelling clouds could, however, lead to a disastrous state of affairs. The history of myxamatosis (a rabbit disease) in Europe provides a parallel. Not only did it drastically reduce the rabbit population in France, into which it was first introduced; it immediately spread to other countries of Europe, including the United Kingdom. The risk of the uncontrolled spread of infection to a number of countries is an important consideration in the use of some bacteriological (biological) weapons.

198. The possibilities of protecting domestic animal stocks against bacteriological (biological) attacks are so remote that they are not worth discussing.

TABLE 5.—EXAMPLES OF DISEASES THAT MIGHT BE USED TO ATTACK DOMESTIC ANIMALS

DISEASE	ANIMALS ATTACKED
Viruses:	
African swine fever	Hogs.
Equine encephalitis	Horses.
Foot-and-mouth disease	Cattle, sheep, hogs.
Fowl plague	Chickens, turkeys.
Hog cholera	Hogs.
Newcastle disease	Chickens, turkeys.
Rift Valley fever	Cattle, goats, sheep.
Rinderpest	Cattle, sheep, oxen, goats, water buffaloes.
Vesicular stomatitis	Cattle, horses, mules, hogs.
Ricksettsiae:	
Veldt disease	Cattle, sheep, goats.
Q-fever	Do.
Bacteria:	
Anthrax	Cattle, sheep, horses, mules.
Brucellosis	Cattle sheep, goats, hogs, horses.
Glanders	Horses, mules.
Fungi:	
Lumpy jaw	Cattle, horses, hogs.
Aspergillosis	Poultry, cattle.

4. Effects on Plants

199. Living micro-organisms could also be used to generate diseases in crops which are economically important either as food or as raw material (e.g., cotton and rubber). Significant food crops in this respect include potatoes, sugar-beet, garden vegetables, soya beans, sorghum, rice, corn, wheat and other cereals and fruits. Obviously the selection of the target for a biological attack would be determined by the relative importance of the crop in the national diet and economy.

Deliberately induced epiphytotics (plant disease epidemics) could in theory have serious national and international consequences.

200. The fungal, bacterial, or viral agents which could be used against plants are shown in table 6.

201. With a few minor exceptions, the plant viruses could be cultured only in living plant systems, the causal agent being found only in the plant tissues and juices. Virus diseases are transmitted principally by insect vectors and to some extent by mechanical means.

202. Bacterial agents which attack plants can persist for months on or in the plants. All of them can be cultured on artificial media. Normally, plant bacteria are not disseminated to any great extent by winds; the principal methods for spread in nature are insects, animals (including man) and water. Rain can spread bacteria locally, while insects and animals are responsible for their more extensive spread. It is conceivable that bacterial plant pathogens could be adapted for deliberate aerial dissemination.

203. Plant fungi, which cause some of the most devastating diseases of important agricultural crops, are disseminated mainly by winds, but also by insects, animals, water and man. Many fungal pathogens produce and liberate into the air countless numbers of small, hardy spores which are able to withstand adverse climatic conditions. The epidemic potential of a number of fungal pathogens is considerable.

204. In theory there are measures which could protect crops against bacteriological (biological) attacks; but at present their potential cost rules them out in practice. There is no essential difference between the counter-measures which would have to be introduced to counter bacteriological (biological) weapons and those employed normally to control plant diseases in peacetime. But the use of bacteriological (biological) weapons to destroy crops on a large scale would imply that the attacker would choose agents capable of overcoming any known, economical method of protection. Advanced countries might, as a precautionary measure exchange susceptible plants by more resistant strains. This would be difficult for countries whose agricultural standards were not high, and which would be the most vulnerable to bacteriological (biological) attacks on their crops.

TABLE 6.—EXAMPLES OF DISEASES THAT MIGHT BE USED TO ATTACK PLANTS

	Diseases	Liklihood of spread
Viruses	Corn stunt	High.
	Hoja blanca (rice)	Do.
	Fiji disease (sugar cane)	Do.
	Sugar beet curly top	Do.
	Potato yellow dwarf	Do.
Bacteria	Leaf blight (rice)	Do.
	Blight of corn	Do.
	Gummosis of sugarcane	Low.
Fungi	Late blight (potato)	Very high.
	Cereal rusts	Do.
	Rice blast	Do.
	Corn rust	High.
	Coffee rust	Very high.

5. Factors Influencing the Effects of Bacteriological (Biological) Attacks

Exotic diseases

205. Any country which resorted to bacteriological (biological) warfare would presumably try to infect, with a single blow, a large proportion of an enemy population with an exotic agent to which they had not become immune through previous exposure. Such exotic agents would lead to the appearance of diseases which normally had not occurred before in a given geographical area, either because of the absence of the organism involved (e.g., foot-and-mouth disease in North America or Japan), and/or of natural vectors (e.g., Japanese or Venezuelan encephalitis in Europe, Rocky Mountain spotted fever in many countries). In addition, a disease which had been controlled or eradicated from an area (e.g., urban or classical yellow fever from many tropical and sub-tropical countries, epidemic typhus from developed countries) might be reintroduced as a result of bacteriological (biological) warfare.

Altered or new diseases

206. Deliberate genetic steps might also be taken to change the properties of infectious agents, especially in antigenic composition and drug resistance. Apart from genetic changes that could be induced in known organisms, it is to be expected that new infectious diseases will appear naturally from time to time and that their causative agents might be used in war. However, it could not therefore be assumed that every outbreak of an exotic or new disease could necessarily be a consequence of a bacteriological (biological) attack. The Marburg disease, which broke out suddenly in 1967 in Marburg, Frankfurt and Belgrade, was a good example. It was acquired by laboratory workers who had handled blood or other tissues of vervet monkeys which had been recently caught in the wild, and by others who came into contact with them. Because the outbreak occurred in medical laboratories it was very skillfully handled. In other circumstances, it might have spread widely before it was controlled.

Epidemic spread

207. As already emphasized, a wide variety of agents can infect by the inhalation route, so that in a bacteriological (biological) attack a large number of persons could be infected within a short time. From the epidemiological point of view, the consequences would differ depending on whether the resultant disease was or was not transmissible from man to man. In the latter case the result would be a once-for-all disaster, varying in scale and lethality according to the nature of the organism used and the numbers of people affected. The attack would undoubtedly have a strong demoralizing effect on the unaffected as well as the affected population, and it would be in the nature of things that were would be a breakdown of medical services.

208. If the induced disease were easily transmissible from man to man, and if it was one against which the population had not been effectively immunized, it is possible to imagine what could happen by recalling say, the periodical appearance of new varieties of influenza virus, e.g. the 1957 influenza pandemic. In Czechoslovakia (population about 14 million), 1,500,000 influenza patients were actually reported; the probable total number was 2,500,000. About 50 per cent of the sick were people in employment and their average period away from work was six days. Complications necessitating further treatment developed in 5–6 per thousand of the cases, and about 0.2 per thousand died. Those who are old enough to remember the 1918 influenza pandemic, which swept over most of the world, will judge the 1957 outbreak as a mild affair.

Susceptibility of population

209. A very important factor in the effectiveness of an aerosol attack is the state of immunity of the target population. Where the population is completely lacking in specific immunity to the agent which is disseminated, the incidence and severity of disease are likely to be exceptionally high. Naturally occurring examples of very severe epidemics in virgin populations are well known (e.g. measles in Fiji, poliomyelitis and influenza in the Arctic). A similar result follows the introduction of a suspectible population (often a military force) into an already infected area. Thus there was a high prevalence of dengue fever in military forces operating in the Pacific in World War II—sometimes affecting as many as 25 per cent of the operational strength of a unit. The local population suffered relatively little from the disease because they had usually been infected early in life, and were subsequently immune.

Populations of increased vulnerability

210. *Malnutrition:* Recent statistical studies reveal a clear association between malnutrition and the incidence of infectious diseases. FAO, WHO and UNICEF have pointed out that in developing countries, a shortage of nutritious food is a major factor in the high mortality rate due to infectious diseases, particularly in children.

211. *Housing and clothing:* Primitive housing and inadequate clothing would lead to an increased vulnerability to bacteriological (biological) and more particularly chemical weapons. Millions of people live in houses which are permeable to any sort of airborne infection or poison, and millions are inadequately clothed and walk barefooted.

212. Other conditions which characterize poor populations have a definite influence on the spread of infections. Large families increase the opportunities for contagious contact. Inadequate housing, lack of potable water and, in general, bad sanitation, a low educational level, numerous vectors of infectious disease (e.g. insects), and, of course, lack of medical services are factors which also favour the spread of disease. The agents used might also persist in the soil, on crops, grasses, etc., so that delayed action might need to be taken into account.

Social effects and public health measures

213. A basic factor which influences the risk of epidemic situation during every war is a rapid impairment of standards of hygiene. Widespread destruction of housing and of sanitary facilities (water works, water piping, waste disposal, etc.), the inevitable decline in personal hygiene, and other difficulties, create exceptionally favourable conditions for the spread of intestinal infections, or louse-transmitted disease, etc.

214. The importance of adequate public health services is well illustrated by an explosive water-borne epidemic of infectious hepatitis in Delhi in 1955–1956, which affected some 30,000 persons, and which occurred because routine water treatment was ineffective. This epidemic was caused by the penetration into the water supply of waste waters heavily contaminated with hepatitis virus. However, there was no concurrent increase in the incidence of bacillary dysentery and typhoid fever, showing that the routine treatment of the water had been adequate to prevent bacterial but not viral infections.

215. Air streams, migrating animals and running water may transport agents from one country to the other. Refugees with contagious diseases pose legal and epidemiological problems. In areas with multinational economies, losses in livestock and crops may occur in neighbouring countries by the spread of the disease through regional commerce.

216. The experiences from fairly recent smallpox epidemics can also be used to illustrate the social effects of an accidentally introduced, highly dangerous airborne infection. In New York (1947) one patient started an epidemic, in which twelve persons became ill and two died. Within a month more than 5 million persons were revaccinated. Similarly in Moscow, in January 1960, a smallpox epidemic of forty-six cases (of whom three died) developed, caused by a single patient. At that time 5,500 vaccination teams were set up and vaccinated 6,372,376 persons within a week. Several hundreds of other health workers searched a large area of the country for contacts (9,000 persons were kept under medical supervision, of these 662 had to be hospitalized as smallpox suspects).

ANNEX A.—CHEMICAL PROPERTIES, FORMULATIONS AND TOXICITIES OF LETHAL CHEMICAL AGENTS (EXCERPT FROM MATERIAL SUPPLIED BY WORLD HEALTH ORGANIZATION)

[Key to table: (1) Trivial name; (2) military classification; (3) approximate solubility in water at 20° C.; (4) volatility at 20° C; (5) physical state (a) at −10° C., (b) at 20° C.; (6) approximate duration of hazard (contact, or airborne following evaporation) to be expected from ground contamination (a) 10° C., rainy, moderate wind, (b) 15° C. sunny, light breeze, (c) −10° C., sunny, no wind, settled snow; (7) casualty producing dosages (lethal or significant incapacitating effects); (8) estimated human respiratory LCt_{50} (m ld act'vity: breathing rate ca. 15 liters /min.); (9) estimated human percutaneous toxicity.]

(1)	Sarin	VX	Hydrogen cyanide	Cyanogen chloride	Phosgene	Mustard gas	Botulinal toxin A
(2)	Lethal agent (nerve gas)	Lethal agent (nerve gas)	Lethal agent (blood gas)	Lethal agent (blood gas)	Lethal agent (lung irritant).	Lethal agent (vesicant)	Lethal agent.
(3)	100 percent	1 to 5 percent	100 percent	6 to 7 percent	Hydrolysed	0.05 percent	Soluble.
(4)	12,100 mg/m³	3 to 18 mg/m³	873,000 mg/m³	3 300,000 mg/m³	6,370,000 mg/m³	630 mg/m³	Negligible.
(5) (a)	Liquid	Liquid	Liquid	Solid	Liquid	Solid	Solid.
(b)	do	do	do	Vapour	Vapour	Liquid	Do.
(6) (a)	¼ to 1 hour	1 to 12 hours	Few minutes	Few minutes	Few minutes	12 to 48 hours	
(b)	¼ to 4 hours	3 to 21 days	do	do	do	2 to 7 days	
(c)	1 to 2 days	1 to 16 weeks	1 to 4 hours	¼ to 4 hours	¼ to 1 hour	2 to 8 weeks	
(7)	>5 mg.-min./m³	>0.5 mg.-min./m³	>2,000 mg.-min./m³	>7,000 mg.-min./m³	>1,600 mg.-min./m³	>100 mg.-min./m³	0.001 mg. (oral).
(8)	100 mg.-min./m³	10 mg.-min./m³	5,000 mg.-min./m³	11,000 mg.-min./m³	3,200 mg.-min./m³	1,500 mg.-min./m³	0.02 mg.-min./m³
(9)	1,500 mg./man	6 mg./man				4,500 mg./man [1]	

[1] A drop of mustard weighing a few milligrams can produce a serious blister which will be incapacitating if it interferes with the normal activities of an individual.

ANNEX B—TEAR AND HARASSING GASES

Three parameters will be used to qualify the effects of tear gases. These are defined as follows:

Threshold of irritation is the atmospheric concentration of the substance (in mg per m³), which, in one minute of exposure, causes irritation.

Tolerance limit is the highest atmospheric concentration (in mg per m³) which a test subject can tolerate during one minute of exposure.

Lethal index is a dosage, and thus the product of the concentration in the air (in mg per m³) and the time of exposure (in minutes), which causes mortality. Data for various tear gases are given in the following table.

The data given under "Lethal index" are from animal experiments with various species.

Tear gas	Threshold of irritation (mg/m³)	Tolerance limit (mg/m³)	Lethal index (mg.min/m³)
Adamside (DM)	0.1	2–5	15,000–30,000
Ethyl bromacetate	5	5–50	25,000
Bromacetone	1.5	10	30,000
Omega-chloracetophenone (CN)	0.3–1.5	5–15	8,500–25,000
O-chlorbenzylidene malononitrile (CS)	.05–.1	1–5	40,000–75,000

ANNEX C.—SOME BIOLOGICAL AGENTS THAT MAY BE USED TO ATTACK MAN

Disease	Infectivity [1]	Transmissibility [2]	Incubation period [3]	Duration of illness [3]	Mortality [3]	Antibiotic therapy	Vaccination [4]
Viral:							
Chikungunyna fever	Probably high	None	R to 6 days	2 weeks to a few months.	Very low (less than 1 percent)	None	None.
Dengue fever	High	do	5 to 8 days	A few days to weeks	do	do	Do.
Eastern equine encephalitis	do	do	5 to 15 days	1 to 3 weeks	High (greater than 60 percent).	do	Under development.
Tick-borne encephalitis	do	do	1 to 2 weeks	1 week to a few months	Variable up to 30 percent	do	Do.
Venezuelan *equine* encephalitis	do	do	2 to 5 days	3 to 10 days	Low (less than 1 percent)	do	Do.
Influenza	do	do	1 to 3 days	3 to 10 days	Usually low, except for complicated cases.	do	Available.
Yellow fever	do	do	3 to 6 days	1 to 2 weeks	High (up to 40 percent)	do	Do.
Smallpox	do	High	7 to 16 days	12 to 24 days	Variable but usually high (up to 30 percent).	do	Do.
Ricksettsial:							
Q-fever	do	None or negligible.	10 to 21 days (sometimes shorter).	1 to 3 weeks	Low (usually less than 1 percent.)	Effective	Under development.
Psittacosis	do	Moderately high.	4 to 15 days	1 to several weeks	Moderately high	do	None.
Rocky Mountain spotted fever	do	None	3 to 10 days	2 weeks to several months.	Usually high (up to 80 percent.)	do	Under development.
Epidemic typhus	do	do	6 to 15 days	A few weeks to months	Variable but usually high (up to 70 percent).	do	Available.
Bacterial:							
Anthrax (pulmonary)	Moderately high.	Negligible	1 to 5 days	3 to 5 days	Almost invariably fatal	Effective if given very early.	Do.
Brucellosis	High	None	1 to 3 weeks	Several weeks to months	Low (less than 5 percent)	Moderately effective	Under development.
Cholera	Low	High	1 to 5 days	1 to several weeks	Usually high (up to 80 percent)	do	Available.
Glanders	High	None	2 to 14 days	4 to 6 weeks	Almost invariably fatal	Little effective.	None.
Melioidosis	do	do	1 to 5 days	4 to 20 days	Almost 100 percent fatal	Moderately effective	Do.
Plague (pneumonic)	do	High	2 to 5 days	1 to 2 days	do	Moderately effective if given early.	Available.
Tularemia	do	Negligible	1 to 10 days	2 to several weeks	Usually low sometimes high (up to 60 percent).	Effective	Do.
Typhoid fever	Moderately high.	Moderately high.	1 to 3 weeks	A few to several weeks	Moderately high (up to 10 percent).	Moderately effective	Do.
Dysentery	High	High	1 to 3 days	A few days to weeks	Low to moderately high depending on strain.	Effective	None.
Fungal: Coccidioido mycosis	do	None	1 to 3 weeks	A few weeks to months	Low	None	Do.

[1] Infectivity: indicates the potency of the parasite to penetrate and multiply in the host's organism, regardless of the clinical manifestation of illness. In fact, there are several agents by which the great majority of the exposed popu.ation will be infected without developing clin cal symptoms.

[2] Transmissibility: This refers to direct transmission from man to man without the intervention of any arthropod vector.

[3] The figures listed under incubation period, duration of disease, and mortality are based on epidemiological data. They vary, according to variations in virulence and dose of the infecting agent, resistance of the host and many other factors. It also should be noted that if the agents concerned would be deliberately spread in massive concentrations as agents of warfare, the incubation periods might be shorter and he resulting symptoms more serious. As to mortality, this refers to the ratio between the number of fatalities to the number of diseased (not to that of infected) individuals, if no treatment is given.

[4] The availability of vaccines is no indication of their degree of effectiveness.

CHAPTER III. ENVIRONMENTAL FACTORS AFFECTING THE USE OF CHEMICAL AND BACTERIOLOGICAL (BIOLOGICAL) CONSIDERATIONS

A. General considerations

217. Extraneous factors influence the behaviour of chemical and bacteriological (biological) weapons to a far greater extent than they do any other kind of armament. Some, such as wind and rain, relate to the state of the physical environment, and to a certain extent can be evaluated quantitatively. Others, which reflect the general ecological situation, and the living conditions and physiological state of the populations exposed to the effects of the weapons, are more difficult to define; their influence—though they could be considerable—cannot be quantified.

218. This limitation applies particularly to bacteriological (biological) weapons. The natural course of infectious diseases—for example in influenza epidemics—shows that they are governed by so many uncontrollable factors that the way they develop cannot as a rule be foreseen. This would also be probably true of pathogenic agents which were deliberately dispersed. On the other hand, the knowledge gained through the study of epidemiology, and in the study of artificial dispersions of bacteriological (biological) agents, both in the laboratory and the field, has shed some light on some of the factors concerned.

219. The ecological problem is the main theme of chapter IV. The factors which con-

cern the variability of the human target, e.g. physiological and living conditions, and levels of protection, have already been described in chapters I and II. This chapter is concerned with physical environment (climate, terrain).

1. Phenomena Associated With the Dispersal of Chemical and Bacteriological (Biological) Agents

220. It has already been pointed out that chemical substances and living organisms capable of being used as weapons are extremely varied in their nature and in their effects. On the other hand, regarded solely from the standpoint of their physical state after dispersion in the atmosphere, they can clearly be placed in one or the other of the following categories:

Liquid drops and droplets of varying size; (diameters greater than about 10 Microns).

More or less finely divided liquid and solid aerosols; (diameters less than about 10 Microns).

Vapours.

221. Almost always, moreover, especially in the case of liquid chemical agents, the result of dispersion is a mixture of these different phases; thus, a liquid dispersed by an explosive charge gives rise to a mixture of aerosol and vapour, while aerial spraying may produce a mixture of droplets and aerosols. Solid chemical substances will be in aerosol form, and this will also be true, as has already been pointed out, of bacteriological (biological) agents.

222. Thus, chemical attacks would usually take effect simultaneously in two forms:

Contamination of the ground at, and in the immediate vicinity of, the target by direct deposition of the agent at the time of dispersion, and by subsequent settling of large particles;

Formation of a toxic cloud consisting of fine particles or droplets, of aerosol, and possibly of vapour.

223. Most bacteriological (biological) attacks would be designed primarily to create an infectious aerosol as an inhalation hazard. Some ground contamination might, however, also result when infectious particles settled on the ground.

224. Both ground contamination and toxic or infectious clouds would be immediately subject to the physical action of the atmosphere.

225. If the soil contaminants are liquid chemical agents, they would either evaporate, producing a sustained secondary cloud, or be absorbed by the ground, or diluted or destroyed by atmospherical precipitation. If they were solid agents, whether chemical or biological, they might be returned to a state of suspension by air currents, and perhaps carried out of the initially contaminated zone.

226. As it becomes formed, the toxic or infectious cloud is immediately exposed to atmospheric factors, and is straightaway carried along by air currents. At the same time, the particles within it are deposited at different rates according to their mass, and reach the ground at varying distances from the point of emission, depending on wind velocity (up to several kilometres in the case of particles less than a few tens of microns in diameter). The mechanically stable fraction of the aerosol (particles under 5 microns in diameter) remains in suspension, and may be carried along for considerable distances.

B. The influence of atmospheric factors on clouds of aerosols or vapours

227. The movement of a toxic or infectious cloud after its formation depends chiefly on the combined effects of wind and atmospheric conditions. The cloud is carried a longer or shorter distance by the wind; at the same time it is dispersed and diluted at a faster or slower rate by turbulence of the atmosphere and by local disturbances of mechanical origin resulting from the roughness of the ground.

228. The cloud may rise rapidly in the atmosphere or remain in the immediate vicinity of the ground, thus retaining its destructive power for a greater or lesser time depending on whether the air layer in which it is released is in a stable or unstable state.

1. State of the Atmosphere

229. The state of the atmosphere plays such an important role in the behaviour of aerosol clouds that one might almost say that it is the predominant factor in determining the outcome of an attack, the effect of which could be considerably reduced, or almost nullified, were the atmosphere very unstable, or very serious if it was in a state of pronounced and prolonged stability. For this reason the mechanisms governing the turbulent movements of air, caused by differences in temperatures between superimposed air layers require some explanation (see fig. 2).

230. Disregarding the frictional layer of air close to the ground, where mechanical turbulence resulting from friction between the air and the rough ground over which it moves creates special conditions, air temperature in the troposphere decreases on average at the rate of 0.64° C for every 100 metres of altitude. Very frequently, however, as a result of thermal exchange between the air and the ground, a cooler air layer may be formed beneath a mass of hot light air; in such conditions, the lower air layer, with its greater density, does not tend to rise and the atmosphere is said to be in "stable equilibrium".

231. The situation, in which the vertical temperature gradient becomes inverted, is known as "temperature inversion", while the air layer affected by the phenomenon is termed as "inversion layer". When present it is eminently favourable to the persistence of toxic clouds.

232. After a day of sunshine, the surface of the ground cools rapidly, with the result that the layer of air close to the ground cools more rapidly than those above it. Both the intensity of the inversion and the thickness of the air layer involved increase to a maximum towards 4 a.m., and then decrease again, finally disappearing shortly after sunrise. This variation is very marked when the sky is clear, and in favourable conditions the inversion may last from fourteen to eighteen hours a day, depending on the season.

233. Very often, however, especially in winter or in overcast weather, when the rays of the sun are not sufficiently intense to heat the surface of the ground, the temperature inversion may last for several days. This condition has characterized all the disasters caused by industrial pollution; for example, the smog which claimed 4,000 victims in London in 1952 took its toll during a period of atmospheric stability which lasted for seven days.

234. Figure 2 shows the evolution of a toxic cloud depending on the state of the atmosphere. (Fig. 2 not printed.)

235. Apart from this kind of low-altitude inversion, which is most important in the context of this report since it governs the behaviour of toxic clouds released close to the ground, similar process may take place on a large scale at higher altitudes (hundreds of thousands of metres) whenever a cool air layer is formed beneath a hot air mass. This may take place over large, cold expanses (i.e. large expanses of land or sea, cloud or fog masses, etc.). Because of the high altitude at which they form, these inversion layers have little effect on toxic clouds released at ground level; but in the case of the long-distance transfer of spores they may act as a screen or reflector.

236. The configuration of the surface of the earth in a particular area, which alters the thermal exchange pattern, may also be conducive to the formation of an inversion. For example, inversions are a customary phenomenon in winter in deep valleys surrounded by high peaks, and occur more frequently in the neighbourhood of slopes facing the north than on southern slopes. This also occurs whenever hills of any size enclose a plain or basin, interrupting the general flow of air and preventing mixing from taking place. It is interesting to note that apart from the periodic appearance of smog in London, all the other major accidents resulting from air pollution have occurred in regions where the land configuration fits this description. For example, the small town of Donora, in the United States, lies in a relatively narrow plain bordered by high hills. In 1948 air pollution in the course of an inversion lasting five days led to twenty deaths and 6,000 cases of illness among the town's 14,000 inhabitants.

2. Urban Areas

237. The case of urban built-up areas is more complex, and it may even be said that each one possesses its own micro-climate, depending on its geographical situation, its topography and the layout and nature of its buildings.

238. Because the materials from which they are constructed are better conductors, and because their surfaces face in very varied directions, buildings usually capture and reflect solar radiation better than does the natural ground. Urban complexes therefore heat up more quickly than does the surrounding countryside, and the higher temperature is still further augmented by domestic and industrial heating plants. The results in a flow of cool air from the neighbouring countryside towards the hot centre of the town, beginning shortly after sunrise, decreasing at the beginning of the afternoon and then rising again to a maximum shortly before sunset. This general flow, which is of low velocity, is disturbed and fragmented at ground level by the buildings, forming local currents flowing in all directions.

239. This constant mechanical turbulence, to which is added the thermal turbulence caused by numerous heat-generating sources, should prevent the establishment in towns of a temperature inversion at low altitude. In fact, however, inversions do occur, when conditions are otherwise favourable, but the inversion layer is situated at a higher altitude than over the surrounding countryside (30 to 150 metres).

240. At night, local inversions may be generated at low altitude as a result of rapid radiation from the roofs of houses; thus in a narrow street lined with buildings of equal height, an inversion layer may be created at roof-top level which will persist until dawn.

241. Fog is more frequent over towns than over open country (+30 per cent in summer and +100 per cent in winter). The process of fog formation is accelerated by the particles, dust and smoke which form a dome over the town. At night these particles act as nuclei around which the fog condenses, the fog contributing in its turn to the retention of the particles in the dome. Fog will obviously have the same concentrating effect on particles originating in toxic clouds.

242. One final point which should be noted is that toxic aerosols and vapours may take some time to penetrate enclosed spaces. Once they have done so, they may continue as a hazard for very long unless adequate ventilation is provided.

3. Effect of Wind and Topography

243. The wind carries and spreads the toxic

or infectious cloud, which is simultaneously diluted by turbulence. The distance which the cloud travels before its concentration has fallen to a level below which it is no longer harmful depends on the velocity of the wind and the state of the atmosphere. Since topography also produces changes in the normal wind pattern, it too plays an important part in determining the direction of travel of toxic clouds, sometimes focusing their effects in individual areas. Local winds may also be established as a result of differences in the heat absorbed by, and radiated from, different ground surfaces.

244. These local, surface winds, which affect the air layer nearest the ground up to 300 metres, are frequent and widespread in mountain ranges and near sea coasts. There are slope breezes, valley breezes, sea breezes and land breezes; and they could shift a toxic cloud in directions which cannot be predicted from a study of the general meteorology of the area. The breezes develop according to a regular cycle. During the day, under the influence of solar radiation, the air moves up the valleys and slopes, and moves from the sea towards the land; at night these currents are reversed. In temperate climates land and sea breezes are predominant during the summer; but they are masked by the general wind pattern during the other seasons of the year. They are predominant in subtropical and tropical regions throughout the year.

4. Example of Combined Effects of Wind and the State of the Atmosphere on a Cloud

245. There is some similarity between the evolution of toxic clouds which could be produced by chemical and bacteriological (biological) attacks and that of clouds containing industrial pollutants, so much so that the mathematical models developed for forecasting atmospheric pollution can be applied, with a few modifications, to toxic clouds. But the initial characteristics of the two are as a rule different. Characteristic features of chemical or bacteriological (biological) attacks are the multiplicity and high yield of the sources of emission and their very short emission time, all of which are factors making for a greater initial concentration in the cloud than the concentration of pollutants in industrial clouds.

246. Figure 4 indicates the order of magnitude of these phenomena, and demonstrates the schematic form, and for different atmospheric conditions, the size of area which would be covered by toxic clouds originating from a chemical attack using Sarin, with an intensity arbitrarily chosen at 500 kg/km. It shows that the theoretical distance of travel by the cloud, determined for bare and unobstructed ground, may exceed 100 km. In practice the atmosphere must remain stable for more than ten hours in order to enable the cloud to travel such distances, a condition which, although certainly not exceptional, is fairly uncommon. (Figure 4 not printed.)

247. This figure illustrates the effect of atmospheric conditions on the distance a toxic cloud can be carried by the wind.

248. The example chosen is that of a medium-intensity (500 kg) attack with Sarin on a circular objective 1 km in diameter. The wind velocity is 7 km/h.

249. Each of the lines represents a contour of the hazard zone, i.e. the zone in which any unprotected person would be exposed to the effects of the agent.

250. Under highly unstable conditions (for example, on a very sunny day), this hazard zone is no greater than the area of objective aimed at (the circle at the left end of the figure). On the other hand, in any other situation—(1) slightly unstable, (2) neutral, (3) slightly stable, (4) moderately stable or (5) highly stable—the distance traveled will be greater, and it may extend almost 100 km if conditions remain highly stable for a sufficiently long time. It must be noted, however, that the distance of 100 km could be reached only if a very marked inversion persisted for about fourteen hours (100+7); such a situation is quite rare.

251. Corresponding evaluations cannot be made for an urban area, since the parameters involved are too numerous and too little understood. But it may be presumed that most of the characteristics of the urban micro-climate would tend to increase the persistence of chemical clouds. This is serious cause for concern, when it is remembered that in highly industrialized countries 50 to 90 per cent of the population live in urban areas

252. To sum up, a stable or neutral atmosphere in equilibrium might cause a toxic cloud produced by a chemical or bacteriological (biological) attack to persist for hours after it had exercised its military effect, which could generally be expected to materialize in the first few minutes following the attack. These conditions could obtain not only at night, but also during long winter periods over vast continental expanses. If a neutral atmosphere in equilibrium were associated with a light wind irregular in direction, then the area affected could be relatively large, and, assuming an adequately heavy initial attack, the concentrations would be high.

5. Special Features of Bacteriological (Biological) Aerosols

253. So far as physical phenomena are concerned (horizontal and vertical movements, sedimentation, dilution, etc.), bacteriological (biological) aerosols would be generally affected in the same way as chemical clouds of aerosol and vapour, but not necessarily to the same extent. But since the effective minimum doses for bacteriological (biological) agents are considerably smaller than for chemical agents, bacteriological (biological) aerosols would be expected to remain effective even in a very dilute state and, consequently, that they could contaminate much larger areas than could chemical clouds. An example is given in chapter II.

254. There would be no limit to the horizontal transport of micro-organisms, if there were none to the capacity of the organisms to survive in the atmosphere. Thus if the microbial aerosol particles were so small that their speed of fall remained close to the speed of the vertical air movements in the frictional layer (under average conditions this is on the order of 10 cm/s), the agents, whether alive or dead, would remain suspended and travel very considerable distances. Even if bacteriological (biological) clouds were to move only in the air layer nearest the ground, they could cover very large areas. For example, in one experiment 600 litres of *Bacillus globigii* (a harmless spore-forming bacterium which is highly resistant to aerosolization and environmental stresses) were released off shore; bacteria were found more than 30 km inland. Organisms were found over 250 km² which was the entire area within which there were monitoring stations during the trial. The actual area covered was much more extensive.

255. On the other hand, most pathogenic agents are highly vulnerable when outside the organism in which they normally reproduce, and are liable to biological inactivation, which is sometimes rapid, in the aerosol state. This inactivation process is governed by several factors (such as temperature, humidity, solar radiation, etc.) which are now the subject of aerobiological research.

256. The size of the infective particles in a bacteriological (biological) aerosol is highly significant to their ability to initiate disease as a result of inhalation. It has been established that the terminal parts of the respiratory tract are the most susceptible sites for infection by inhalation. As with chemical agents, the penetration and retention of inhaled bacteriological (biological) particles in the lungs is very dependent on particle size, which is primarily determined by the composition of the basic material and the procedure of aerosolization, as pointed out in chapter I.

257. The influence of particle size of aerosol infectivity is illustrated in table 1, which shows that there is a direct relationship between the LD_{50} and particle diameter of an aerosol of *Franciscella tularensis*.

TABLE 1.—NUMBERS OF BACTERIA OF *FRANCISCELLA TULARENSIS* REQUIRED TO KILL 50 PERCENT OF EXPOSED ANIMALS

Diameter of particles (microns)	Numbers of bacterial cells LD_{50}	
	Guinea pigs	Rhesus monkeys
1	3	17
7	6,500	240
12	20,000	540
22	170,000	3,000

C. Influence of atmospheric factors on chemical agents

1. Influence of Temperature

258. An attack with a liquid chemical agent, as already pointed out, would as a rule result in the formation of a cloud of small droplets, aerosol and vapour in varying proportions, as well as in ground contamination, all of which would be affected by air temperature.

259. *Influence on droplet and aerosol clouds:* Only particles having dimensions within certain limits penetrate and are retained by the lungs. The larger ones are trapped in the upper part of the respiratory tract (e.g. nose and trachea), whereas the smaller ones are exhaled. Penetration and retention have maximum values in the size range of 0.5 to 3 microns.

260. Liquid chemical agents exercise their effects both by penetrating the skin and by inhalation. The material absorbed by the lungs acts immediately, whereas there is a delay before the effects become manifest from an agent absorbed through the skin or the mucous membrane of the upper air passages.

261. A high temperature favours the evaporation of particles which will decrease in size and thus reach the lungs, contributing to the immediate effect; an additional quantity of vapour is produced which contributes to the same effect.

262. *Effect on ground contamination:* The temperature of the air, and even more that of the ground, have a marked effect on the way ground contamination develops and persists. The temperature of the ground, which depends on the thermal characteristics of its constituent materials and on the degree of its exposure to the sun, either increases or reduces evaporation, and consequently decreases or increases the duration of contamination. The surface temperature is extremely variable from point to point, depending on the type and colour of the soil; a temperature difference of 20° has been noted between the asphalt surface of a road and the surrounding fields. The temperature gradient also varies during the course of the day; in clear weather the differences may range from 15 to 30° C. in a temperate climate, and up to 50° C. in a desert climate. High temperatures of both air and ground favour the rate of evaporation, thus reducing the persistence of surface contamination; wind, because of the

mechanical and thermal turbulence it creates, has a similar effect.

263. To illustrate the effect of these variable factors, it is worth noting that the contamination of bare ground by unpurified mustard, at a mean rate of 30 g/m², will persist for several days or even weeks at temperatures below 10° C at medium wind velocities, whereas it lasts for only a day and a half at 25° C. Furthermore, because of accelerated evaporation at high temperatures, the cloud produced is more concentrated, and the danger of vapour inhalation in, and downwind of, the contaminated area becomes greater.

2. Influence of Humidity

264. In contrast to high temperature, high relative humidity may lead to the enlargement of aerosol particles owing to the condensation of water vapour around the nuclei which they constitute. The quantity of inhalable aerosol would thus diminish, with a consequent reduction in the immediate effects of the attack.

265. On the other hand, a combination of high temperature and high relative humidity causes the human body to perspire profusely. This intensifies the action of mustard-type vesicants, and also accelerates the transfer through the skin of percutaneous nerve agents.

3. Influence of Atmospheric Precipitation

266. Light rain disperses and spreads the chemical agent which thus presents a larger surface for evaporation, and its rate of evaporation rises. Conversely a heavy rain dilutes and displaces the contaminating product, facilitates its penetration into the ground, and may also accelerate the destruction of certain water-sensitive compounds (e.g. lewisite, a powerful blistering agent).

267. Snow increases the persistence of contamination by slowing down the evaporation of liquid contaminants. In the particular case of mustard gas, the compound is converted into a pasty mass which may persist until the snow melts.

268. Soil humidity, atmospheric precipitation and temperature also exercise a powerful influence on the activity of herbicides, which are much more effective at higher humidities and temperatures, than in dry weather and at low temperatures. This applies equally to preparations applied to plants and to those introduced into the soil.

4. Influence of Wind

269. As vapors emanating from ground contaminated by liquid chemical agents begin to rise, the wind comes into play. The distance the vapours will be carried depends on the wind velocity and the evaporation rate of the chemical, which will itself change with variations in ground and air temperatures. The distance is maximal (several kilometres) when there is a combination of the conditions promoting evaporation (high soil temperature) persistence of the cloud (stable atmosphere) and dispersal of the cloud (gentle winds). These conditions exist in combination at the end of a sunny day, at the time when a temperature inversion exists.

5. Influence of Soil—Dependent Factors

270. *Nature of the soil.* The soil itself, through its texture and the porosity of its constituent materials, plays an important role in the persistence of liquid chemical contaminants, which may penetrate to a greater or lesser extent, or remain on the surface. In the former case the risk of contamination by contact is reduced in the short term, but persistence will be increased to the extent that factors favourable to evaporation (temperature, wind) are prevented from acting. In the latter case, when the contaminant remains on the surface, the danger of contact contamination remains considerable, but persistence is reduced. Thus persistence in sandy soils may be three times as long as in clay.

271. *Vegetation.* Vegetation prevents a liquid contaminant from reaching the soil and also breaks it up, thus encouraging evaporation. But at the same time the short-term danger is enhanced because of the widespread dispersion of the contaminant on foliage, and the consequently increased risk of contact contamination.

272. The canopy of foliage in dense forests (e.g., conifers, tropical jungle), traps and holds a considerable portion of a dispersed chemical agent, but the fraction which none the less reaches the soil remains there for a long time, since the atmospheric factors involved in the process of evaporation (temperature, wind over the soil, turbulence) are hardly significant in such an environment as compared with open spaces.

273. Too little is known about the absorption and retention of toxic substances by plants to make it possible to assess the resulting danger to the living creatures whose food supply they may constitute. Like certain organic pesticides, it is probable that other toxic chemicals may penetrate into plant systems via the leaves and roots. Cases could then arise where all trace of contaminant had disappeared from the soil but with the toxic substance persisting in vegetation.

274. *Urban areas.* It can also be assumed that, in spite of a surface temperature which is on the average higher, contaminants might persist longer in built-up areas than over open ground. There are two reasons for this. Structural, finishing and other building materials are frequently porous, and by absorbing and retaining liquid chemical agents more readily, they increase the duration of contamination. Equally the factors which, in open country, tend to reduce persistence (sunshine, wind over ground) play a less important part in a built-up city.

275. Climate, in general, may exercise an indirect influence on the effect of percutaneous chemical agents, simply because of the fact that in hot climates the lightly clad inhabitants are very vulnerable to attacks through the skin.

276. The predominating influence of climatic factors and terrain on the persistence of contamination indicates that the *a priori* classification of chemical agents as persistent or non-persistent, solely on the basis of different degrees of volatility, is somewhat arbitrary since, depending on circumstances, the same material might persist for periods ranging from a few hours to several weeks, or even months.

D. Influence of atmospheric factors on bacteriological (biological) agents

277. Infectious agents, when used to infect by way of food and water, or by means of animal vectors are, of course, hardly subject to the influence of climatic factors. But any large-scale attack by bacteriological (biological) agents would probably be carried out by aerosols, in which the agents would be more susceptible to environmental influences than chemical agents.

278. Physico-chemical atmospheric factors have a destructive effect on aerosol-borne micro-organisms. Their viability decreases gradually over a period of hours or days at a progressively diminishing rate. Some decay very rapidly: for example, certain bio-aerosols used for pest control in temperate climates, and dispersed under average conditions in the cold and transitional seasons, show a rate of decay of 5 per cent per minute.

279. This apparent vulnerability of micro-organism in aerosols might cast some doubt on the possible effectiveness of bacteriological (biological) attacks. However there are various means by which the rate of decay in the aerosol can be considerably reduced. For example: the use of very high concentrations of agent; the use of suitably "modeled" pathogenic strains; or the protection of aerosol particles by encapsulating them in certain organic compounds.

280. These procedures, which prolong the survival of micro-organisms in air, could presumably also be applied to potential agents of bacteriological (biological) warfare. Means are also available for prolonging the survival of micro-organisms in water, soil, etc.

1. Influence of Temperature

281. The effect of temperature on the survival of micro-organisms in bacteriological (biological) aerosols is not highly significant in the temperature ranges generally encountered. As a general rule, aerosol-borne biological agents will be destroyed more rapidly the more the temperature rises. On the other hand, in some circumstances high temperatures may act on bacteriological (biological) aerosols in the same way as on chemical aerosols, that is to say, particle size will be diminished by evaporation, and thus their rate of entry into the lungs will be enhanced.

2. Influence of Humidity

282. Relative humidity is the most important of the atmospheric conditions which affect the rate of decrease of viability of micro-organisms in the air. The extent of its effect varies with different micro-organisms, with the nature of the suspending fluid from which the aerosol is disseminated, with the manner of its dissemination (as a spray or as a dry powder). As a general rule, the rate of inactivation is greater at lower relative humidity although with some organisms maximum inactivation occurs in the middle range of relative humidity (30–70 per cent). The rate of inactivation will, however, tend to decrease with time, and may become extremely low when a state of equilibrium (stabilization) between the particles and their environment has been established. This implies that irrespective of relative humidity values, the final infective concentration of a stabilized aerosol may still be above the threshold minimum dose for infection by inhalation. Even so, microbial survival in a stabilized aerosol may be further reduced by sudden variations in atmospheric humidity.

283. The effectiveness of aerosol-borne bacteriological (biological) agents depends not only on their capacity to survive in the air. Also important is their low rate of sedimentation, combined with the capacity of the micro-organisms to spread and penetrate into buildings, so contaminating surfaces and materials indoors as well as outdoors. The possibility that some infective agents can survive for a long time in such conditions, and the fact that environmental dust particles may exercise a protective influence on organisms have been demonstrated on many occasions. Studies made in hospitals have shown that surviving micro-organisms can be dispersed from sites which have come to be called "secondary reservoirs", and that they may become sources of new infections, carried either through the air or by contact.

3. Influence of Solar Radiation

284. The ultra-violet part of the solar spectrum has a powerful germicidal effect. Bacterial spores are much less sensitive to this radiation than are either viruses or vegetative bacteria, and fungal spores are even less sensitive than bacterial spores. The destructive effect of solar radiation on micro-organisms is reduced when relative humidity is high (over 70 per cent). Air pollution, including a high proportion of atmospheric dust, also provides some protection.

285. Ultra-violet light exercises its destructive effects on micro-organisms through the structural degradation of the nucleic acids which carry the genetic information. Most research on this subject has been carried out

on microbes in liquid suspensions, but the results of studies of aerosol-borne microbes seem to lead to similar conclusions.

286. The germicidal effect of ultra-violet radiation has been known for a long time and used in combating airborne infections in schools, military buildings and hospitals. The problem of proper radiation dosage, and proper techniques, however, still remain to be solved.

287. The lethal effect of sunlight on micro-organisms is less marked, although still apparent, in diffuse light. This is why a bacteriological (biological) attack, if one ever materialized, would be more probably undertaken in darkness.

4. Influence of Atmospheric Precipitation

288. Rain and snow have relatively little effect on bacteriological (biological) aerosols.

5. Influence of the Chemical Composition of the Atmosphere

289. Little is known about the influence on the viability of mirco-organisms of the chemical compounds present in the atmosphere. Oxygen promotes the inactivation of aerosol-borne agents, particularly in conditions of low humidity, and recent studies have also demonstrated that an unstable bactericidal factor (formed by combination between ozone and gaseous combustion products of petroleum) is present in the air, particularly downwind of heavily populated areas.

6. General Effects of Climate

290. Climate may also have a general and considerable influence on the development of epidemics and epizootics, in so far as the proliferation of vectors which spread disease may be encouraged, given the right conditions. This is indicated by the way myxomatosis developed in Australia. Although several attempts in 1927, and then from 1936 to 1943, to impart the disease to Australian rabbits failed, the epizootic spread rapidly from 1950 onwards, apparently for the sole reason that the summer, which was particularly rainy that year, was associated with an exceptional proliferation in the flooded Murray River valley of the mosquitoes which carry the disease.

291. Atmospheric humidity and temperature also have a strong influence on micro-organisms acting upon vegetation.

CHAPTER IV. POSSIBLE LONG-TERM EFFECTS OF CHEMICAL AND BACTERIOLOGICAL (BIOLOGICAL) WARFARE ON HUMAN HEALTH AND ECOLOGY

A. Introduction

292. So far this report has dealt essentially with the potential short-term effects of chemical and bacteriological (biological) warfare. The possible long-term effects of the agents concerned need to be considered against the background of the trends whereby man's environment is being constantly modified, as it becomes transformed to meet his ever-increasing needs. Some of the changes that have occurred have been unwittingly adverse. The destruction of forests has created deserts, while grasslands have been destroyed by over-grazing. The air we breathe and our rivers become polluted, and chemical pesticides, despite the good they do, also threaten with undesirable secondary effects. The long-term impact of possible chemical and bacteriological (biological) warfare clearly needs to be considered within an adequate ecological framework.

293. *Ecology* may be defined as the study of the interrelationships of organisms on the one hand and of their interactions with the physical environment in which they are found on the other. The whole complex of plants and animals within a specific type of environment—a forest, a marsh, a savannah—forms a community comprising all the plant life and all the living creatures—from the microorganisms and worms in the soil, to the insects, birds and mammals above the ground—within that environment, and the understanding of their interrelationships also necessitates a knowledge of the physical characteristics of the environment which bear on the living complex. Ecological communities are normally in dynamic equilibrium, which is regulated by the interaction of population density, available food, natural epidemics, seasonal changes and the competition of species for food and space.

294. Man has his special ecological problems. His numbers are multiplying fast, and increasing population requires commensurate increases in food production. The production and distribution of adequate food for the population which is predicted for the latter part of this century, and which will go on increasing through the next, will allow no relaxation in the effort which has already proved so successful. Food production has increased phenomenally in the past fifty years, primarily because of (1) improved agricultural practices, and particularly because of a marked increase in the use of chemical fertilizers and pesticides; (2) the development of genetically improved plants, herbs and flocks; and (3) increased industrialization of food-producing processes. There is hope that steps such as these will continue to bear fruit.

295. But while the use of fertilizers, herbicides and pesticides has brought about a massive increase in food production, it has also added to the pollution of soil and water, and as a result has altered our ecological environment in an enduring way. So too have other features of our industrial civilization. The motor car has been a very potent factor in increasing air pollution in towns and cities. The increasing population of the world creates unprecedented wastes, and the methods used to dispose of it—burying it, burning it, or discharging it into streams or lakes—have further polluted the environment. The remarkable development of synthetic and plastic materials in recent years has also added a new factor to the short- and long-term biological effects on man. Every new advance on our technological civilization helps to transform the ecological framework within which we evolved. From this point of view the existence and possible use of chemicals and bacteriological (biological) agent in warfare have to be regarded as an additional threat, and as a threat which might have enduring consequences, to our already changing environment.

B. Consequences to man of upsetting the ecological equilibrium

296. The chemical industry doubled its output between 1953 and 1960 and it is still growing fast but the useful results of its continued development are none the less of the utmost importance to man's future. The good effects on food production of the use of artificial fertilizers alone far outweigh any secondary deleterious consequences of their use. The facts are too well known to need spelling out. It is enough to point out, as one example, that maize production in the United States increased between 1923 and 1953, a thirty-year period, by barely four quintals per hectare, but that in the ten years between 1953 and 1964, when the use of fertilizers and more productive hybrid seeds became widespread, the increase was eleven quintals. This is characteristic of what has happened everywhere where fertilizers have been used on a large scale.

297. The beneficial effect of the use of modern chemical pesticides also does not need spelling out. It is estimated that the present annual world loss in production due to weeds and parasites is still approximately 460 million quintals of wheat and 360 million quintals of maize, and that to eliminate this waste will mean the use of even more pesticides than are now being consumed.

298. What has to be realized about modern agricultural practices is that without them the increases in the output of food which the world needs could never be achieved. Unless production mounts everywhere, those who have not yet cast off the burdens of living in a primitive agricultural world will never reach the level of civilization to which all aspire.

299. But, as already indicated, the great increase in the use of fertilizers, pesticides and herbicides does have deleterious side effects. For example, in Switzerland, surface waters and springs have been contaminated in times of high rainfall by excessive amounts of fertilizers corresponding to 0.3–0.5 kg of phosphorous and 45 kg of nitrogen per hectare per year. This kind of thing occurs elsewhere as well, and it cannot but help transform—for all we know adversely—the environment in which living matter including fish otherwise thrive.

300. The dangers of the side effects of modern pesticides are also beginning to be appreciated, and are already beginning to be guarded against in advanced countries. Except in high dosage, these substances act only on lower organisms, although some organophosphorous compounds are toxic to man and other vertebrates. Less selective agents may be toxic to soil bacteria, plankton, snails and fish. Chlorinated hydrocarbons, such as DDT, are toxic only in unusually high dosages, but accumulate in fat, and deposit in the liver and the central nervous system. Following surface application, pesticides enter the soil and seep into underground waters; or become washed by rain into rivers, lakes and reservoirs. It is theoretically possible that in some situations, in which non-selective chemical pesticides are used, disruption of the ecological equilibrium could lead to the long-term suppression of useful animals and plants. These are dangers which only constant vigilance will avert.

301. Detergents are another modern chemical development whose use has had to be regulated, since they have a direct short-term effect on certain types of natural food such as daphniae and the algae which are eaten by fish. The first detergents which came on the market led to enormous quantities of foam on river, and this in turn reduced the supply of oxygen for organisms living in the water. They also damage the earth by affecting soil bacteria. Such detergents, which resist destruction even by the most modern water treatment methods, have all but disappeared from use and have been replaced by others, which can be almost completely destroyed by waste water treatment.

302. In the context of the possible long-term effects of chemical and bacteriological (biological) weapons, we have finally to note that towns and cities are growing all over the world, and that in the developed countries, conurbations (fusion of cities with loss of suburbs) have reached population levels approaching 50 million. Such great concentrations of people require very complicated arrangements for supply of food, water and other materials, transport and general administration. The use of chemical or bacteriological (biological) weapons against cities would undoubtedly have an exceptionally severe disorganizing effect, and the full re-establishment of the services necessary for health, efficient government, and the smooth operation of industry might take a very long time.

C. Possible long-term effects of chemical and bacteriological (biological) means of warfare on man and his environment

303. Chemical weapons, in addition to their highly toxic short-term effects, may also have a long-term effect on the environment in which they are disseminated. If used in

very high concentration they might cause damage by polluting the air, by poluting the water supplies and by poisoning the soil.

304. Bacteriological (biological) weapons could be directed against man's sources of food through the spread of persistent plant diseases or of infectious animal diseases. There is also the possibility that new epidemic diseases could be introduced, or old ones reintroduced, which could result in deaths on the scale which characterized the medieval plagues.

1. Chemical Weapons

305. There is no evidence that the chemical agents used in World War I—chlorine, mustard, phosgene, and tear-gas—had any untoward ecological consequences. As already observed, over 120,000 tons of these agents were used during that war, and in some areas which were attacked, concentrations must have added up to hundreds of kilograms per hectare. These regions have long since returned to normal and fully productive use.

306. The organophosphorous, or nerve agents have never been used in war, and no corresponding experience is available to help form a judgment about their possible long-term effects. But since these agents are toxic to all forms of animal life, it is to be expected that if high concentrations were disseminated over large areas, and if certain species were virtually exterminated, the dynamic ecological equilibrium of the region might be changed.

307. On the other hand there is no evidence to suggest that nerve agents affect food chains in the way DDT and other pesticides of the chlorinated hydrocarbon type do. They hydrolyze in water, some of them slowly, so there could be no long-term contamination of natural or artificial bodies of water.

308. The use of herbicides during the course of the Viet-Nam conflict has been reported extensively in news media, and to a lesser extent in technical publications. The materials which have been used are 2,4-dichlorophenoxyacetic acid, 2,4,5-trichlorophenoxyacetic acid, cacodylic acid and picloram.

309. Between 1963 and 1968 these herbicides were used to clear forested areas for military purposes over some 9,100 km². This may be divided by forest type as shown in the following table.

TABLE 1.—TYPE OF FOREST AND EXTENT AND AREA TREATED WITH HERBICIDES IN SOUTH VIETNAM, 1963-68

Type of forest	Extent kilometers²	Area treated kilometers²
Open forest (semideciduous)	50,150	8,140
Mangrove and other aquatic	4,800	960
Coniferous	1,250	0
Total	56,200	9,100

310. South Viet-Nam is about 172,000 km² in area, of which about one-third is forested. The area treated with herbicides up to the end of 1968 thus amounts to about 16 per cent of the forested area, or a little over 5 per cent of the total.

311. There is as yet no scientific evaluation of the extent of the long-term ecological changes resulting from these attacks. One estimate is that some mangrove forests may need twenty years to regenerate, and fears have been expressed about the future of the animal population they contain. Certain species of bird are known to have migrated from areas that have been attacked. On the other hand, there has been no decline in fish catches, and as fish are well up in the food chain, no serious damage would seem to have been done to the aquatic environment.

312. When a forest in a state of ecological equilibrium is destroyed by cutting, secondary forest regenerates, which contains fewer species of plants and animals than were there originally, but larger numbers of those species which survive. If secondary forest is replaced by grassland, these changes are even more marked. If one or more of the animal species which increases in number is the host of an infection dangerous to man (a zoonosis), then the risk of human infection is greatly increased. This is exemplified by the history of scrub typhus in South-East Asia, where the species of rat which maintains the infection and the vector mite are much more numerous in secondary forest, and even more so in grassland, so increasing the risk of the disease being transmitted to people as forest is cleared.

313. In high rainfall areas, deforestation may also lead to serious erosion, and so to considerable agricultural losses. Deserts have been created in this way.

2. Bacteriological (Biological) Weapons

Against man

314. New natural foci, in which infection may persist for many years, may be established after an arosol or other type of bacteriological (biological) attack. This possible danger can be appreciated when one recalls the epidemiological consequences of the accident introduction of rabies and other veterinary infections (blue-tongue, African swine fever) into a number of countries. The spread of rabies in Europe following World II, as a consequence of the disorganization caused by the war, shows how an epidemiologically complicated and medically dangerous situation can emerge even with an infection which had long been successfully controlled. In 1945 there were only three major foci of infection in Czchoslovakia. In the following years, foxes multiplied excessively because farms were left unworked, because of the increased number of many kinds of wild creatures, and also because of the discontinuation of systematic control. Foxes also came in from across frontiers, and the epizootic gradually worsened. In the period 1952/1966 a total of 888 foci were reported, 197 new ones in 1965 alone. Bringing the situation under control demand extraordinary and prolonged efforts by the health service: in 1966 alone, 775,000 domestic animals were vaccinated in affected areas of the country. None the less, the disease has not yet been stamped out. Natural foci cannot be eliminated without organized and long-term international co-operation.

315. Arthropods (insects, ticks) also play an important part, along with other creatures, in the maintenance of pathogenic agents in natural foci. A man exposed to a natural foci risks infection, particularly from arthropods, which feed on more than one species of host. A bacteriological (biological) attack might lead to the creation of multiple and densely distributed foci of infection from which, if ecological conditions were favourable, natural foci might develop in regions where they had previously never existed, or in areas from which they had been eliminated by effective public health measures.

316. On the other hand, the large-scale use of bacterological (biological) weapons might reduce populations of susceptible wild species below the level at which they could continue to exist. The elimination of a species or group of species from an area would create in the ecological community an empty niche which might seriously disturb its equilibrium, or which might be filled by another species more dangerous to man because it carried a zoonosis infection acquired either naturally or as a result of the attack. This would result in the establishment of a new natural focus of disease.

317. The gravity of these risks would depend on the extent to which the community of species in the country attacked contained animals which were not only susceptible to the infection, but were living in so close a relationship to each other that the infection could become established. For example, not all mosquito species can be infected with yellow fever virus, and if the disease is to become established, those which can become vectors must feed frequently on mammals, such as monkeys, which are also sufficiently susceptible to the infection. A natural focus of yellow fever is therefore very unlikely to become established in any area lacking an adequate population of suitable mosquitos and monkeys.

318. Endemics or enzootics of diseases (i.e. infections spreading at a low rate, but indefinitely, in a human or animal population) could conceivably follow a large-scale attack, or might be started by a small-scale sabotage attack, for which purpose the range of possible agents would be much wider, and might even include such chronic infections as malaria.

319. *Malaria* is a serious epidemic disease in a susceptible population, but it is difficult to envisage its possible employment as a bacteriological (biological) weapon, because of the complex life cycle of the parasite. Drug-resistant strains of malaria exist in, for example, areas of Asia and South America, and their possible extension to areas where mosquitos capable of transmitting the disease already exist, would greatly complicate public health measures, and cause a more serious disease problem because of the difficulties of treatment.

320. *Yellow fever* is still enzootic in the tropical regions of Africa and America. Monkeys and other forest-dwelling primates, together with mosquitos which transmit the virus, constitute natural foci and ensure survival of the virus between epidemics.

321. Importation of this disease is possible wherever a suitable environment and susceptible animal and mosquito hosts exist. This occurred naturally in 1960 when a previously uninfested area of Ethiopia was invaded by yellow fever and an epidemic resulted in about 15,000 deaths. Because of the inaccessibility of the area, some 8,000–9,000 people had died before the epidemic was recognized. The epidemic was extinguished but it is likely that a permanent foci of yellow fever infection has been established in this area, previously free of the disease. It might be extremely serious if the virus were introduced into Asia or the Pacific islands where the disease appears never to have occurred, but where local species of mosquito are crown to be able to transmit it. Serious problems could also arise if the virus were introduced into the area of the United States where vector mosquitos still exist, and where millions of people live in an area of a few square kilometers.

322. Another consideration is the possible introduction of a new species of animal to an area to cause either long-term disease or economic problems. For example, mongooses were introduced many years ago to some Caribbean islands, and in one at least they have become a serious economic pest of the sugar crop, and an important cause of rabies. The very large economic effect on the introduction of rabbits to Australia is well known. Certain mosquito species (a yellow fever mosquto, *Aedes aegypti*, and a malaria mosquito, *Anopheles gambiae*) have naturally spread to many areas of the world from their original home in Africa, and have been responsible for serious disease problems in the areas that have been invaded. It is conceivable that in the war the introduction of such insects on a small scale might be tried for offensive purposes.

323. In addition to the development of new natural foci, another long-term hazard, but one which is very much more speculative than some of the possibilities mentioned

above, is that of the establishment of new strains of organisms of altered immunological characteristics or increased virulence. This might occur if large numbers of people or other susceptible animal species became infected in an area through a bacteriological (biological) attack, thus providing opportunities for new organisms to arise naturally. The appearance from time to time of immunologically different forms of influenza shows the type of thing which might happen. Such altered forms of agents might cause more severe and perhaps more widespread epidemics than the original attack.

Against domestic animals

324. *Foot-and-mouth disease* is a highly infectious but largely non-fatal disease of cattle, swine and other cloven-footed animals It is rarely transmitted from a diseased animal to man, and when it is, the order is a trivial one.

325. The milk yield of diseased cows decreases sharply and does not reach its normal yield even after complete recovery. Losses range from 9 to 30 per cent of milk yield. In swine, loss from foot-and-mouth are estimated at 60–80 per cent among suckling pigs. Foot-and-mouth is endemic in many countries and breaks out from time to time even in countries which are normally free of the disease. Some countries let it run its course without taking any steps to control it; others try to control it by the use of vaccines; and some pursue a slaughter policy in which all affected animals and contacts are killed.

326. It is obvious that a large epizootic could constitute a very serious economic burden, for example, by bringing about a serious reduction in the supply of milk. It is in this context that foot-and-mouth disease could conceivably serve as a bacteriological (biological) weapon, especially since war conditions would greatly promote its spread. Efficient prevention is possible through active immunization, but the immunity is rather short-lived and annual vaccination is required.

327. *Brucellosis* is an example of chronic disease which could possibly result from bacteriological (biological) weapon attacks. There are three forms known, which attack cattle, swine and goats respectively. Any of these may be transmitted to man, in whom it causes a debilitating but rarely fatal disease lasting for four to six months or even longer. It is enzootic in most countries of the world, and an increased incidence of the disease resulting from its use as a weapon could be dealt with, after the initial blow, in the same way as is the natural disease. But the cost of eliminating disease such as brucellosis from domestic animals is very high.

328. *Anthrax* was described in chapter II and what concerns us here is that if large quantities of anthrax spores were disseminated in bacteriological (biological) weapons, thus contaminating the soil of large regions, danger to domestic animals and man might persist for a very long time. There is no known way by which areas could be rendered safe. The use of large quantities of anthrax as a weapon might therefore cause long-term environmental hazards.

Against crops

329. The *rust* fungus, as already noted, is one of the most damaging of natural pathogens which affects wheat crops. Each rust pustule produces 20,000 uredospores a day for two weeks, and there may be more than 100 pustules on a single infected leaf. The ripe uredospores are easily detached from the plant even by very weak air currents. The spores are then carried by the wind over distances of many hundreds of kilometres. It is estimated that the annual total world loss of wheat from rust is equivalent to about $500 million.

330. Weather plays a decisive role in the epiphytotic spreading of rust. Temperature influences the incubation period and the rate of uredospore germination. Germination and infection occur only when there is a water-saturated atmosphere for three to four hours. Thus, epiphytotic spread occurs when there are heavy dews and when the temperature is between 10° and 30° C. The principal means of prevention is to destroy the pathogen and to breed resistant species. Recently, ionizing radiation has been employed to develop resistant strains.

331. The cereal rusts die out during winter unless some other susceptible plant host, such as barberry, is present, and therefore their effect on crops would be limited to a single season. As they are capable of reducing man's food reserves considerably, rust spores could be extremely dangerous and efficient bacteriological (biological) weapons, especially if deployed selectively with due regard to climatic conditions. Artificial spreading of an epiphytotic would be difficult to recognize and delivery of the pathogen to the target would be relatively simple.

332. Rust epiphytotics might have a very serious effect in densely populated developing countries, where the food supply might be reduced to such an extent that a human population already suffering from malnutrition might be driven to starvation, which, depending on the particular circumstances, might last a long time.

333. Another conceivable biological weapon, although neither a practical nor a bacteriological one, is the *potato beetle*. To use it for this purpose, the beetle would have to be produced in large numbers, and introduced, presumably clandestinely, into potato growing regions at the correct time during maturation of the crop. In the course of spread the beetle first lives in small foci, which grow and increase until it becomes established over large territories. The beetle is capable of astonishing propagation: the progeny of a single beetle may amount to about 8,000 million in one-and-a-half years.

334. Since beetles prefer to feed and lay their eggs in plants suffering from some viral disease, they and their larvae may help transmit the virus thereby increasing the damage they cause. The economic damage caused by the beetle varies with the season and the country affected, but it can destroy up to 80 per cent of the crop. Protection is difficult because it has not been possible to breed resistant potato species and the only means available at present is chemical protection.

335. Were the beetle ever to be used successfully for offensive purposes, it could clearly help bring about long-term damage because of the difficulty of control.

3. Genetic and Carcinogenic Changes

336. The possibility also exists that chemical and bacteriological (biological) weapons might cause genetic changes. Some chemicals are known to do this. LSD, for example, is known to cause genetic changes in human cells. Such genetic changes, whether induced by chemicals or viruses, might conceivably have a bearing on the development of cancer. A significantly increased incidence of cancer in the respiratory tract (mainly lung) has been reported recently among workers employed in the manufacture of mustard gas during World War II. No increased prevalence of cancer has been reported among mustard gas casualties of World War I although it is doubtful if available records would reveal it. However, most of these casualties were exposed for only short periods to the gas whereas the workers were continuously exposed to small doses for months or years.

CHAPTER V. ECONOMIC AND SECURITY IMPLICATIONS OF THE DEVELOPMENT, ACQUISITION AND POSSIBLE USE OF CHEMICAL AND BACTERIOLOGICAL (BIOLOGICAL) WEAPONS AND SYSTEMS OF THEIR DELIVERY

A. Introduction

337. Previous chapters have revealed the extent to which developments in chemical and biological science have magnified the potential risks associated with the concept of chemical or bacteriological (biological) warfare. These risks derive not only from the variety of possible agents which might be used, but also from the variety of their effects. The doubt that a chemical or bacteriological (biological) attack could be restricted to a given area means that casualties could occur well outside the target zone. Were these weapons used to blanket large areas and cities, they would cause massive loss of human life, affecting non-combatants in the same way as combatants, and in this respect, they must clearly be classified as weapons of mass destruction. The report has also emphasized the great problems and cost which would be entailed in the provision of protection against chemical and bacteriological (biological) warfare. It is the purpose of this final chapter to explore in greater depth the economic and security implications of matters such as these.

B. Production

1. Chemical Weapons

338. It has been estimated that during the course of the First World War, at a time when the chemical industry was in a relatively early stage of development, about 180,000 tons of chemical agents were produced, of which more than 120,000 tons were used in battle. With the rapid development of the industry since then, there has been an enormous growth in the potential capacity to produce chemical agents.

339. The scale, nature, and cost of any progamme for producing chemical weapons, and the time needed to implement it, would clearly be largely dependent on the scientific, technical and industrial potential of the country concerned. It would depend not only on the nature of the chemical industry itself, and on the availability of suitably trained egnineers and chemists, but also on the level of development of the chemical engineering industry and of the means of automating chemical processes, especially where the production of highly toxic chemical compounds is involved. Whatever the cost of developing a chemical or bacteriological (biological) capability, it needs to be realized that it would be a cost additional to, and not a substitute for, that of acquiring an armoury of conventional weapons. An army could be equipped with the latter without having any chemical or bacteriological (biological) weapons. But it could never rely on chemical or bacteriological (biological) weapons alone.

340. Today a large number of industrialized countries have the potential to produce a variety of chemical agents. Many of the intermediates required in their manufacture, and in some cases even the agents themselves, are widely used in peace time. Such substances include, for example, phosgene, which some highly developed countries produce at the rate of more than 100,000 tons a year and which is commonly used as an intermediate in the manufacture of synthetic plastics, herbicides, insecticides, paints and pharmaceuticals. Another chemical agent, hydrocyanic acid, is a valuable intermediate in the manufacture of a variety of synthetic organic products and is produced in even greater quantities. Ethylene-oxide, which is used in the manufacture of mustard gases, is also produced on a large scale in various countries. It is a valuable starting material in the production of a large number of important substances, such as detergents, disinfectants and wetting agents. The world production of ethylene-oxide and propylene-oxide is now well in excess of 2 million tons per year. Mustard gas and nitrogen mustard gases can be produced from ethylene-oxide by a relatively simple process. Two hundred and fifty thousand tons of ethylene-oxide would yield about 500,000 tons of mustard gas.

341. The production of highly toxic nerve agents, including organophosphorus com-

pounds, presents problems which, because they are relatively difficult, could be very costly to overcome. To a certain extent this is because of the specialized safety precautions which would be needed to protect workers against these very poisonous substances, a need which, of course, applies to all chemical agents, especially to mustard gas. However, many intermediates used in the manufacture of nerve agents have a peacetime application: for example, dimethylphosphite, necessary for the production of Sarin, is used in the production of certain pesticides. But even leaving operating expenses aside, the approximate cost of acquiring one plant complex to produce munitions containing up to 10,000 tons of Sarin a year would be about $150 million. The cost would, of course, be considerably less if existing munitions could be charged with chemical agents.

342. A country which possesses a well-developed chemical industry could clearly adapt it to produce chemical agents. But were it to embark on such a step, it would be only the beginning. The establishment of a comprehensive chemical warfare capability would also involve special research centres, experimental test grounds, bases, storage depots and arsenals. The development of sophisticated and comprehensive weapons systems for chemical or bacteriological (biological) warfare would be a very costly part of the whole process. None the less, the possibility that a peacetime chemical industry could be converted to work for military purposes, and of chemical products being used as weapons, increases the responsibility of Governments which are concerned to prevent chemical warfare from ever breaking out.

2. Bacteriological (Biological) Weapons

343. The microbiological expertise necessary to grow agents of bacteriological (biological) warfare exists to a large extent in many countries, since the requirements are similar to those of a vaccine industry and, to a lesser extent, a fermentation industry. Apart from the combination of the highly developed technologies of these two industries, there remains only a need for some specialized knowledge, expertise and equipment to permit the safe handling of large quantities of bacteriological (biological) agents. Consequently, existing facilities in the fermentation, pharmaceutical and vaccine industries could be adapted for the production of bacteriological (biological) agents. But the technological complexities of producing bacteriological (biological) agents in dry powder form are very much greater than for wet spray systems. Moreover, it would be desirable to provide an effective vaccine with which to protect production staff. The technical difficulties would increase with the scale and complexity of the weapons systems that were being developed. But the fact remains that any industrially advanced country could acquire whatever capability it set out to achieve in this field.

344. The difficulty and cost of providing for the transport and storage of bacteriological (biological) weapons are considerable, since special storage conditions, e.g., refrigeration, and stringent safety and security precautions are essential. In addition, testing to determine the potential effectiveness of the material produced would require considerable and costly testing facilities both in the laboratory and in the field.

345. Despite the fact that the development and acquisition of a sophisticated armoury of chemical and bacteriological (biological) weapons systems would prove very costly in resources, and would be dependent on a sound industrial base and a body of well-trained scientists, any developing country could in fact acquire, in one way or another, a limited capability in this type of warfare—either a rudimentary capability which it developed itself, or a more sophisticated one which it acquired from another country. Hence, the danger of the proliferation of this class of weapons applies as much to developing as it does to developed countries.

C. Delivery systems

346. Practically all types of explosive munitions (artillery shells, mines, guided and unguided rockets, serial bombs, landmines, grenades, etc.) can be adapted for the delivery of chemical agents. A modern bomber, for example, can carry about fifteen tons of toxic chemical agents, and it is estimated that only 250 tons of V-gas, an amount which could be delivered by no more than fifteen or sixteen aircraft, is enough to contaminate a great city with an area of 1,000 square kilometres and a population of 7 to 10 million. Were such a population mainly in the open and unprotected, fatal casualties might reach the level of 50 per cent.

347. Existing armaments which (with some modification) could be used to deliver agents in order to generate local outbreaks of disease, could also contaminate large areas with pathogens. For example, a single aircraft could cover with a bacteriological (biological) agent an area of up to 100,000 square kilometres, although the area of effective dosage might be much smaller due to loss of the infectivity of the airborne agent.

348. While the development and production costs of chemical and bacteriological (biological) agents might well be high, the cost of the complete weapons system (see chapter I) would be even greater. The cost of developing, procuring and operating a squadron of modern bombers far outweighs the cost of the bombs it could carry. However, for some purposes, an existing weapon system or a far less sophisticated means of disseminating might be used.

D. Protection

349. The measures which would be required to protect a population, its livestock and plants against chemical or bacteriological (biological) attack are immensely costly and complex (chapter I). At present, warning systems for the detection of aerosol clouds are fairly rudimentary. Systems for the detection of specific chemical and bacteriological (biological) agents might be devised, but again they are likely to prove very expensive, if indeed they are feasible.

350. With certain agents, contamination of the environment, for example of buildings and soil, could persist for several days or weeks. Throughout this period people would be exposed to the risk of contamination by contact and by inhalation. Protective clothing, even if adequately prefabricated and distributed or improvised, would make it difficult to carry on with normal work. The prolonged wearing of respirators causes physiological difficulties, and it would prove necessary to provide communal shelters with air filtration and ventilations systems for civil populations. Shelters would be extremely costly to build and operate, and a programme for their construction would constitute a heavy burden on the economy.

351. Even if protective measures were provided against known agents, it is conceivable that new ones might be developed whose physical or chemical properties would dictate a need for new individual and communal protective equipment. This could constitute an even greater economic burden.

352. Defensive measures, especially against chemical agents, would also have to include the extremely laborious and expensive task of decontaminating large numbers of people, as well as equipment, weapons and other materials. This would mean setting up decontamination centres and training of people in their use. Stocks of decontaminating agents and replacement clothing would also be required.

353. A very important part of a defence system against chemical or bacteriological (biological) weapons would be the means of very rapidly detecting an attack and identifying the specific agent used in an attack. Methods for doing this rapidly and accurately are still inadequate. Specific protection against bacteriological (biological) agents would necessitate the use of vaccines and perhaps antibiotics (see annex C of chapter II). Vaccines vary in their effectiveness, even against naturally-occurring infections, and even those which are highly effective in natural circumstances may not protect against bacteriological (biological) agents deliberately disseminated into the air and inhaled into the lungs. Antibiotics used prophylactically are a possible means of protection against bacteria and rickettsiae but not against viruses. But the large and complex problems of their use in large populations would be all but insuperable.

354. It would be extremely difficult to arrange for the medical treatment of a civilian population which had been attacked with chemical or bacteriological (biological) weapons. Mobile groups of specialists in infectious disease, of microbiologists, and of well-trained epidemologists, would have to be organized to provide for early diagnosis and treatment, while a network of reserve hospitals and a massive supply of drugs would have to be prepared in advance. The maintenance of a stockpile of medical supplies is extremely costly. Many drugs, especially antibiotics, deteriorate in storage. Huge amounts would have to be discarded as useless from time to time, and the stock would have to be replenished periodically.

E. Cost to society

355. The extent to which the acquisition, storage, transport and testing of chemical and bacteriological (biological) munitions would constitute an economic burden, would depend on the level of a country's industrial and military capability, although compared to nuclear weapons and advanced weapons systems in general, it might not seem excessive. But the task of organizing delivery systems and deployment on a large or sophisticated scale could well be economically disastrous for many countries. Moreover the preparation of an armoury of chemical and bacteriological (biological) weapons would constitute a possible danger to people in the vicinity of production, storage and testing facilities.

356. Chemical and bacteriological (biological) attacks could be particularly dangerous in towns and densely populated areas, because of the close contacts between individuals, and because of the centralized provision of services for every day necessities and supply (services, urban transport networks, trade, etc.). The consequences might also be particularly serious in regions with a warm, moist climate, in low lying areas, and in areas with poorly developed medical facilities.

357. The technical and organizational complexity, as well as the great financial cost, of providing adequate protection for a population against attack by chemical and bacteriological (biological) agents have already been emphasized. The costs would be formidable by any standards. The construction of a system of fall-out shelters to protect only part of the population of one large and highly developed country against nuclear weapons has been estimated at no less than $5,000–$10,000 million. Such shelters could be modified, at a relatively modest additional cost, to provide protection against chemical and bacteriological (biological) weapons. To construct communal shelters for a corre-

sponding part of the population against chemical and bacteriological (biological) weapons alone would cost much the same as protection against nuclear fall-out. If all other necessary related expenditures are considered—such as detection and warning systems, communications, and medical aid—the total costs of civil defence against chemical and bacteriological (biological) agents would be greater than $15,000–$25,000 million for a developed country of 100–200 million people. But even if such a programme were ever planned and implemented, there could be no assurance that full protection could be achieved.

358. For whatever its cost, no shelter programme could provide absolute protection against attack by chemical or bacteriological (biological) agents. Protective measures would be effective only if there were adequate warning of an attack, and if civil defence plans were brought into operation immediately and efficiently. However, many shelters were available, the likelihood would be that large numbers of people would be affected to varying degrees, and would be in urgent need of medical attention, and once hostilities had ceased, that there would be large numbers of chronic sick and invalids, requiring care, support and treatment, and imposing a heavy burden on a society already disorganized by war.

359. It is almost impossible to conceive of the complexity of the arrangements which would be necessary to control the consequences of a large-scale bacteriological (biological) attack. Even in peacetime, the development of an epidemic of a highly contagious disease started by a few individual cases, introduced from abroad, necessitates enormous material expenditure and the diversion of large numbers of medical personnel. Examples of widespread disruption due to a few smallpox contacts are given in chapter II. No estimates are given of the actual costs involved in dealing with these events, but in some cases they must have run into millions of dollars. Large-scale bacteriological (biological) attacks could thus have a serious impact on the entire economy of the target country and, as is observed in chapter II, depending on the type of agent used, the disease might well spread to neighbouring countries.

360. Whatever might be done to try to save human beings, nothing significant could be done to protect crops, livestock, fodder and food-stuffs from a chemical and bacteriological (biological) weapons attack. Persistent chemical agents could constitute a particular danger to livestock.

361. Water in open reservoirs could be polluted as a result of deliberate attack, or perhaps accidentally, with chemical or bacteriological (biological) weapons. The water supply of large towns could become unusable, and rivers, lakes and streams might be temporarily contaminated.

362. Enormous damage could be done to the economy of a country whose agricultural crops were attacked with herbicides. For example, only ten to 10 grammes per hectare of 2, 4D could render a cotton crop completely unproductive (see annex A). Fruit trees, grape vines and many other plants could also be destroyed. Mixtures of 2, 4D, of 2, 4, 5T and picloram are particularly potent. The chemical known as paraquate can destroy virtually all annual plants, including leguminous plants, rice, wheat and other cereals. Arsenic compounds dessicate the leaves of many crops and make them unusable as food. There are no means known at present of regenerating some of the plants which are affected by herbicides. Experience has shown, however, that in the case of some species, either natural or artificial seeding can easily produce normal growth in the next growing season. But the destruction of fruit trees, vines and other plants, if achieved could not be overcome for many years. For most practical purposes, it would be impossible to prevent the destruction of cultivated plants on which herbicides have been used, and depending on a country's circumstances, widespread famine might follow.

363. If the induced disease were to spread, bacteriological (biological) weapons could affect even more extensive agricultural areas. The effect would however be more delayed and more specific to the crops affected. Annex A gives examples of the extent of the decrease in a wheat harvest and in a rice harvest affected by blast. The uredospores of the rust are easily transported by air currents so that down-wind sections would be affected by rust to a considerable distance, with a corresponding sharp reduction in the crop, while the upwind sections gave a good yield.

364. Over and above all these possible effects of chemical and bacteriological (biological) warfare on farm animals and crops is the possibility discussed in the previous chapter, of widespread ecological changes due to deleterious changes brought about in wild fauna and flora.

F. The relevance of chemical and bacteriological (biological) weapons to military and civil security

365. The comparison of the relative effectiveness of different classes of weapons is a hazardous and often futile exercise. The major difficulty is that from the military point of view, effectiveness cannot be measured just in terms of areas of devastation or of numbers of casualties. The final criterion would always be whether a specific military purpose had been more easily achieved with one rather than another set of weapons.

366. Clearly, from what has been said in the earlier chapters of this report, chemical weapons could be more effective than equivalent weights of high explosive when directed against densely populated targets. Similarly, so far as mass casualties are concerned, bacteriological (biological) weapons could, in some circumstances, have far more devastating effects than chemical weapons, and effects which might extend well beyond the zone of military operations.

367. From the military point of view, one essential difference between anti-personnel chemical and bacteriological (biological) weapons on the one hand, and a conventional high explosive weapon on the other (including small arms and the whole range of projectiles), is that the area of the effects of the latter is more predictable. There are, of course, circumstances where, from the point of view of the individuals attacked, an incapacitating gas would be less damaging than high explosives. On the other hand, whereas military forces can, and do, rely entirely upon conventional weapons, no country, as already observed, could entrust its military security to an armoury of chemical and bacteriological (biological) weapons alone. The latter constitute only one band in the spectrum of weapons.

368. As previous chapters have also shown, neither the effectiveness nor the effects of chemical and bacteriological (biological) weapons can be predicted with assurance. Whatever military reasons might be advanced for the use of these weapons, and whatever their nature, whether incapacitating or lethal, there would be significant risk of escalation, not only in the use of the same type of weapon but also of other categories of weapons systems, once their use had been initiated. Thus, chemical and bacteriological (biological) warfare could open the door to hostilities which could become less controlled, and less controllable, than any war in the past. Uncontrollable hostilities cannot be reconciled with the concept of military security.

369. Since some chemical and bacteriological (biological) weapons constitute a major threat to civilian populations and their food and water supplies, their use cannot be reconciled with general national and international security. Further, because of the scale and intensity of the potential effects of their use, they are considered as weapons of mass destruction. Their very existence thus contributes to international tension without compensating military advantages. They generate a sense of insecurity not only in countries which might be potentially belligerent, but also in those which are not. Neutral countries could be involved through the use of chemical and bacteriological (biological) weapons, especially those whose territories bordered on countries involved in conflict in the course of which chemical and bacteriological (biological) casualties had been suffered by garrisons and civilians close to frontiers. The effects of certain bacteriological (biological) weapons used on a large scale might be particularly difficult to confine to the territory of a small country. Large-scale chemical and bacteriological (biological) agents and chemical agents might be used for acts of sabotage. Such events might occur as isolated acts, even carried out in defiance of the wishes of national leaders and military commanders. The continued existence and manufacture of chemical weapons anywhere may make such occurrences more likely.

370. Obviously any extensive use of chemical weapons would be known to the country attacked. The source of the attack would probably also be known. On the other hand, it would be extremely difficult to detect isolated acts of sabotage in which bacteriological (biological) weapons were used, especially if the causative organism were already present in the attacked country. Because of the suspicions they would generate, acts of sabotage could thus provoke a conflict involving the widespread use of chemical and bacteriological (biological) weapons.

ANNEX A

ECONOMIC LOSS FROM POSSIBLE USE OF CHEMICAL AND BACTERIOLOGICAL (BIOLOGICAL) WEAPONS AGAINST CROPS

TABLE 1.—ECONOMIC LOSS WHICH COULD RESULT FROM THE USE OF CHEMICAL WEAPONS DUE TO THE DESTRUCTION OF CROPS PER HECTARE OF LAND

Type of plant	Average harvest (in tons per hectare)	Price of 1 ton in U.S. dollars	Sum total of losses in U.S. dollars per hectare
Cotton	3	600	1,800
Rice	5	84	420
Wheat	3	69	207
Apple tree	30	[1] 140	[1] 8,400

[1] Will not produce apples for 2 years.

TABLE 2.—ECONOMIC LOSS DUE TO THE USE OF BACTERIOLOGICAL (BIOLOGICAL) WEAPONS AGAINST CROPS

Plant	Type of agent	Losses		Loss in U.S. dollars per hectare
		Percent	Tons per hectare	
Wheat	Cereal rust (Puccinia graminis)	80	24	165
Rice	Rice blast (Piricular.a drizae).	70	35	294

CONCLUSION

371. All weapons of war are destructive of human life, but chemical and bacteriological (biological) weapons stand in a class of their own as armaments which exercise their effects solely on living matter. The idea that bacteriological (biological) weapons could deliberately be used to spread disease generates a sense of horror. The fact that cer-

tain chemical and bacteriological (biological) agents are potentially unconfined in their effects, both in space and time, and that their large-scale use could conceivably have deleterious and irreversible effects on the balance of nature adds to the sense of insecurity and tension which the existence of this class of weapons engenders. Considerations such as these set them into a category of their own in relation to the continuing arms race.

372. The present inquiry has shown that the potential for developing an armoury of chemical and bacteriological (biological) weapons has grown considerably in recent years, not only in terms of the number of agents, but also in their toxicity and in the diversity of their effects. At one extreme, chemical agents exist and are being developed for use in the control of civil disorders; and others have been developed in order to increase the productivity of agriculture. But even though these substances may be less toxic than most other chemical agents, their ill-considered civil use, or use for military purposes could turn out to be highly dangerous. At the other extreme, some potential chemical agents which could be used in weapons are among the most lethal poisons known. In certain circumstances the area over which some of them might exercise their effects could be strictly confined geographically. In other conditions some chemical and bacteriological (biological) weapons might spread their effects well beyond the target zone. No one could predict how long the effects of certain agents, particularly bacteriological (biological) weapons might endure and spread and what changes they could generate.

373. Moreover, chemical and bacteriological (biological) weapons are not a cheap substitute for other kinds of weapons. They represent an additional drain on the national resources of those countries by which they are developed, produced and stockpiled. The cost cannot of course be estimated with precision; this would depend on the potential of a country's industry. To some the cost might be tolerable; to others it would be crippling, particularly, as has already been shown, when account is taken of the resources which would have to be diverted to the development of testing and delivery systems. And no system of defence, even for the richest countries in the world, and whatever its cost, could be completely secure.

374. Because chemical and bacteriological (biological) weapons are unpredictable, in varying degree, either in the scale or duration of their effects, and because no certain defence can be planned against them, their universal elimination would not detract from any nation's security. Once any chemical or bacteriological (biological) weapon had been used in warfare, there would be a serious risk of escalation, both in the use of more dangerous weapons belonging to the same class, and of other weapons of mass destruction. In short, the development of a chemical or bacteriological (biological) armoury, and a defence, implies an economic burden without necessarily imparting any proportionate compensatory advantage to security. And at the same time it imposes a new and continuing threat to future international security.

375. The general conclusion of the report can thus be summed up in a few lines. Were these weapons ever to be used on a large scale in war, no one could predict how enduring the effects would be, and how they would affect the structure of society and the environment in which we live. This overriding danger would apply as much to the country which initiated the use of these weapons as to the one which had been attacked, regardless of what protective measures it might have taken in parallel with its development of an offensive capability. A particular danger also derives from the fact that any country could develop or acquire, in one way or another, a capability in this type of warfare, despite the fact that this could prove costly. The danger of the proliferation of this class of weapons applies as much to the developing as it does to developed countries.

376. The momentum of the arms race would clearly decrease if the production of these weapons were effectively and unconditionally banned. Their use, which could cause an enormous loss of human life, has already been condemned and prohibited by international agreements, in particular the Geneva Protocol of 1925, and, more recently, in resolutions of the General Assembly of the United Nations. The prospects for general and complete disarmament under effective international control, and hence for peace throughout the world, would brighten significantly if the development, production and stockpiling of chemical and bacteriological (biological) agents intended for purposes of war were to end and if they were eliminated from all military arsenals.

377. If this were to happen, there would be a general lessening of international fear and tension. It is the hope of the authors that this report will contribute to public awareness of the profoundly dangerous results if these weapons were ever used, and that an aroused public will demand and receive assurances that Governments are working for the earliest effective elimination of chemical and bacteriological (biological) weapons.

APPENDIXES

Protocol for the prohibition of the use in war of asphyxiating, poisonous or other gases, and of bacteriological methods of warfare, signed at Geneva, 17 June 1925

The undersigned plenipotentiaries, in the name of their respective Governments:

Whereas the use in war of asphyxiating, poisonous or other gases, and of all analogous liquids, materials or devices, has been justly condemned by the general opinion of the civilized world;

Whereas the prohibition of such use has been declared in Treaties to which the majority of Powers of the world are Parties; and

To the end that this prohibition shall be universally accepted as a part of International Law, binding alike the conscience and the practice of nations;

Declare:

That the High Contracting Parties, so far as they are not already Parties to Treaties prohibiting such use, accept this prohibition, agree to extend this prohibition to the use of bacteriological methods of warfare and agree to be bound as between themselves according to the terms of this declaration.

The High Contracting Parties will exert every effort to induce other States to accede to the present Protocol. Such accession will be notified to the Government of the French Republic, and by the latter to all signatory and acceding Powers, and will take effect on the date of the notification by the Government of the French Republic.

The present Protocol, of which the French and English texts are both authentic, shall be ratified as soon as possible. It shall bear today's date.

The ratifications of the present Protocol shall be addressed to the Government of the French Republic, which will at once notify the deposit of such ratification to each of the signatory and acceding Powers.

The instruments of ratification of and accession to the present Protocol will remain deposited in the archives of the Government of the French Republic.

The present Protocol will come into force for each signatory Power as from the date of deposit of its ratification, and, from that moment, each Power will be bound as regards other Powers which have already deposited their ratifications.

In witness whereof the Plenipotentiaries have signed the present Protocol.

Done at Geneva in a single copy, the seventeenth day of June, One Thousand Nine Hundred and Twenty-Five.

RESOLUTION 2162 B (XXI)

(1484th plenary meeting, December 5, 1966)

The General Assembly,

Guided by the principles of the Charter of the United Nations and of international law,

Considering that weapons of mass destruction constitute a danger to all mankind and are incompatible with the accepted norms of civilization,

Affirming that the strict observance of the rules of international law on the conduct of warfare is in the interest of maintaining these standards of civilization,

Recalling that the Geneva Protocol for the Prohibition of the Use in War of Asphyxiating, Poisonous or Other Gases, and of Bacteriological Methods of Warfare, of 17 June 1925, has been signed and and adopted and is recognized by many States,

Noting that the Conference of the Eighteen-Nation Committee on Disarmament has the task of seeking an agreement on the cessation of the development and production of chemical and bacteriological weapons and other weapons of mass destruction, and on the elimination of all such weapons from national arsenals, as called for in the draft proposals on general and complete disarmament now before the Conference.

1. *Calls for* strict observance by all States of the principles and objectives of the Protocol for the Prohibition of the Use in War of Asphyxiating, Poisonous or Other Gases, and of Bacteriological Methods of Warfare, signed at Geneva on 17 June 1925, and condemns all actions contrary to those objectives;

2. *Invites* all States to accede to the Geneva Protocol of 17 June 1925.

RESOLUTION 2454 A (XXIII)

(1750th plenary meeting, December 20, 1968)

The General Assembly,

Reaffirming the recommendations of its resolution 2162 B (XXI) calling for strict observance by all States of the principles and objectives of the Protocol for the Prohibition of the Use in War of Asphyxiating, Poisonous or other Gases, and of Bacteriological Methods of Warfare signed at Geneva on 17 June 1925, condemning all actions contrary to those objectives and inviting all States to accede to that Protocol,

Considering that the possibility of the use of chemical and bacteriological weapons constitutes a serious threat to mankind,

Believing that the people of the world should be made aware of the consequences of the use of chemical and bacteriological weapons,

Having considered the report of the Eighteen-Nation Disarmament Committee which recommended that the Secretary-General appoint a group of experts to study the effects of the possible use of such weapons,

Noting the interest in a report on various aspects of the problem of chemical, bacteriological and other biological weapons which has been expressed by many Governments and the welcome given to the recommendation of the Eighteen-Nation Disarmament Committee by the Secretary-General in his Annual Reports for 1967–68,

Believing that such a study would provide a valuable contribution to the consideration in the Eighteen-Nation Disarmament Committee of the problems connected with chemical and bacteriological weapons,

Recalling the value of the report of the Secretary-General on the effects of the possible use of nuclear weapons,

1. *Requests* the Secretary-General to pre-

pare a concise report in accordance with the proposal in Part II of his Introduction to the Annual Report for 1967–68 and in accordance with the recommendation of the Eighteen-Nation Disarmament Committee contained in paragraph 26 of its report (document A/7189);

2. *Recommends* that the report be based on accessible material and prepared with the assistance of qualified consultant experts by the Secretary-General, taking into account the views expressed and the suggestions made during the discussion of this item at the twenty-third session of the General Assembly;

3. *Calls upon* Governments, national and international scientific institutions and organizations to co-operate with the Secretary-General in the preparation of the report;

4. *Requests* that the report be transmitted to the Eighteen-Nation Disarmament Committee, the Security Council and the General Assembly at an early date, if possible by 1 July 1969, and to the Governments of Member States in time to permit its consideration at the twenty-fourth session of the General Assembly;

5. *Recommends* that Governments give the report wide distribution in their respective languages, through various media of communication, so as to acquaint public opinion with its contents;

6. *Reiterates* its call for strict observance by all States of the principles and objectives of the Geneva Protocol of 17 June 1925 and invites all States to accede to that Protocol.

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Mr. NELSON. Mr. President, it is the most comprehensive document of this kind that has been called to my attention. I think it is in the interest of the Congress and the public that it be printed in full in the RECORD. The United Nations report was compiled by an internationally distinguished group of scientists, representing many nations, and I think presents, in the most effective fashion. I have seen, the implications of engaging in this kind of warfare.

The Secretary General, in his conclusion, states that:

The general conclusion of the report can thus be summed up in a few lines. Were these weapons ever to be used on a large scale in war, no one could predict how enduring the effects would be, and how they would affect the structure of society and the environment in which we live. This overriding danger would apply as much to the country which initiated the use of these weapons as to the one which had been attacked, regardless of what protective measures it might have taken in parallel with its development of an offensive capability. A particular danger also derives from the fact that any country could develop or acquire, in one way or another, a capability in this type of warfare, despite the fact that this could prove costly. The danger of the proliferation of this class of weapons applies as much to the developing as it does to developed countries.

The momentum of the arms race would clearly decrease if the production of these weapons were effectively and unconditionally banned. Their use, which could cause an enormous loss of human life, has already been condemned and prohibited by international agreements, in particular the Geneva Protocol of 1925, and, more recently, in resolutions of the General Assembly of the United Nations.

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

Mr. STENNIS. Mr. President, does the Senator from New Hampshire desire more time?

Mr. McINTYRE. Not at the present moment.

Mr. NELSON. Mr. President, I would like to ask for 2 minutes to complete the reading of that statement.

Mr. STENNIS. Oh, I thought the Senator had concluded.

Mr. NELSON. No.

Mr. STENNIS. Mr. President, I yield 2 minutes to the Senator from Wisconsin.

Mr. NELSON. I thank the Senator.

I just want to read the completion of this summary:

The prospects for general and complete disarmament under effective international control, and hence for peace throughout the world, would brighten significantly if the development, production and stockpiling of chemical and bacteriological (biological) agents intended for purposes of war were to end and if they were eliminated from all military arsenals.

"If this were to happen, there would be a general lessening of international fear and tension. It is the hope of the authors that this report will contribute to public awareness of the profoundly dangerous results if these weapons were ever used, and that an aroused public will demand and receive assurances that Governments are working for the earliest effective elimination of chemical and bacteriological (biological) weapons."

I have given the study prepared by the consultant experts my earnest consideration and I have decided to accept their unanimous report in its entirety. . . .

I simply say I wish to endorse that statement of the Secretary General. I

think the elimination of the production, distribution, and stockpiling of this kind of weapon is our ultimate goal.

I thank the Senator from Mississippi for yielding.

Mr. STENNIS. Mr. President, I yield myself such time as I may take.

The Senator from Indiana has indicated that he may want some time.

Mr. HARTKE. Five minutes.

Mr. STENNIS. I yield the Senator from Indiana 5 minutes.

Mr. HARTKE. Mr. President, first, I should like to thank the committee for the action it has taken in concerning itself with the very important question of chemical and biological warfare, and also to express my special thanks to the distinguished Senator from New Hampshire (Mr. McINTYRE) for the fine work he has done with regard to this rather complicated but at the same time very important legislation dealing with a matter of general concern not alone to the people of this country, but the whole world.

In the statement of the Senator from New Hampshire (Mr. McINTYRE), he also made mention of the fact that we are dealing with the shipment of such materials which are shipped by those other than the Defense Department itself. I think it is very important for us to recognize that the shipment of any type of material of this kind which is dangerous to the public generally should be dealt with; that it is not just the Pentagon itself which is the one unit which is shipping material which can be hazardous to the public health.

It is my intention to support legislation by the Senator from New Hampshire to prohibit the shipment of such materials by other agencies, including private corporations, because we know that a large number of potentially dangerous biological agents which are shipped through the country generally are not under any real control. It has been a matter of great concern to me, and the committee has held hearings on surface transportation.

Also, the whole question of chemical and biological warfare is not a new issue in the Senate. Many of us can recall the intense publicity campaign waged by the Army Chemical Corps nearly 10 years ago—a campaign designed to inform the Congress as to the supposed economy and humanity of gas and germ warfare. At that time we were told that chemicals and biologicals were "Tomorrow's weapons," and that they would some day make it possible for Nations to wage a "war without death."

This publicity campaign succeeded in boosting the status of the chemical corps and our CBW budget increased threefold between 1961 and 1963.

Also, as our involvement in Vietnam deepened, R. & D. gradually gave way to manufacturing, stockpiling, and combat use. Procurement budgets, now shrouded in wartime secrecy, have grown to disturbing proportions. "Tomorrow's Weapons" are now costing us more than $1 million a day. Our CBW program—once an underfunded vision—has grown into an uncontrolled nightmare. "Tomorrow's Weapons" are with us today—but they have brought with them fear, suffering, and disaster. The use of tear gas in Vietnam to flush the enemy from cover, and the use of herbicides to destroy Vietnamese food supplies, is not the humane "war without death" that we were promised. The Utah sheep-kill episode and the nerve gas disposal issue have brought the dangers of CBW closer to home. Accidents in Okinawa and open air testing in Maryland have only served to intensify public fears about lethal gases and germs.

I recall one instance in which I was rather severely criticized for complaining about the utilization of this type of material; and the man in charge of the operation said, "Well, this is just killing without a 'bang.'" I think killing is effective whether with a "bang" or not.

Predictably, as CBW budgets have grown, the Army's craving for publicity has disappeared. Today, the issue of chemical and biological warfare is being raised primarily by civilian opponents rather than by Pentagon advocates.

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

Mr. STENNIS. Mr. President, I yield the Senator 2 minutes.

Mr. HARTKE. I thank the Senator.

The Senate action today has been prompted by a profound public concern—a concern that becomes harder to control the longer we delay. The American people are demanding the Congress take a hard look at our chemical and biological warfare program—a hard, critical look.

The amendment we are considering today is a modest step in the right direction. It puts mild restrictions on certain kinds of testing, limits the development of certain kinds of delivery systems, prohibits stockpiling of CB weapons overseas, and provides greater safety in transportation of lethal chemicals and biologicals. But most important, in my mind, it strips away some of the unnecessary secrecy which surrounds our CBW program. My own contributions to the amendment are embodied in the report requirement, the prohibition on "backdoor" financing, and the rail shipment notification restrictions. These provisions, providing the Congress with basic information on the scope and the purpose of our CBW program, will make the other restrictions easier to enforce, and will prevent ungrounded public fears from turning CBW into a dangerous and emotional issue.

Mr. President, the CBW issue need not grow into a symbolic attack on military spending, or a ritualistic defense of military preparedness. It can be judged on its own terms, thanks to the collective efforts of those who have brought this widely accepted amendment to the floor. This amendment provides the Senate with an opportunity to answer its own questions, to express its concern, and to respond to public demands, without impairing our military capabilities or compromising our Nation's security.

I thank the Senator from Mississippi for yielding me this time.

Mr. McINTYRE. Mr. President, will the Senator from Mississippi yield me 2 minutes to respond?

Mr. STENNIS. Yes. Mr. President, I yield the Senator from New Hampshire 2 minutes.

Mr. McINTYRE. Mr. President, I commend the Senator from Indiana wholeheartedly for his interest in this field, particularly in this year of 1969, and I commend, too, the fact that his staff, working together with my staff and Pentagon personnel, have done a lot of hard work. There was much give and take in working out these compromises. The Senator and his staff have displayed great merit, and deserve our commendation.

The Senator made mention, in his remarks, about shipments of biological agents throughout the United States, not by the Department of Defense but by others. The Senator may be aware of what I am about to say. I think he has made reference to the fact that his committee has oversight of the matter.

Mr. HARTKE. That is correct.

Mr. McINTYRE. The American Type Culture Collection, which is a private group in Washington, D.C., made shipments of nearly 20,000 different cultures of bacteria and viruses, many of them deadly, in 1967 and again in 1968.

During these same years Fort Detrick made shipments totally about 400—about 200 a year.

Figures are not readily available for the shipments of these bacteria and viruses by the communicable disease lab with headquarters in Atlanta, Ga., but I understand that there is a heavy movement of these agents by the laboratories.

Mr. HARTKE. I thank the Senator from New Hampshire for this information. We will certainly bring it up in committee, and I think we can come forward with some legislation this year which will be effective in making it possible for us to provide greater protection for the people generally in transporting these agents, which are potentially so dangerous and so deadly.

Mr. McINTYRE. I think that will be fine, because I think the whole group of amendments sponsored by the Senator from Indiana, the Senator from Wisconsin, the Senator from New York, the Senator from Texas, the Senator from Rhode Island, and others, have demonstrated that Congress feels the need for more control over shipments of these deadly germs and deadly gases, and not only for more control, but for more knowledge about them.

I thank the Senator.

Mr. STENNIS. Mr. President, I yield myself 2 minutes.

As chairman of the committee, I highly congratulate the Senator from New Hampshire (Mr. McINTYRE) for the splendid work he has done on this subject during our hearings. I also commend him and the authors of the various amendments for the work that they have done in this highly important field, which has developed to the point where it needs such regulation as is reflected by these amendments. I believe the Senators and the staffs have done a splendid job; and in fact I support the amendments. We have not had a chance to have a committee meeting, and I cannot speak for the committee, but I have discussed the

matter with the Senator from Maine (Mrs. SMITH), and I am sure she will have a word to say in their support.

I point out that the committee took out the $16 million for research and development of lethal offensive chemical and biological items. This is follow-on to the work of the McIntyre subcommittee, with the other Senators who authored these amendments. I believe they have done a splendid job.

I discussed this matter on the telephone Saturday morning with Secretary Laird, and he thinks some regulation is desirable.

The PRESIDING OFFICER. The Senator's time has expired.

Mr. STENNIS. I yield myself 1 additional minute.

He expressed concern about the situation, and an inclination to support the amendment; and later, at a press conference, he did express support for it.

So I commend it to the Senate. As I say, I think the Senator from Maine will have a few words in its favor also. I thank the Senator from Wisconsin, for the committee, for his very generous words with respect to our efforts on this bill.

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

Mr. STENNIS. I yield to the Senator from New Hampshire.

Mr. McINTYRE. I ask for the yeas and nays.

The yeas and nays were ordered.

Mr. STENNIS. Mr. President, if I have any time left, I yield to the Senator from Arizona.

Mr. GOLDWATER. Mr. President, I merely wish to say that I believe the chairman has made a very wise move in accepting this amendment. While, as he said, I cannot speak for the whole committee, I want him to know that at least he has the backing of the junior Senator from Arizona.

We did a good bit of work on this subject in committee. It is a very touchy, very sensitive field, that all of us believe should have regulation, or more regulation, and I am very happy that the distinguished Senator from New Hampshire was able to work out the compromise that he did, with the large number of amendments with which he had to work. He has done an oustanding job all through the writing of this bill and its defense on the floor. So, Mr. President, I am glad that the chairman has indicated the position which he has with respect to the action which is about to be taken.

Mr. STENNIS. Mr. President, I thank the Senator very much.

The PRESIDING OFFICER. Who yields time?

Mr. DIRKSEN. Mr. President, I yield 1 minute to the Senator from Maine.

Mrs. SMITH. Mr. President, I join the very able chairman of the Committee on Armed Services, and concur with what he has said with respect to this amendment. I also commend the several sponsors of the various amendments for getting together and bringing in what seems to me to be an excellent compromise, and I am glad to support it.

Mr. DIRKSEN. I yield 1 minute to the Senator from California.

Mr. MURPHY. Mr. President, I associate myself with the remarks made by the ranking minority member of the Committee on Armed Services, and by the chairman of the committee, and say that I should like to join in congratulating the Senators who have agreed upon this amendment. I think it is most helpful, most progressive, and certainly would help bring back the control to Congress, where it should be.

Mr. DIRKSEN. Mr. President, I yield myself such time as I may require.

Hideous as the words "chemical and biological warfare" seem to be to the sensitivities of people, yet there are other countries which have had and do have capabilities in the field. I recall very vividly, for example, lying in a ditch with a gas mask over my nose when the first burst of chlorine came over from the enemy in World War I; and I remember when I was a horse officer, how badly those artillery horses were galled and beaten by mustard gas.

That was one time when it was used. The Italians used it in Ethiopia, and the Egyptians used in it Yemen; and we know, from the Penkovsky papers, that there is a capability on the part of the Soviet Union, because he wrote, among other things:

> Many places in the country have experimental centers for testing various chemical and bacteriological devices.

He amplifies that, of course. So there is a capability in this field; and it occurs to me that we have to have some kind of a retaliatory facility for the very purpose of deterring others from ever using it.

So I fully concur in what has been fashioned here by way of a modified amendment.

Mr. President, we have heard many voices recently questioning the need for chemical warfare and biological research programs as a part of this country's defense. I would like to go on record in support of these two programs and at the same time I encourage the increasing interest of the Members of this body in the why and wherefore of these programs.

First, we should recognize that the President recently directed the executive branch to undertake a detailed review of our policies and posture in chemical and biological warfare, including the U.S. position on arms control and the ratification of the 1925 Geneva Protocol.

Second, I remind my colleagues that the Defense Department has consistently followed congressional advice in their chemical and biological defense activities, and I do not believe they have attempted to hide these activities, some of which are necessarily classified, from congressional inquiries made by the committees directly concerned.

A congressional committee in 1959 made several recommendations pertinent to our considerations today. One of the recommendations stated it is recognized that in the present world situation, with other countries pursuing vigorous programs of chemical and biological development, the best immediate guarantee the United States can possess to insure that chemical and biological warfare is not used anywhere against the free world is to have a strong capability in this field, and this will only come with a stronger program of research. Another recommendation was that if chemical and biological weapons are to be considered a deterrent force in the U.S. arsenal of weapons, the program of research advocated here will have to be accompanied by an adequate program of manufacture and deployment of chemical and biological munitions.

The first recommendation alluded to the threat as it existed in 1959. Has there been any reduction in the threat since then? We do not believe so. In 1967, the then Deputy Secretary of Defense testified on chemical and biological warfare before the Senate Subcommittee on Disarmament, saying:

> At long as other nations, such as the Soviet Union, maintain large programs, we believe we must maintain our defensive and retaliatory capability.

I am informed that the Soviets conduct chemical research that is related to offensive and defensive chemical warfare and that they have means which are suitable to deliver them. Col. Oleg Penkovsky, the former Soviet intelligence agent, wrote in his "Penkovsky Papers" about the chemical and biological programs of the U.S.S.R.:

> Many places in the country have experimental centers for testing various chemical and bacteriological devices.

He further wrote:

> Soviet artillery units all are regularly equipped with chemical-warfare shells. They are at the gun sites, and our artillery is routinely trained in their use. And let there be no doubt: if hostilities should erupt, the Soviet Army would use chemical weapons against its opponents. The political decision has been made, and our strategic military planners have developed a doctrine which permits the commander in the field to decide whether to use chemical weapons, and when and where.

The U.S.S.R. has a capability in biological warfare; they have the technological capability to produce, store, and deliver biological warfare agents.

On the defensive side, the Soviets are believed to possess a chemical defensive capability in terms of equipment and training, superior to those of the Western powers. Training in the use of defensive equipment, reconnaissance measures, and means for survival are taught and practiced until individual and unit proficiency are attained.

You may raise the question why we need such a program. I believe I have just covered the major reason—the potential threat posed to the United States and her Allies. We must have a program to deter enemy use of chemical weapons by being able to retaliate in kind. To place this statement in proper perspective, let us review some history. There are three major occasions when chemicals were used—World War I, first used by the Germans; in the 1930's when the Italians used chemicals in Ethiopia; and more recently in 1967 when the

Egyptians used chemicals in Yemen. We should note that the Italians and Egyptians had been signatories to the Geneva Protocol of 1925 and yet subsequently initiated the use of these weapons.

On these occasions, the other side did not have a deterrent capability and did not have a chemical weapon to use. Neither did they have a defensive or protective capability.

However, during World War II with many nations having a capability, chemicals were not used. Many experts believe that the U.S. policy that it would not use chemical weapons unless another nation used them first, and having backed this up with a retaliatory capability, was the major deterrent to the use of chemicals during World War II.

Some might say we do not need these weapons today as deterrents when we have nuclear weapons in our stockpile. Personally, I do not want to have to rely on nuclear weapons as a deterrent in this area because it may engage the United States in a much larger exchange. Further, if a nation were to use chemical weapons or biological weapons against the United States or its Allies, and the United States had no chemical or biological capability, it would force us to respond with nuclear weapons or accept the alternative of possible defeat.

Thus, the United States has maintained a limited chemical and biological offensive and defensive capability primarily as a deterrent and because we cannot permit ourselves to be technologically and militarily surprised by the advances other nations are bound to make. We cannot by legislation or wishful thinking stop the progress of science. Any action which we take to deprive our Nation of this capability without insuring effective and well policed international arms control constitutes unilateral disarmament, and I for one do not believe this to be prudent.

As we all know, the United States is committed to exploring any proposals or ideas that could contribute to effective arms control.

For example we recently participated in a United Nations study of chemical and biological warfare to be used by the 18 Nation Disarmament Committee to explore means of getting an effective disarmament agreement on chemical and biological weapons. However, until we achieve effective agreements with the required controls to eliminate all stockpiles of these weapons, we should maintain a chemical and biological program strong enough to be credible and strong enough to deter any aggressor from using these weapons.

Mr. President, how much time do I have remaining?

The PRESIDING OFFICER. The Senator has 9½ minutes remaining.

Mr. DIRKSEN. I yield 3 minutes to the Senator from Utah.

Mr. MOSS. Mr. President, because of the widely publicized sheep incident last year in Utah and more recently, because of my successful fight to keep the Army from shipping obsolete nerve gas weapons from the Denver Rocky Mountain Arsenal to Utah, I am very familiar with the CBW controversy.

The amendment being proposed today is basically in accord with my own position on CBW. I do, however, have several questions about the specific language of the amendment and then some observations on the CBW problem generally.

I ask the Senator from Wisconsin, first, whether the language in section (b) which forbids the procurement of delivery systems specifically designed to disseminate lethal chemical and biological agents include devices that are being used in the present testing of CBW, such as the artillery shells that are now being used?

Mr. NELSON. Mr. President, I suggest that the Senator direct that question to the subcommittee chairman.

Mr. McINTYRE. Mr. President, it does go to prohibit any dissemination or distribution weapons that are specifically designed for this purpose. Of course, it would not include the 155 mm. howitzer. That is a weapon we could use to dispense the material, if the time ever comes, God forbid, but it is not specifically designed for that purpose. This section refers exclusively to disseminating systems specifically designed to dispense CBW agents.

We had to yield to the Defense Department on this point because the original language was so broad it could have been armor, weaponry, and things we purchase as part of our equipment to deliver normal military high explosives.

Mr. MOSS. Mr. President, I think that the suggestion is still much too restrictive. However, that is something that we would have to deal with later.

Second, I might suggest that the language in section d(1) and (2) which restricts the transportation of lethal chemical and biological agents be tightened to avoid a possible loophole. Instead of applying these restrictions just to shipments to or from military installations, I would broaden the language to include any shipments anywhere within the United States, its territories, or possessions. This could be done by simply dropping the words "to or from any military installations" in sections d(1) and (2).

Mr. McINTYRE. Mr. President, the group working on the proposal felt that if it was too restrictive, we might become involved in the interplay between the military.

What we did do was to try to restrict it to moving and disposal.

Mr. MOSS. Mr. President, this would merely say to or from military installations. If it was not going to or from military installations, it would be included. I think this ought to be tightened up at this time.

Mr. McINTYRE. The Senator might have a point.

Mr. MOSS. A final point, Mr. President. Too much of the public discussion about CBW has become emotional and speculative primarily because of the Army's obsession with secrecy. Rightly or wrongly, and I think rightly, the Government's credibility concerning CBW is highly suspect. Even after the Dugway incident it was some time before the Army would admit that they were testing nerve gas agents let alone responsible for the death of the sheep.

To give the American people good reason to believe what the Government tells them and to provide the public with much-needed information, I suggest that the Surgeon General appoint a committee of three State public health officials and three nonmilitary experts to assist him in making the determination as to whether CBW testing is a hazard to public health. This determination should be made in a public report and should include as much information as possible. In my opinion much of the information now classified need not be and would help in creating a better public understanding of CBW.

Mr. DIRKSEN. Mr. President, I yield 3 minutes to the Senator from South Carolina.

The PRESIDING OFFICER. The Senator from South Carolina is recognized for 3 minutes.

Mr. THURMOND. Mr. President, the management and control of our chemical and biological warfare research programs has become an emotional issue in recent months, due to an unfortunate incident in Utah.

Certainly, this is an area in which the greater care must be taken as these chemical agents and disease producing biological micro-organisms and biological toxins are deadly. Tighter controls may well be in order, judging from the accident in Utah.

While some restrictions would be useful, the McIntyre amendment is broad in its coverage, especially in that it prohibits funds to procure delivery systems or any components of delivery systems for chemical and biological agents.

Such a restriction may be harmless at this point, as the military does not desire any funds in the current bill for offensive delivery systems. However, if this restriction is passed, it becomes law. It would, therefore, tie the hands of those charged with our defense if, in the future, more sophisticated means of delivery for these agents are needed to maintain our defense posture.

Presently, we use standard shells and bombs to deliver these agents but this requirement could change and valuable time could be lost in removing this restriction to allow the Defense Department to meet the needs of an emergency.

Mr. President, the history of the use of these agents shows they have only been used a few times in modern history and in each instance their use was made when the user knew his opponent did not have the means to retaliate.

Mr. President, I ask unanimous consent that Secretary Laird's statement be printed in the RECORD at this point.

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

MEMORANDUM FOR CORRESPONDENTS,
AUGUST 9, 1969

(Secretary of Defense Melvin R. Laird today issued the following statement in response to queries about the DOD position on the pending McIntyre amendment.)

On assuming the office of Secretary of Defense in January, I became concerned with the management and control of our chemical warfare and biological research programs. I felt that improvements were needed in the management and control of these programs. That is why in April I requested and the President ordered a National Security Council study of these matters. This study is in progress.

Pending the completion of the NSC study,

I believe it is prudent that we act jointly with Congress and take actions, wherever possible, to improve the management and control of chemical warfare and biological research programs.

Members of my staff, principally Dr. John S. Foster, Jr., Director of Research and Engineering, have been working in recent days with Senator Thomas J. McIntyre of New Hampshire, and with other members of the Senate Armed Services Committee, on a revised amendment to the pending Defense Authorization Bill.

I am in agreement with the goals of the new amendment, which the Senate is scheduled to consider on Monday.

I believe this revised amendment will allow us to maintain our chemical warfare deterrent and our biological research program both of which are essential to national security.

The history of the use of lethal chemical warfare agents has demonstrated on three notable occasions in this century that the only time military forces have used these weapons is when the opposing forces had no immediate capability to deter or to retaliate. This was true early in World War I, later in Ethiopia and more recently in Yemen. Clearly, failure to maintain an effective chemical warfare deterrent would endanger national security.

Because it would not always be possible to determine the origin of attack by biological agents, the deterrent aspects of biological research are not as sharply defined. A continued biological research program, however, is vital on two other major counts.

First, we must strengthen our protective capabilities in such areas as vaccines and therapy.

Second, we must minimize the dangers of technological surprise.

It is important that the American people be informed of why we must continue to maintain our chemical deterrent, conduct biological research, and how we propose to improve the management and control of these programs.

Mr. THURMOND. Mr. President, in view of this, I support this amendment but with some reservation, and mainly in the trust that the military will act promptly and the Congress will respond realistically if they see any indication a change in this policy is required.

Mr. DIRKSEN. Mr. President, I yield 1 minute to the Senator from New York.

The PRESIDING OFFICER (Mr. GOODELL in the chair). The Senator from New York is recognized for 1 minute.

Mr. GOODELL. Mr. President, the high degree of amiability and unanimity on this omnibus amendment at this point belies the difficulty that many have had in pushing this matter forward so that we could have reasonable regulation of chemical and biological weapons.

The amendment does not meet head on the critical issue involved that I hope the McIntyre subcommittee will face in the year ahead. That is whether our country should continue to produce and stockpile chemical and biological weapons and the means of delivering them as a deterrent, and whether we must have a better deterrent in every area of every kind of weapon if we are to preserve our national security.

I trust that the Senator from New Hampshire will explore this question in depth so that we may have a decision on the matter in the year ahead.

Mr. YOUNG of Ohio. Mr. President, approximately $350 million of taxpayers' money has been spent annually for chemical and biological warfare agents. For many years the Department of Defense has purchased and stockpiled enormous amounts of toxic and infectious chemical and biological agents.

In fact, we are in the process of trying to get rid of 27,000 tons of such chemical weapons now obsolete, yet too dangerous to remain stockpiled. During the past 16 years nearly 1,500,000 nerve gas bombs containing a total of 4 million pounds of such gas have been produced. Another 1,350,000 pounds of the same deadly gas is contained in our M55 rockets. Our chemical and biological warfare arsenal now includes numerous and varied agents for the spread of wholesale disease, starvation, choking or suffocating of entire populations, and other such deadly effects.

For the first time in many years, possibly since the days of World War I, Americans are becoming uneasy and concerned about the most grisly weapons in contemporary arsenals—the weapons of chemical and biological warfare. It is a subject that cries out for sober discussion.

The production of these weapons has been shrouded in secrecy. Even we in the Congress know very little about what is occurring in experimentation, development, stockpiling, and disposal of these weapons. Most Senators and Representatives were shocked at the recent disclosure that 28 persons were injured in a nerve gas accident in Okinawa, and of the fact that the Pentagon has stored nerve gases and other chemical-biological warfare weapons in bases throughout the world. That time we were lucky that a more serious catastrophe did not occur that could have taken the lives of millions of men, women and children. The extent to which the Congress has been uninformed on this vital issue was best emphasized by a recent statement of the distinguished senior Senator from Louisiana (Mr. ELLENDER), the ranking majority member of the Committee on Appropriations, who said:

As far as the Continental U.S. is concerned, evidence has recently been brought out that tremendous stockpiles of various deadly compounds are on hand at centers throughout the country. Most of this work has been done without the knowledge of the Congress. During my twenty years service on the subcommittee of the Appropriations Committee for Defense, I never have come across any line item for the production of nerve gas.

This, despite the fact that almost $1 million a day is being spent by the Pentagon on chemical-biological warfare weapons.

Since 1964 it has not even been possible to determine how much money the Government is spending on these weapons. Estimates vary from $350 million to $500 million per year. In the arsenal of the Pentagon and of those in at least 13 other nations are chemical poisons so toxic that one-fiftieth of a drop can be lethal in minutes. Senators will recall the death in 1968 of 6,400 sheep from nerve gas in the Dugway Proving Ground in Utah.

It is horrible to contemplate, but it is a fact that today the Soviet Union and United States possess enough of these chemicals and biological agents to destroy every man, woman, and child on earth.

It is clear that the time has come for a full-scale congressional investigation of our chemical and biological warfare potential. The fact that we have nerve gases in bases around the world raises grave moral and public policy questions.

At least some of the secrecy ought to be ripped away. No one reasonably would ask that Pentagon officials make full disclosure of every last detail of research, development, production, and storage of its chemical and biological warfare agents. At the same time, a thorough ventilation of the nature of these frightful weapons might well lead to stronger treaties against their production and use.

Congress must act now to fulfill its responsibility in a program that has escaped careful congressional scrutiny for too many years.

Unfortunately, some of these weapons are presently being used in Vietnam. The use of chemical defoliants in Vietnam has been increasingly questioned by those concerned over the longrun environmental dangers. Also, there is evidence that the so-called riot control gases used in Vietnam can be fatal to the weak, sick, and undernourished civilians exposed to them.

On July 2, 1969, U.N. Secretary-General U Thant released an excellent report on chemical and biological warfare in which he strongly urged that all nations ratify the Geneva Protocol of 1925 banning first use of chemical and biological warfare. He also called for all nations to reach agreement to halt the development, production, and stockpiling of all chemical and biological warfare agents and to eliminate them from the arsenal of weapons.

U Thant's report makes it clear that the testing and use of biological warfare agents pose health hazards to everyone—that the deadly diseases that have been stockpiled for use as weapons are just as dangerous to the producer and potential user as they are to the recipient. The report emphasizes the need to promptly reach agreement on a ban on the production, stockpiling, and use of biological weapons. A proposal that would accomplish this is now before the 25-Nation Disarmament Conference which is meeting in Geneva. I am hopeful that the administration will do all it can to see that this resolution is adopted.

Mr. President, today a comparatively few nations possess these lethal weapons. However, any nation, large or small, can develop contagious bacteria and viruses. If and when they do, the danger of an accident or purposeful use becomes greater. The very survival of man is at stake. The development and stockpiling of these horrible chemicals and germs is a pursuit after armaments far in excess of those needed for our national security and national defense.

I am utterly opposed to any further development and stockpiling of such devices. I urge the adoption of the pending amendment to establish effective guidelines and controls over the storage, transportation, disposal, and maintenance of chemical and biological agents. Also, to ban future open-air testing of lethal chemical agents, disease producing biological micro-organisms or poisons except on determination of the Secretary of Defense that such tests are necessary for

the national security and only then after the Surgeon General has determined that the proposed tests will not present hazards to public health. The provisions of the pending amendment form an important first step toward stemming and controlling the proliferation of these deadly weapons.

Mr. PELL. Mr. President, I was delighted to read in the newspapers this weekend that the Secretary of Defense, Hon. Melvin Laird, approves of the amendments that we have before us to control the chemical and biological weapons program.

I interpret Secretary Laird's approval of my amendment regarding international law to mean that the Secretary of Defense recognizes a responsibility of the Department of State for interpreting our international obligations, and I assume that the Secretary of Defense will provide for proper consultation with the Department of State regarding the international legal implications of the movement of chemical and biological materials outside of the United States in the future.

Although I am happy that the chairman of the Armed Services Committee and the Department of Defense has approved the amendments which we have before us, I hope this does not mean there will not be further debate on the foreign policy questions involved in the chemical and biological warfare question. I believe that the Senate should discuss the role that the Department of Defense expects CBW to play in the world arms race, and I would hope that we would discuss the implications of Secretary Laird's recent statement implying the chemical and biological weapons are strategic weapons which might be used in a second strike capacity.

Mr. TOWER. Mr. President, I would like to express my understanding of the intent and effect of this amendment. This amendment is not intended to prevent the Department of Defense from undertaking biological and chemical research programs. Those programs have been presented and justified to the Congress as required in the interest of national defense. The amendment recognizes, however, that the public and members of the Congress are concerned that the program be undertaken under conditions of maximum safety and that the Congress be fully aware of the actions that are taken. For this reason, the amendment, while not restricting the types of activities that the Department of Defense may undertake in pursuing the program it has presented and justified to us, imposes certain reporting and coordinating requirements. Some of these requirements may prove burdensome and time-consuming. Perhaps with experience we will later decide to remove some of them. However, despite the burdens the amendment imposes, the Department of Defense has recognized the concern of the public and members of the Congress in matters concerning chemical warfare and biological research programs, and has therefore indicated it will not oppose enactment of the amendment.

As I understand this amendment, it in no way represents a criticism of the CBW program or of the military officials who have administered it. It simply expresses the desire of the Senate to have Congress better informed on the program and indicates the Senate's rightful concern that testing, transportation, disposal and storage of chemical and biological warfare elements be done as safely as possible. With this understanding, I support the amendment.

Mr. MUSKIE. Mr. President, for more than 50 years poison gas has been an instrument of warfare, and for all that time Americans have been repulsed by the thought of poison gas being used to kill and maim people.

As a nation, America traditionally has viewed the case of poisonous gases as inhumane. We have sought to make gas an illegal weapon of war, and in two world wars we declined to use it to kill our enemies.

Despite our public stance, American military contracts have continued to be let and military personnel have been assigned to the task of researching, developing, manufacturing, and storing poison gas and biological agents.

Until a year ago, gas and germ warfare seemed a subject for science fiction. Members of Congress were vaguely aware of the research and development programs, but regarded them as contingency operations, first, to deter other nations from using such weapons first; and second, to aid in research on countermeasures. The first major rumbling of complaint came with the use of tear gas, defoliants, and napalm in Vietnam. More vigorous complaints erupted with news of dangers from testing and disposal of chemical and biological materials and weapons in the United States.

The first major incident came last year when more than 6,000 sheep died in Utah, near the Dugway Proving Ground, where chemical and biological warfare materials were tested. The sheep fall victims to a nerve gas released by a plane. For a long time military secrecy cloaked the cause of the deaths. Now, thanks in large part to the work of Representative RICHARD D. MCCARTHY, Democrat, of New York, the facts about that incident and other threats from our chemical and biological warfare program are being given to the Congress and to the public.

The second major incident—or near incident—was the Army's plan to transport 27,000 tons of poison gas containers by rail from Colorado to the east coast where it would be loaded on barges and dumped in the ocean. That plan has been shelved, temporarily, but additional opposition to the chemical and biological warfare program has been stirred up by the fact that the Army was prepared to ship such dangerous materials across the country through large cities without major precautions against accidental discharge of the gases and without serious attention to the environmental hazards posed by ocean disposal.

In retrospect, the Dugway Proving Ground accident and the ocean dumping proposal may have been blessings in disguise. They have alerted the country to a clear and present danger from chemical and biological warfare operations, in peace and in war.

Materials containing anthrax, tularemia and Q fever germs, nerve gas, and other toxic materials are not minor weapons, and secrecy about their development and use does not guarantee safety.

Americans have a right to expect their Government to use great caution in approaching such an awesome set of weapons. They have a right to expect their Government to use more than ordinary care in handling such weapons. They have a right to expect their Government to develop considerable energy to eliminating the danger of such weapons being used in time of war.

The packet of amendments we are considering now will enable us to meet their responsibility.

The PRESIDING OFFICER. All time having expired, the question is on agreeing to the modified amendment (No. 131) of the Senator from New Hampshire. On this question, the yeas and nays have been ordered, and the clerk will call the roll.

The assistant legislative clerk called the roll.

Mr. KENNEDY. I announce that the Senator from Tennessee (Mr. GORE) is absent on official business.

I also announce that the Senator from Indiana (Mr. BAYH), the Senator from Nevada (Mr. BIBLE), the Senator from Connecticut (Mr. DODD), the Senator from New Mexico (Mr. MONTOYA), the Senator from Georgia (Mr. RUSSELL), and the Senator from Texas (Mr. YARBOROUGH) are necessarily absent.

I further announce that, if present and voting, the Senator from Indiana (Mr. BAYH), the Senator from Tennessee (Mr. GORE), the Senator from New Mexico (Mr. MONTOYA), the Senator from Texas (Mr. YARBOROUGH), and the Senator from Connecticut (Mr. DODD) would each vote "yea."

Mr. SCOTT. I announce that the Senator from Michigan (Mr. GRIFFIN) is detained on official business, and, if present and voting, would vote "yea."

The Senator from Ohio (Mr. SAXBE) is necessarily absent; and if present and voting, would vote "yea."

The result was announced—yeas 91, nays 0, as follows:

[No. 74 Leg.]

YEAS—91

Aiken	Goodell	Mundt
Allen	Gravel	Murphy
Allott	Gurney	Muskie
Anderson	Hansen	Nelson
Baker	Harris	Packwood
Bellmon	Hart	Pastore
Bennett	Hartke	Pearson
Boggs	Hatfield	Pell
Brooke	Holland	Percy
Burdick	Hollings	Prouty
Byrd, Va.	Hruska	Proxmire
Byrd, W. Va.	Hughes	Randolph
Cannon	Inouye	Ribicoff
Case	Jackson	Schweiker
Church	Javits	Scott
Cook	Jordan, N.C.	Smith
Cooper	Jordan, Idaho	Sparkman
Cotton	Kennedy	Spong
Cranston	Long	Stennis
Curtis	Magnuson	Stevens
Dirksen	Mansfield	Symington
Dole	Mathias	Talmadge
Dominick	McCarthy	Thurmond
Eagleton	McClellan	Tower
Eastland	McGee	Tydings
Ellender	McGovern	Williams, N.J.
Ervin	McIntyre	Williams, Del.
Fannin	Metcalf	Young, N. Dak.
Fong	Miller	Young, Ohio
Fulbright	Mondale	
Goldwater	Moss	

NOT VOTING—9

Bayh	Gore	Russell
Bible	Griffin	Saxbe
Dodd	Montoya	Yarborough

So Mr. McINTYRE's amendment (No. 131), as modified, was agreed to.

Mr. McINTYRE. Mr. President, I move to reconsider the vote by which the amendment was agreed to.

Mr. NELSON. I move to lay that motion on the table.

The motion to lay on the table was agreed to.

Mr. STENNIS addressed the Chair.

The PRESIDING OFFICER. The Senator from Mississippi is recognized.

Mr. STENNIS. Mr. President, I wish to make a very brief overall statement about the bill and consideration of additional amendments thereto.

Mr. SYMINGTON. Mr. President, may we have order?

The PRESIDING OFFICER. The Senate will be in order.

Mr. STENNIS. Mr. President, what I will say is nothing new, but I am saying it in an effort to promote our debate in such a way that the issues will be understood by Members of the Senate.

As an illustration, last Friday we had about 3½ hours of debate on an amendment by the device of continuous yielding by the author. This is a practice we have fallen into. I do not blame anyone; no one was out of order; and I do not make these remarks critically. However, the committee had no chance in all that time to present our views and the situations as we saw it with reference to that amendment. That is only an illustration.

I hope we can work out something to avoid such a situation in the future. The committee chairman has no control, except as he may confer and reach understandings with Senators with respect to which amendment is called up and when it shall come up.

The main point I wish to talk about now is that this bill represents a balanced program.

Mr. President, will the Chair enforce the rule so that we may have order?

The PRESIDING OFFICER. The Senate will be in order.

Mr. STENNIS. We have offensive nuclear weapons, and we have provided for a defensive system against the offensive nuclear weapons arrayed against us. We know that we are not going to make a first strike. There is nothing like that in the minds of the people, Congress, or the President. We know that we are not going to start a nuclear war. I do not know, but with the high development of these weapons I doubt that Russia would intentionally start a nuclear war. Perhaps the time when that was probable is behind us. However, no one really knows. So we must be prepared in that field. I do not believe we should say that we will not start one under any circumstances. I said that years ago. I mention these matters to get down to the real issue; namely, the need for conventional forces.

At one time, we were getting away from that. We went into the nuclear field and neglected modernization of the Army. We neglected a great many other things because we put most of our money into nuclear weapons.

Certainly we are not about to reach a millennium, when everyone will be at peace, and the lion and the lamb will lie down together, when there will be no more boundary disputes and no more aggression against one nation by another. We do not believe that that millennium has arrived. We know that we must have sufficient military strength to protect our people, and I am talking about 200 million citizens here at home. We know that we must protect them with sufficient conventional weapons. We know that it must be our policy to protect those 200 million Americans. We have assumed many commitments around the world and may be forced to go beyond our boundaries and protect the perimeter.

We may want to reduce these commitments, but no one is offering a resolution to do so. No Senator has proposed a plan to change the situation. No committee of Congress is hearing any testimony on the subject. There is no report or statement of opinion of a committee that is weighted in favor of any change.

We have not had any requests from a President to that effect—from President Nixon or any prior President.

Thus, our policy still is that we can best protect ourselves by providing some defense of the outer perimeter. That is what a great deal of the hardware in the bill is for.

Some Senators may think the bills should be changed right here on the floor of the Senate, piece by piece, so as to take out the tanks, take out the carriers, take out this, or take out that. I do not believe that is the way to proceed. When the will of the majority is felt, we will find out for sure.

I favored paring some items in the bill, as I said in my opening talk, but we had better know what we are doing and have a committee consider the matter from all angles and submit a report on a bill. This is what the Armed Services Committee did.

At the same time, I should also like to know what the President thinks about it.

This policy should be enunciated clearly; then we can implement it. Let us not place the cart before the horse.

We all remember that following World War II we decided that Japan should have no weapons, except to a very limited degree. We said to Japan, "We will take care of you."

I think we overdid it. We should modify that.

But can we do that? Can we take pieces out of the military bill on the floor of the Senate, until the President, the committees and others have spoken or enunciated some kind of policy?

Look at our obligations around the world. Take Korea. We must not tear down everything we have built up there. We guaranteed Korea's integrity when no other nation joined with us. It was just the United States of America and Korea. We guaranteed Korea's protection. That requires credible military forces and military deterrence. It does not take a wise man to see that.

We all remember Formosa. We all remember Vietnam, where we are now. The Lord only knows how or when we can get out of there. We are members of SEATO and NATO. All these obligations prove conclusively that we need balanced conventional forces, and that we must have them. I want to have them with the smallest number of dollars.

Let me mention something else. One can go to a military service and sometimes get a large listing of the defects in the weapons of a rival military service. That is a part of the picture in the Pentagon. The Navy which believes in its weapons, and the Air Force also believes in its weapons—and I am glad they do. But sometimes, on the side, they are quick to point out defects, real or imaginary, in the weapons of the other service.

Let me give an illustration. I was once inside the matter of the Nike-Hercules ground-to-air defense missile.

I thought we were going too fast and too far, and before it had been perfected enough. The bill provided hundreds of millions of dollars.

I was handling the military construction bill. A general spoke on "Face the Nation" that Sunday afternoon. He was a very fine general. The question was put to him: If a city were properly defended with enough Nike-Hercules, and a hundred enemy bomber planes came in, how many could they knock out? He said, "A hundred out of a hundred."

The next morning I talked with an outstanding admiral of that day, one of the foremost we had. I said, "If a city had the required number of Nike-Hercules and a hundred enemy bombers were coming in to bomb the city, how many Nike-Hercules could they knock down out of that hundred?"

He said, "Not a darned one."

I think both of those gentlemen were wrong. But that general remark of the admiral, coming down the corridor of the building, having no appointment, led us to go further into the matter.

Mr. McNamara told me later that it would save some money. But my point is that we do not know enough about missiles. My point is that there is interservice rivalry, and that is seldom brought up in debate. I am not saying this critically of anyone. I know there is rivalry. Sometimes it is within a service.

All of us remember the old cavalry. The cavalry has gone. But weapons rivalry still exists within the services.

So we had better examine carefully some of the information we are getting—and getting in good faith—about these matters. My point is that the bill provides a balanced program, something that the Joint Chiefs have agreed to.

The Chairman of the Joint Chiefs is no ordinary man. Do not discount General Wheeler, unless you want to condemn all military men. If you do, let General Wheeler go on down the drain with the rest of them. But if you want impartiality, do not discount General Wheeler.

That is not all. We are looking for a balanced program in weaponry. This program is largely one like that approved by former Secretary McNamara. Whatever one may think about him, he had plenty of sense. I think he was one of the

most effective Secretaries of Defense we have ever had. I do not think he was right on all things, but he worked, and he knew a lot about defense.

Former Secretary Clifford approved this program, although there were some differences in details.

We squeezed a great deal of water out. But Mr. Clifford is a man of high intelligence and considers things seriously.

Secretary Laird approved this budget just as recently as early March. Senators who do not know Secretary Laird have missed a gem. We who serve on the Committee on Appropriations have been confronting his fine mind and ability for years. I do not know of any Member of Congress who rendered finer service in this field than Representative Melvin Laird. He was usually a jump ahead of most of the rest of us. So the program provided by the bill is his best judgment. He believes the Nation needs this bill as a balanced program. I do not mean that every "i" must be dotted and every "t" crossed, of course, but as an overall proposition.

That is not all. President Nixon approved virtually all of this budget. Mr. Nixon is not a newcomer. He is not one who had been president of General Motors or president of a university or some other institution.

That man learned the hard way. I am not complimenting him. We all know his background and experience. I tell the Senate that when he came back here in 8 years I was amazed, from the word "go," at the fine knowledge he had of the present situation and the present need, here and there and everywhere, of the military program. I know, because I have talked with him over and over. He did not have anything to offer me. I did not have anything that I could give him, except just loyalty to the country. I am not espousing the Nixon program, or anything like that. I am talking about national defense now. But he grasped this problem. He had it in his mind. He was as well versed as anyone outside the military itself. Melvin Laird was there, and so were others. They made hard decisions. They may be planning more.

That is the case here. We are not living in a millennium—oh, not by a long shot. We are not out of Vietnam—not by a long shot. We will have to have the hardware, the weapons, the manpower, the know-how, the skills, and the judgment, if we are to continue as a leader of the free world.

I am no internationalist. I am no big spender, either. I am no big spender—my records shows it—for the military department.

When we talk about such terms as "military-industrial complex," and all that, that does not mean anything to me, and I do not think it means anything to anyone in the showdown. I think it is a slander and a libel on a great military profession and the membership of the Senate for those things to be fed out and fed out on the Senate floor, through committee hearings, through television, through radio, everywhere, all the time, to create—and it does create—a prejudice. Whether that is the purpose or not—I will let every man's motives be decided by him or someone else, and not by me—but it is leading this country into what I consider a dangerous state of mind—mistrust, distrust, downgrading the military, and downgrading the Senators who have responsibility for our defense and who are falsely charged with being "dominated by the military."

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

Mr. STENNIS. Please let me finish with just a few more words.

I give everyone credit for good faith, and I think everyone wants to do what he thinks then is best for the country. But I warn you, we can slip back mighty fast just because we are displeased with a few things. I am displeased with many things. We all wish we could stop the war in Vietnam, for one thing. I am displeased with some contracts for military supplies and material that have been entered into. Incidentally, those contracts came directly out of the brains of the civilian authorities in the Pentagon. We will get into that later.

But I told the military, "You do have some responsibility in the field of spending." When General Ryan, now the Chief of the Air Force, was before us for confirmation, I said, 'General it is not your primary responsibility, but in the nature of things, you do have responsibilities for the expenditures of this money. In part you are responsible in the military area, and I think you ought to train more and more men in the field of management and related fields, so that as you bring them through the categories of promotion, you will have more responsible men. I know you have some who are outstanding, but not enough." He agreed with me heartily. I am going to write the other Chiefs and make the same point. I think it is part of our duty. But if we scuttle this whole thing, if we cut the bone and the muscle here by making too many unwise reductions, acting in the dark, we will rue the day.

I favor reducing military manpower as soon as the shooting stops at least to the level it was before the war started. I am not settling on that as the final figure. But, by a quick calculation, in that category alone there is a minimum of $10 billion a year in savings. There are other savings we can make.

I want the military and the civilian part of the department to do a better job in getting a dollar's worth for every single dollar they spend. But I tell you, we will never do that by settling for second rate weapons. We will never do that by giving the doughboy we send to the front an old tank. We will never do that by sending our aviators, whether they be in the Navy, Air Force, or other service, in a plane not as good as the one he is up against. And so on down the line.

I speak with all deference to everyone, but I tell you, right now we are getting off into the wrong attitude. We are getting off into an attitude of knock down, drag out, regardless of consequences, that can leave this Nation—not immediately, but within a few years—unprepared to defend its own people.

Let us get a balanced program of weapons together. Let us reexamine our foreign policy, and if we want to change it, let competent Senators come in here with a definite resommendation on their resolution, on their report, on their testimony, and on the recommendation of the President of the United States. I will be found somewhere, perhaps not up front but somewhere up near the front, plugging in a proper way for some reasonable modification.

But there are points beside honor involved, in turning our backs upon our commitments. There is involved, for example, the safety and perhaps the survival of the American people.

So, Mr. President, while I welcome debate on any phase of this bill to any reasonable extent, I will approach it in the way that I have outlined; and frankly, I was talking more to the people of the United States than to anyone else in these last few minutes.

Several Senators addressed the Chair.

Mr. STENNIS. I believe the Senator from North Carolina had risen first, if he wishes me to yield.

Mr. ERVIN. Mr. President, I ask the Senator from Mississippi if he does not think that it is a fitting time for us to meditate seriously upon this little verse:

God and the soldier we adore
On the brink of ruin, not before;
When danger's past, and all things righted,
God is forgotten and the soldier slighted.

Mr. STENNIS. I thank the Senator.

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

Mr. STENNIS. I am happy to yield to the Senator from Arkansas.

Mr. FULBRIGHT. I certainly have great sympathy with the position of the Senator from Mississippi. He is, I think, one of the most conscientious and dedicated Members of this body, and not just in his position as chairman of the Committee on Armed Services. He has served with equal distinction as chairman of other committees, and has performed some very difficult functions.

I do not quarrel at all, certainly, with his motives or what he is saying. But I should like to comment in this sense: He says he is interested primarily in a balanced program. I take it he meant balanced within the Military Establishment. I think I, and those of my colleagues who share some of my views, are interested in a balanced program also, but we feel that the balance should be between the military program and the other programs of this Government.

Mr. STENNIS. If the Senator will excuse me a moment, I have an urgent matter.

Very well.

Mr. FULBRIGHT. As a result of a series of crises and wars, for which the Senator from Mississippi, of course, is not to blame, there has developed an imbalance, not within the military so much, but between the military and other programs of our Government. This entire debate is about how to correct that imbalance.

To ask the Senate to accept the proposals of the Pentagon without thorough debate and examination, it seems to me,

to have the Senate simply to abdicate its real function. On many of these matters there have been hearings, as the Senator mentioned. There have been some extremely interesting hearings in the Committee on Foreign Relations, also, and in the Joint Economic Committee headed by the Senator from Wisconsin (Mr. PROXMIRE).

Some of the witnesses before that committee, such as Mr. Fitzgerald and others, are certainly qualified, and as good as we have in this Government. They are right out of the Pentagon itself. Some have suffered personally because of their daring to do their duty, in my opinion, as citizens.

The difference in view on this problem arises because I think that, as Senators, we should balance the military with other governmental programs. I submit that when you calculate the amount of money devoted to the Military Establishment since World War II—well over a $1,000 billion—against other activities important to the country, such as education and the development of our natural resources, I think our system of priorities is out of balance. That, as I said, is really what this debate is about.

The Senator has mentioned rivalry among the services. That is not news. We know about that, and I do not complain about it. But it is our duty to correct some of the results of such rivalry.

We have been told, and I think there is a degree of truth in it, that when we give, we will say, a big program, to the Army and the Air Force. About all that can be done to balance things out is give the Navy more aircraft carriers. That way they will receive about as much as the Air Force and the Army; and therefore, to retain a kind of balance. So we continue to build aircraft carriers when they are obsolete. No other country in the world builds them.

That in itself raises a serious question: Why, if aircraft carriers are really useful and not obsolete, is not Russia, or China, or Germany, or somebody, out trying to build aircraft carriers? It is rather odd that we should be the only ones to put so much faith in this kind of machine. Carriers are extraordinarily costly. The Senator from Missouri (Mr. SYMINGTON) is a better spokesman than I on this subject, but I recognize that, as a member of the Committee on Armed Services, he is a little bit embarrassed to take issue with his colleagues. I would be, too. I am always a little bit embarrassed to take issue with my colleagues on a committee, with whom I have shared many hearings; but the Senator from Missouri has said much about this subject on many occasions.

It is, I submit, the balance of all over national programs that should concern us. I do not for a moment suggest that the Senator from Mississippi is a spendthrift. We are not saying that he is extravagant at all.

Mr. STENNIS. Mr. President, if the Senator will yield to me, I do not have to wait until he or anyone else accuses me of something. I simply call attention to my record. I do not have to wait for the Senator or anyone else.

Mr. FULBRIGHT. Of course, I think there are some members of congressional committees who, in the past, have shown a disposition—and it is not the Senator from Mississippi to whom I refer—to urge upon the Pentagon increased appropriations, even over what was requested.

Coming to the question of the military-industrial complex, the Senator says it is a slander that anyone should mention it. I have mentioned it, but I certainly, in most of my formal speeches on the subject, have made it very clear that the people in the Pentagon, by and large, do not deserve that kind of criticism, nor that it should be regarded as a slander. I regard the criticism, if warranted anywhere, as warranted against Congress; and I should share in it, in that, for 25 years, I have never before seriously engaged in an effort to cut or change, in any substantial way, the budget requests of the military establishment; nor has anyone else to speak of.

This is simply the first effort to restore balance to the system. It is not a slander upon the military. Nobody is slandering the military. If there is any criticism at all, I think it is primarily due to Congress' failure for too long to expose to debate and serious examination these programs.

I do not believe the Senator from Mississippi could say that we have really seriously examined these programs in the past. Not even the Bureau of the Budget has done so. I asked Mr. Schultze, who was then Director of the Budget, in open hearing, about the research programs in the Pentagon. He said frankly that they did not go into them; they just accepted the Pentagon's views.

We have on record a statement of Mr. McNamara that he made, I think before the Committee on Armed Services, that in not one instance while he was Secretary of Defense, where there was a difference of view between the Bureau of the Budget and the Pentagon, was the Pentagon ever overruled. He always prevailed.

This, again, is most unusual, and at least partly the fault of Congress, because nobody bothered to challenge it.

Therefore, I do not believe the Senator has a legitimate complaint about the way in which he or the Military Establishment has been treated. After all, they have $80 billion available in round figures. And to say that our Military Establishment is obsolete and that our servicemen do not have good rifles and good airplanes, is, it seems to me, a gross reflection upon the efficiency of American industry. The money has certainly been spent in large amounts for that purpose.

The Senator is saying that we have given the money but that we do not know how to produce a good airplane. It has not been for the lack of money that we do not have a good plane. If we do not have one. I have been under the impression that we do have good planes and good rifles. I have been under the impression that we do have good ships and other equipment. Never once have I shared the idea or said that our people are not properly equipped.

We have spent and are spending, as the Senator knows, from the best estimates of our intelligence community, substantially more than the Russians have spent. And they are the ones we seem to be so concerned about.

When the Senator says that we are cutting in the dark and slashing and cutting without knowing what we are doing, he is making a statement that I do not subscribe to.

I think we know a good deal about the normal programs. Many good hearings have been held. We have heard from knowledgeable people.

In addition, on occasions when we have requested information from the Defense Establishment, we have been met with the statement that it was classified or too sensitive. They would not furnish it.

So, to the degree that we are operating in the dark, I submit that it is not the fault of the Senate committees. It is the fault of the establishment itself in refusing to make available what I believe to be appropriate and relevant documents and information.

I do not really believe the Senator has a legitimate quarrel about the debate and about the proposals to try to bring about what I would call a better balance between the Military Establishment and the rest of the Government of the United States.

Mr. PROXMIRE. Mr. President, will the Senator yield briefly?

Mr. STENNIS. I will yield later. I believe the Senator from California had requested that I yield to him. I yield to the Senator from California.

The PRESIDING OFFICER. The Senator from California is recognized.

Mr. MURPHY. Mr. President, relative to the Armed Services Committee, I must say that my experience this year has been a great revelation. I suggest that the matter of balance of expenditures certainly must have been because of the necessity created by world conditions.

If we did not have some of the world problems that exist today, we would not have the problem of making high expenditures in order to achieve the balance that the distinguished chairman of the Armed Services Committee has spoken of.

I think probably that, looking at the past and finding where the fault lies, certainly when we have called on the military, wherever they have been permitted to do so, they have done their job very well insofar as I recall history back beginning with World War I.

However, very often where we have looked at the action of the Political Establishment in international affairs and their record, in my humble opinion, has not been quite as good.

Therefore, I point out that the problems which have been created have caused this difficulty in achieving the balance about which the distinguished chairman talks.

Referring to the remarks of the distinguished Senator from Arkansas concerning the statement that we do not have good planes, my experience is that we do not now have them. We have been very neglectful in certain categories. Our planes are good but old. We have not kept up with our potential aggressors and enemies.

We do have a good rifle. However, strangely enough, for some reason, we have only one manufacturer. We have heard about the deficiencies of the South Vietnamese. However, we find that when they had a good rifle, they are pretty good soldiers. They are brave. They are eager to defend their country.

So, I think that the distinguished chairman of the Armed Services Committee makes an excellent point. While there are many other areas that need our attention in this country, they have not been neglected.

I have had the great privilege of serving on the Labor and Public Welfare Committee and on the Education Subcommittee. There has not been any great neglect. However, we could do more.

I join with the distinguished Senator from Arkansas in hoping for the day when this sort of balance has been achieved and we can proceed on all matters in progress, peace, and prosperity not only in our country but also around the world.

At the present time, I am afraid that we must be realistic.

I am afraid that we cannot achieve all of the theory on these programs. We have to accept the situation as it exists today. We have many plans for research and development. We have very little hardware.

We have to rebuild and reestablish our military in order to carry out our commitments and, hopefully, as the result of the strategic arms limitation meetings that are about to take place, we can look for a day when we can deescalate the expenditures on the military side and increase them on the other side.

My colleagues know that I come from a State where a great deal of these procurement funds will be spent. I have had no pressure, no calls, and no suggestions from the so-called highly publicized military-industrial complex which used to be called the military-industrial-scientific complex. There has been no pressure on me.

My decisions in the committee have been based on the information brought out in the hearings and as a result of the questioning of experts, both military and nonmilitary and the studying and reading I have done over years past in order hopefully to equip myself properly for my present position.

I associate myself with the remarks of the distinguished chairman of the committee, the Senator from Mississippi, and say that he hopes, as we all do, that this balance will be much easier to establish once we get world conditions in balance the way they should be.

Mr. STENNIS. Mr. President, I thank the Senator for his remarks.

I point out to the Senator from Arkansas that my remarks and my plea is for this balance in conventional forces within the military. However, if he will bring in some more balance on our commitments in a bill or a resolution, with a report and other usual documents behind the measure, things that ordinarily go with it, he and I will be found to be closer together. My point is that, until we do that, we cannot simply turn our backs on the commitments we have made.

Mr. FULBRIGHT. Mr. President, we are in the process of trying to do that right now in reexamining our commitments. We have a staff working on it and we think we are making some progress.

I hope the Senator does not think we are not doing our best to do exactly that. In the meantime, other matters come up and require our attention.

I am not being critical of the Senator from Mississippi. He is doing his job as is the military, I think. I think in all honesty that I and the other Members of the Senate have failed to do what we should have been doing for 10 or 15 years in being a little more attentive to this kind of program. We have allowed our priorities to get out of balance.

Does the Senator from Mississippi agree that we have inferior planes and that our planes are not as good as the aircraft of other countries?

Mr. STENNIS. I do not agree. I hope the very opposite is true. However, if we do not build new planes, new types of planes—and we have to make the decision 4 or 5 years in advance—we could find ourselves second rate. We may have already slept too long with reference to other weapons.

Mr. FULBRIGHT. We heard the statement of a Senator from a State in which more planes are built than in any other State, to the effect that we have inferior planes.

I never believed that to be true. I had not heard that at all.

We have some that are inferior in some fields. However, our best planes are as good as the best planes of any other country today.

Mr. STENNIS. I do not know that that is true right now. However, we have provision for some contained in the bill. They are moving along and will be the best.

I have referred to our many commitments to other countries—commitments which require us to defend them.

I mentioned Japan. There is a hard one. Take that one on and get it modified, if the Senator believes it should be modified, and bring us something definite on that problem if the Senator wants to. I believe that we can consider some other matters here in that immediate field.

Mr. FULBRIGHT. I think there is a great deal of merit in what the Senator is saying, and that is what we are trying to do. We recently had the case of the Spanish bases, and we tried to modify it. We did get it modified—not as much as I would like, but we modified it substantially.

Mr. STENNIS. I thank the Senator.

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

Mr. STENNIS. I yield to the Senator from Wisconsin. I do not mean to try to retain the floor.

Mr. PROXMIRE. I will be brief.

I say to the distinguished Senator from Mississippi that so far as cutting in the dark is concerned, I think that this year, for the first time in many years—certainly, in the years I have been in the Senate—we are acting with far more information and understanding than ever before, for a number of reasons.

First, the Senator from Mississippi has done an excellent job in his committee and in his hearings. I have had a chance to go over the hearings, and I think he and his committee not only have asked the right questions but also have organized unsually well. As I understand it, the Senator has delegated to some of the members of the committee a great deal of authority, and they have investigated thoroughly and have come up with some extremely useful information.

In addition—and I think this is most unusual—this year a number of Senators—I am not one of them—organized a group called Peace Through Law, and they secured outside professional advice on a number of weapons systems.

If the Senator from Mississippi has had a chance to review the report—I think the Senator from Oregon (Mr. HATFIELD) is one of the principal movers in this area—I believe he will be impressed not only by the professionalism involved but also by the moderation of their recommendations. They did not propose to cut deeply, but they did propose to make some moderate, thoughtful cuts that were well documented.

I understand that the Senator from Oregon will speak on this matter a little later. I hope he speaks soon, because the Senate should be aware of the very comprehensive, painstaking, and thorough examination which has been made of this budget.

Also, the Joint Economic Committee held hearings last November, January, and June, in which we examined in considerable detail, on the public record, the military budget. We had some experts on these weapons appear before us. We have developed some substantial information.

So I think this debate will not be cutting in the dark and it will not be irresponsible from the standpoint of those who are offering amendments to reduce the military budget. I agree with the Senator from Mississippi that we must have a strong military force—strong Army, Navy, and Air Force—and we must be secure. I think our amendments are going to be in the area of trying to achieve this. If there is a difference of opinion, it is simply a difference of judgment as to precisely what is needed from a technical standpoint, not a difference in terms of value in judgment. We must have a secure armed force, for our military people certainly are serving this country very well.

Mr. STENNIS. I thank the Senator very much for his remarks. I think he has done some excellent work.

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

Mr. STENNIS. I yield.

Mr. MILLER. Mr. President, I am pleased that the Senator from Wisconsin is present, because he has a great amount of knowledge about the economic aspects of this matter.

The statement has been made by the Senator from Arkansas that we should have a balance in the broader sense of the term rather than a balance with re-

spect to conventional and strategic forces. I think both points of view are proper. We should have a perspective in both senses.

But I think the danger is that by talking about a balance in the broad sense, much has been said about the military being out of balance. I believe the Senator from Arkansas implied that when he pointed out all the other commitments we have in our own domestic responsibilities.

I have been trying to make the point to my colleagues—and this is the third time—that one way of looking at a balance is to look at our gross national product. I believe that economists generally take a look at a nation's gross national product as an indication of its capabilities to meet various commitments. While I recognize that a $78 billion national defense budget sounds like a great amount of money, I think it should be put in the perspective of what our gross national product is.

I have pointed out that for fiscal year 1970, the $78 billion defense budget will comprise approximately 8.1 percent of our gross national product, and that is no larger than it was for fiscal 1969. I thought we should go back in 5-year periods for 15 years to see how it looks. If one goes back to fiscal 1964, fiscal 1959, and fiscal 1954, he will find that the proposed defense budget for fiscal 1970 is less in percentage of our gross national product than 3 of those periods and equal in one.

So I find myself a little unenthusiastic about all this talk about balance when I take a look at our ability, which is reflected in the gross national product.

One other thought on this matter is that if you take from the $78 billion national defense budget $28 billion for the cost of the war in Vietnam, you get down to $50 billion, which we might say represents what could be a normal national defense commitment. The war is an abnormal situation. That would put us down to 5 percent of our gross national product.

I invite the attention of Senators to this fact: Even though the 8.1 percent of our gross national product is what our national defense will come to for fiscal 1970, that includes $28 billion for the war. When you go back to 1964, there is practically *nothing* for the war; there was nothing for a war in 1959; and there was nothing for a war in 1954. Yet, the percentage of the gross national product devoted to military was greater than the percentage we are going to have for fiscal 1970.

My point is simply this: Before we start talking too much and too enthusiastically about a balance, let us put things in perspective. If we put things in perspective, then I think we might be able to do a better job.

I thank the Senator for yielding.

Mr. STENNIS. I thank the Senator.

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

Mr. STENNIS. I yield.

Mr. ELLENDER. Mr. President, there is no one in the Senate for whom I have higher respect than the distinguished Senator from Mississippi. I know that he is doing a good job as chairman of the Committee on Armed Services. He is very conscientious.

Mr. STENNIS. I wish I could be as good a Senator and as effective a Senator as the Senator from Louisiana.

Mr. ELLENDER. I have been trying for the past 12 years to get most of our troops removed from Western Europe. We have had between four and one-half and six divisions there for 20 years. The main reason why they were sent there, as I understand it, was to help contain the Soviet Union, and to reassure our NATO allies that they would be protected by U.S. forces.

We built huge airfields in Japan, Okinawa, the Philippines, and all over Africa to isolate Russia, and in the process we actually have been sustaining all of Western Europe militarily. We have also constructed many harbors and other military installations. But, somehow, we seem to be unable to get the countries of Western Europe to assist us in our efforts. They do not seem to sense the danger as our military advisers see it, and that should give us something to think about.

The Senator stated that we are in South Korea. We have been there virtually alone for many, many years. And this is supposedly a United Nations undertaking.

It is not totally a U.S. action, as the Senator knows but we have been carrying most of the burden. It seems that the executive department is unable to obtain help or any kind of assistance from the other members of the United Nations. We have been carrying that load alone, as I have stated, at a very substantial cost to our taxpayers.

Now as to Western Europe, it seems to me that it is up to the Chief Executive and perhaps Congress to try to get assistance from our erstwhile allies or withdraw most of our manpower from that area. We have been in Western Europe now for 20 years, as I said. It has been costing the taxpayers of this Nation over $2 billion a year to sustain the five and one-half divisions stationed there. Together with their families that are and have been in that area for the past 15 years, the total of roughly 600,000 Americans.

I cannot understand why we should not obtain assistance. The Senator is on the Subcommittee on Appropriations for the Armed Services. He knows that I have tried every time a new Secretary of Defense was named—beginning with Mr. McElroy and then Mr. Wilson, and their successors—to get help from Western Europe. All I could obtain was, "We will try." Try—that is all they have done and with no results.

From the start the countries of Western Europe were not carrying their just load as they promised to do. On a visit there in 1960, between the Republican and Democratic National Conventions, I found that our so-called allies had no divisions that were ready for action. In Germany, Belgium, and other countries, there were more or less paper divisions. If the Russians had struck in 1960, there would have been only five and a half divisions from our country ready to go, and one brigade from Canada. As I have stated, the rest of them were paper divisions and it would have required months to bring them to our standards.

Why that situation was permitted to continue I cannot say, but somebody was not on the job. When I visited SHAEF in 1960, even our military people there stated to me that our allies were well prepared and ready to go, but after an investigation I found that they were mere paper divisions, particularly in Germany.

Now, to come to our local situation, I have voted every dollar requested by the Defense Department to maintain our defenses. Five or six years ago it was my feeling that since we were living in a missile age, we should spend much of our time and money in developing more and better missiles. It was obvious to me that if a war were to occur between us and Russia, it would be a war in which nuclear missiles would be used, and not conventional weapons.

I stated at the time that it was my feeling and my belief that our country could not afford to carry on both a missile-age program and a conventional war program. It would be simply impossible; it would be too costly. But my advice was not heeded, and we are making efforts now to carry on preparation for both a missile-age war and a conventional warfare program. I see no reason why we should do that if the people from Western Europe, who are now able to assist us, do not join in helping us. It is my belief that as long as the U.S. Government permits the French, Germans, Belgians, Danes, and the British to lay their heads on Uncle Sam's shoulder and to carry them along, they will not do anything to help us out.

Mr. President, it strikes me that every effort should be made by the present administration to obtain assistance, real assistance, from the governments of Western Europe; and, if they do not agree, we should get out of Western Europe. That is what I advocate and that is what I have been proposing for at least 10 years, with little or no success. They seem not to see any danger and our military people take the position that Europe should be protected. I cannot agree.

I am not going to try to debate now the many mistakes made by our policy planners or by the managers of the Pentagon's research and development program. However, as the Senator from Mississippi knows, it has been my belief for a long time that we have been providing too large a reservoir of research money for the Pentagon, and the planners have fallen over themselves to find ways to spend the available funds. I think this year the Defense was allowed over $8 billion by the Bureau of the Budget. Is that correct?

Mr. STENNIS. The exact figure was $8.2 billion.

Mr. ELLENDER. And it was cut back by how much?

Mr. STENNIS. About $1 billion in all.

Mr. ELLENDER. As I figure it, there is over $7 billion in the bill before us.

Mr. STENNIS. It is $7.179 billion.

Mr. ELLENDER. As long as we have that much money for the Pentagon to

do research, ways will be found to spend it. I am very hopeful that during this session we will be able to cut back on some of these research funds. Today we are budgeting almost $17 billion for research funds in all departments of Government. I cannot help but feel there is much waste. Such a huge sum cannot be frugally administered.

My good friend from Arkansas (Mr. McCLELLAN) is familiar with all the billions of dollars that we have spent for the F–111, but we still have funds in the pending bill for further research and building more prototypes and some planes for our Air Force.

Mr. McCLELLAN. Will the Senator yield at that point?

Mr. ELLENDER. I shall yield in a moment. Also, we were presented with a large sum to continue the MOL—the Manned Orbital Laboratory. It was only after a good deal of coaxing that research for the MOL was discontinued. The Air Force is not spending any more money in that direction. Over $1 billion was spent through the Air Force before the project was halted.

In a related area, I am chairman of the subcommittee which goes over the funds requested by the Atomic Energy Commission. For years, we have been working on a small atomic engine for the space program. We have already spent $1,200,000,000 on this engine and up to now we have not satisfactorily constructed a prototype. I asked how long it would take to complete the engine, and I was told 7 more years would be needed and that the cost would be about $1,100-000,000 more. So we will be spending well over $2 billion in order to perfect this machine. Yet at the same time, I am proposing a small amount in that very same bill to continue our public works programs, to fight air pollution and water pollution and, somehow, I have been unable to get amounts budgeted for those worthy projects.

I am for a balanced military program, for our own immediate protection, but not for one to protect the whole world. Most of the millions of dollars we have spent on the military assistance advisory groups and other missions throughout the world have not been well spent. They have brought us more grief and trouble than anything else, in my opinion. They have served to keep the pot boiling, and have helped create fear and suspicion among nations which should be good friends and neighbors. They have helped get us into arguments where we had no good reason to be, and no real American interest to protect.

So far as I am concerned, I should like to see every American soldier now in Europe come back, and let the Europeans do more to protect themselves. They are well able to take care of themselves by this time.

Mr. McCLELLAN. The Senator from Louisiana mentioned a while ago as one illustration the F–111 airplane. In all fairness, I am not absolving the military from all the blame in connection with that airplane, but I think the record should be kept straight that the military, from the very beginning, disapproved of that airplane, and from the beginning, the military people warned that the commonality of the concept would not work, that the two planes would not be able to perform the missions for which they were designed. Thus, I simply want to keep the record straight that the primary mistake and responsibility, and then the compounding of that mistake, lies primarily with the civilian head of the Department of Defense and not with the military who repeatedly tried to get that concept modified and the plane redesigned so as to make it work.

I am not absolving the military from all the blame but this is one instance where there was a great overrun of the costs, where the Secretary of Defense said he was taking the figures out of his head and overruled everyone else. Thus, we cannot blame the military and the experts in the military field when they try to counsel, and their counsel is overruled in that fashion. I want to keep the record straight. I am sure the military have made many blunders, but the Senator mentioned that one plane, and I have some knowledge about that.

Mr. ELLENDER. I have named no one.

Mr. McCLELLAN. I did. I named someone.

Mr. ELLENDER. I did not. I was talking about the Defense Department generally. I know that there was quite a difference of opinion between the Navy and the Air Force regarding the F–111 and that the Navy took the position that they should have their own plane.

Mr. McCLELLAN. The result was they did not get any plane. If they had gotten what was given to them, they would not have had a weapon.

Mr. ELLENDER. The point is that the Department of Defense, in that area, spent about $2.5 billion. Is that not correct?

Mr. McCLELLAN. They spent nearly $5 billion.

Mr. ELLENDER. Very well. That makes it worse; $5 billion and they have no planes at present.

Mr. McCLELLAN. They will be getting 400 planes, instead of the 1700 originally ordered.

Mr. ELLENDER. As I said, I named no one. I was speaking of the Department of Defense generally. I am certain Mr. McNamara did not move alone.

Mr. McCLELLAN. He overruled all the military.

Mr. ELLENDER. Perhaps.

Mr. McCLELLAN. That is an undisputed fact.

Mr. ELLENDER. The point I was trying to emphasize most is that we have made many promises to assist everyone in the world. That has been the effect of the MAAG's I referred to earlier. That is some of the programs I have been trying to emphasize. That is why we have spent so many billions of dollars to help people who did not do enough to try and help themselves.

Mr. McCLELLAN. Let me say to the distinguished Senator from Louisiana that I wanted to keep the record straight with respect to the TFX airplane.

Now I want to say to the Senator that I am in complete agreement with him about Western Europe. We have supported them all these years, providing defense for them, and I think it is high time they began to provide their own. I agree completely with the Senator from Louisiana about that. When we talk about bringing our troops home, the Western European countries should take up some of the burden of defending the free world.

Mr. COOPER. Mr. President, will the Senator from Mississippi yield?

Mr. STENNIS. I yield.

Mr. COOPER. Mr. President, I have listened with a good deal of interest to the statement of the Senator from Mississippi and the remarks which have been made in response. We appreciate his sincerity and the great amount of work he has performed on the bill before us. For myself, I do not find any fault in his concept of balance.

While the amendment which was offered by the Senator from Michigan (Mr. HART) and myself took a good deal of time, I do not think it has been wasted. It has directed the attention of the Senate, the Congress, and the people to the defense budget, and naturally the debate led into the larger questions of security and the means of attaining security.

I have not been one who has criticized the military. I have always recognized that our military leaders have a particular responsibility, a responsibility to plan and recommend those programs which they believe are necessary for the security of the country. The security of this country is not limited only by its physical protection but, in my view, it comprehends protecting its institutions and our free system of Government.

Anyone who has been in the military service, whether in a squad, platoon, company, or regiment, knows that every commander of a unit seeks all the materiel and arms he can to meet any contingency. I have no doubt that this responsibility enters into the thinking and concern of military leaders. But to secure balance, there are several things to be considered.

One consideration is the resources of our country and this demands the amount be allocated for effective and reasonable purposes. As the Senator from Louisiana pointed out a second consideration involves the use of our resources in assistance and defense of other countries, any inquiry as to the efforts they are willing to make. I remember when the Senator from Mississippi and I attended the NATO assembly meeting, after the invasion of Czechoslovakia.

Then, the representatives of other countries, were concerned, and the meeting reflected great interest in the defense of Europe. It was my duty to file a report, and on examination, and as a result of comments from military leaders, I at least, came to the conclusion that if there had been any balance between the NATO forces and the Soviet forces, the balance had been upset by the invasion of Czechoslovakia. Yet since that time, our NATO allies, no matter how much they are appealed to, have not increased their contributions necessary for the adequate defense of their own countries.

I had attempted to secure from the Department of Defense the cost of our total contribution to the security of

Western Europe. I secured information from the Department of Defense, which I placed in my report. The total cost, not merely the cost of the troops in Europe, but the cost of the 6th fleet weapons, and backup costs, was $12 billion annually. This fact demands help from the other countries.

As Senators have said, we must relate our defense needs to our foreign policy commitments. What a good many of us have tried to do is to insist that the executive branch be very careful about commitments. We do not want it to be taken for granted that a commitment exists to send troops to another country, to engage in war, or to put our troops on foreign soil in a position where we could back into a war—which we have done in Vietnam—unless a joint authority is given by the Executive and by the Congress of the United States.

We ought to establish what our commitments are, and their relationship to the security of this country. Otherwise, we may be engaged in military spending, and wars in areas throughout the world.

We should try to find agreement with the Soviet Union upon the control of nuclear arms. We hope that progress can be made. Agreements could reduce materially the demand for spending, and even more important, reduce the chance of nuclear war.

Now I would like to make a suggestion.

Mr. STENNIS. I will consider a suggestion from the Senator from Kentucky at any time.

Mr. COOPER. We have a bill before us involving about $20 billion. It involves expenditures for all of the branches of the armed services, and it includes many items with which those of us who do not serve on the Armed Services Committee are not familiar.

For a year I have found how difficult it is to learn about one issue—anti-ballistic-missile systems. I believe it would be very helpful if the Senator from Mississippi would go through the bill, explain the provisions of the bill, the need and relationship of the weapons systems, which are very difficult for all of us, and explain the reasons supporting the various provisions and their funding. Give us your views of the balance of the bill of which the Senator spoke so well.

Mr. STENNIS. I thank the Senator very much. I know there is a need in that field or the Senator would not have brought it up. I will do my best to fulfill that need, to some degree. I will have to arrange a time.

Mr. President, I do not want to hold the floor any longer. I yield the floor.

Mr. McCLELLAN obtained the floor.

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

Mr. McCLELLAN. I yield to the Senator from Arizona, without losing my right to the floor.

Mr. GOLDWATER. I thank the Senator from Arkansas for yielding.

Mr. President, this morning, under controlled conditions, the senior Senator from Kansas (Mr. PEARSON) addressed himself to the military-industrial complex. Having forgotten that it was under controlled conditions, I tried to question the Senator at the finish of his speech, but the Chair, properly, silenced me. However, before I was seated, I stated I thought the Senator had made a good speech, but I did not agree with it. I should like to correct what I think may be a wrong impression.

I think the Senator made a fine speech, in which he recommended to the American people that they realize that we have a military-industrial complex, and we should be proud and glad we have it, and he made some very interesting suggestions.

When I said I disagreed with it, it was only as to a point or two in his thinking.

His use of the famous quotation by General Eisenhower in his farewell speech on the military-industrial complex was put in the RECORD without what I think is an equally important part, in which President Eisenhower said:

> We now stand 10 years past the midpoint of a century that has witnessed four major wars among great nations. Three of these involved our own country. Despite these holocausts America is today the strongest, the most influential and most productive nation in the world. Understandably proud of this preeminence, we yet realize that America's leadership and prestige depend, not merely upon our unmatched material progress, riches, and military strength, but on how we use our power in the interests of world peace and human betterment.

I merely wanted to get that point in the RECORD, together with one other that the Senator made. I have discussed this matter with him, and I recognize why he made it. If I did not serve on the Armed Services Committee, I would feel myself somewhat in agreement with him. He comments in one sentence:

> But nowhere is this weakness more glaring than in defense matters.

I take personal offense at that, because I have served on committees of the Senate for many, many years, and I have never served on a committee that is so thorough and so constant in its investigations as is the Armed Services Committee, under the chairmanship of the Senator from Mississippi (Mr. STENNIS).

The Senator went further, and this is one other point I disagreed with, but it does not mean I disagree with the entire speech at all. He said:

> I submit that under the present conditions it is a simple physical impossibility for the two armed services committees and the two military subcommittees of the appropriations committees to effectively review and evaluate the policy and budgetary request of the Department of Defense.

I wanted to make a statement on my own behalf that this is not so; that I think the two committees and the two subcommittees involved do an excellent job.

I also wanted my verification on the record that the suggestion which he made to return to a Truman type of committee that we knew back in World War II is a good one, whether it means expansion of the present committees or setting up a new one.

I wanted merely to correct the record. I thank the Senator from Arkansas for yielding to me.

Mr. McCLELLAN. Mr . President, I yield to the Senator from Connecticut (Mr. RIBICOFF) without losing my right to the floor.

Mr. RIBICOFF. Mr. President, during the past several days, the Senate has been deeply concerned about waste in the defense budget. This concern has been demonstrated by the number of amendments introduced relating to the role of the General Accounting Office in auditing defense contracts.

Every Member of this body is dedicated to efficient and effective government. And so is the Committee on Government Operations.

The Committee on Government Operations is concerned about any waste, excess spending, or inefficient practices in the Federal Government, wherever they exist. In particular, it is especially concerned that the agency established and charged with monitoring Federal spending—GAO—be properly constituted and staffed for this critical task.

As was repeatedly noted during last week's debate, the Committee on Government Operations has legislative oversight over the operations and activities of the General Accounting Office. The following excerpts from Senate rule XXV makes this very clear:

> (j) (1) Committee on Government Operations . . . to which shall be referred all proposed legislation, messages, petitions, memorials and other matters relating to the following subjects:
>
> (A) Budget and accounting measures, other than appropriations.
>
> (B) Reorganizations in the executive branch of the Government.
>
> (2) Such committee shall have the duty of—
>
> (A) receiving and examining reports of the Comptroller General of the United States and of submitting such recommendations to the Senate as it deems necessary or desirable in connection with the subject matter of such reports:
>
> (B) studying the operation of Government activities at all levels with a view to determining its economy and efficiency.

Commenting on proposals to expand the concept and functions of the General Accounting Office, the able and distinguished chairman of the Senate Armed Services Committee, Senator JOHN STENNIS, placed in the RECORD of August 7, 1969, a letter he had received from Elmer B. Staats, the Comptroller General, which stated in part:

> Before legislation of this type is enacted, it would be our recommendation that the most careful consideration be given to it by the Congress. The type of reviews made by this office and the needs of the interested committees of the Congress need further development and exploration.

This assessment should begin with the committee that has statutory responsibility for the activities of the General Accounting Office.

I have been authorized by the chairman of the Committee on Government Operations, Senator JOHN MCCLELLAN, to say that the committee plans to hold hearings on the General Accounting Office to determine its capacity to meet its current—and proposed—obligations and responsibilities.

The hearings would be a general assessment of the GAO, its statutory authority, budget and staff. We would also seek to determine in what additional ways the GAO could better fulfill its obligations to the legislative branch. I would also like to note that these proposed hearings have the full endorsement and support of Senator KARL MUNDT, ranking minority member of the committee. The committee hopes to hear testimony from the Comptroller General, from interested Senators, from the Department of Defense, and others. We would welcome any bills that would assist the GAO in carrying out its responsibilities in auditing the activities of the Federal Government.

It would be my hope that the committee could then report out legislation that would be responsive to the pressing problem of monitoring, assessing and controlling—to the fullest possible extent—the massive expenditures of the Department of Defense, as well as all Federal agencies.

I thank the distinguished Senator for yielding me the opportunity to make this statement.

YOUNG PEOPLE, ORGANIZED CRIME, AND CRIMINAL JUSTICE

Mr. McCLELLAN. Mr. President, too often those of us who are concerned about the administration of criminal justice tend to analyze the problems that face us in terms of categories without seeing inner relationships. We express our concern about street crime and attempt to respond to the rape, robbery, and murder that occur in our streets. We express our concern about organized crime and attempt to respond to the depredations of criminal syndicates. It was in this context, therefore, that I found the testimony of Prof. Donald R. Cressey, of the University of California at Santa Barbara, before the House Select Committee on Crime, on August 5, all that much more enlightening. A student of Sutherland, whose "White Collar Crime" did so much to destroy the myth that poverty is a cause of crime, Professor Cressey is a nationally recognized authority in criminology, whose most recent studies have been conducted in the area of organized crime. Professor Cressey's testimony shows clearly the relationship between our Nation's failure to respond to the challenge of organized crime and the increasing violence of our inner city youth. In showing this connection, he demonstrates how essential an attack on organized crime is in any concerted effort to respond to crime in the streets.

Mr. President, I submit that a society that cannot bring to book the overlords of La Cosa Nostra is a society which cannot hold the allegiance of the young to the traditional standards of moral responsibility. I commend Professor Cressey's statement to each of my colleagues, and I ask unanimous consent that it be printed in the RECORD following my remarks.

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

ORGANIZED CRIME AND INNER-CITY YOUTH

(Testimony by Prof. Donald R. Cressey before the Select Committee on Crime, House of Representatives, Congress of the United States, August 5, 1969)

American criminals have managed to put together an organization which is at once a nationwide illicit cartel and a nationwide confederation. This organization is dedicated to amassing millions of dollars by means of extortion, and from usury, the illicit sale of lottery tickets, chances on the outcome of horse races and athletic events, narcotics, and untaxed liquor. Its presence in our society is morally reprehensible because any citizen purchasing illicit goods and services from organized criminals contributes to a culture of fraud, corruption, violence, and murder. But the real danger of organized crime arises because the tremendous profits obtained from the sale of illicit goods and services are being invested in legitimate businesses and in the political process. The game is monopoly, both the economic sphere and the political sphere.

Although organized crime touches every American, the direct victims are the citizens living in the deteriorated areas of our large cities. The economic base of organized crime's multi-billion investments in legitimate business and in politics is the precious money of the urban poor. The war on poverty has not been a smashing success at least in part because Government money poured into ghettos goes immediately from the pockets of the poor to the pockets of organized criminals. From there, the money goes to nullification of the very economic and political processes which make the war on poverty possible in the first place.

Numbers lotteries and bookmaking businesses thrive on the dollars of unskilled Negroes and other inner-city residents, not on bets placed by the rich, the educated, the well-housed, the well-employed. Similarly, the American drug addict is likely to be poorly educated and unskilled, a resident of a central-city area, and a member of a disadvantaged ethnic minority group. And it is the factory worker, the marginal businessman, and the urban welfare recipient, not the suburbanite, who frequently is so desperate for a loan that he seeks out a loanshark.

A membership group variously known as "Cosa Nostra," "The Mafia," and "The Syndicate" is the core of the organized crime group that is feeding on the urban poor. The structure and operations of this organization need not be described here. They were sketched out by the McClellan Committee in 1963 [1] and by the President's Commission on Law Enforcement and Administration of Justice in 1967.[2] Three recent books, including my own, fill in some of the details.[3]

Cosa Nostra is a membership organization. About 5,000 men who have been admitted to membership now view themselves as members and take special cognizance of other members. But not all the persons making a living from organized crime are members of Cosa Nostra. For example, very few of the public officials corrupted by Cosa Nostra are members. Each of the twenty-four Cosa Nostra "families" in the United States has at least one position for a "corrupter," a man whose job it is to secure immunity of "family" members from the law-enforcement process. For each "corrupter" position of this kind, there is at least one "corruptee"—the person receiving the bribe, the payoff, the contribution, or the "favor" the corrupter has to offer. While the corruptee usually is not a Cosa Nostra member, the services he performs are essential to the continuing operations of Cosa Nostra. Accordingly, he is part of organized crime even if he is excluded from membership in the core organization.

Similarly, the persons occupying the lowest levels of the division of labor constituting organized crime ordinarily are not Cosa Nostra members. These are the "street men" involved in the retailing of Cosa Nostra's illicit goods and services, such as narcotics and bet-taking. They also fill the organization's needs for personnel to provide low-level services such as driving trucks and cars, delivering messages, running errands, picking up illegal betting slips, and answering the thousands of telephones utilized by bookmakers. In the ghetto areas of large cities, much of the street work is done by Negroes. These street-level workers are employed by Cosa Nostra in much the way corruptees are employed by Cosa Nostra. That is, they may be part-time employees paid on a piece-work basis, or full-time salaried employees, or commission agents.

Commission agents are the most affluent street-level organized criminals. Some of them solicit bets for centrally located bookmakers who have title to a neighborhood. Others sell illegal lottery tickets. Still others are considered the "owners" or "bankers" of illegal numbers lotteries. These last men are likely to be called "independents" because they are not members of Cosa Nostra. But they are not independent. Each of them must give a percentage of his gross to a Cosa Nostra member for the privilege of doing business in his territory.

The street-level commission agents working in black ghettos ordinarily are black men. All of them—and especially the "independent" numbers bankers have high status in their neighborhoods. They are the "hustlers" with the ready bank roll, the Cadillac, the Omega watch, the $65 alligator shoes, and other symbols of affluence. Despite the fact that discriminatory practices prevent black commission agents from moving up into the echelons of Cosa Nostra, where the *real* money is, these organized criminals are the idols of young ghetto residents. They are men who have made it.

The National Advisory Commission on Civil Disorders noted that poverty, violence, and organized crime activities combine to produce great cynicism about the idea that success is to be achieved by legitimate means. The Commission succinctly stated what many other persons and agencies have observed:

"With the father absent and the mother working, many ghetto children spend the bulk of their time on the streets—the streets of a crime-ridden, violence-prone and poverty-stricken world. The image of success in this world is not that of the "solid citizen," the responsible husband and father, but rather that of the "hustler" who takes care of himself by exploiting others. The dope sellers and the numbers runners are the "successful" men because their earnings far outstrip those men who try to climb the economic ladder in honest ways.

"Young people in the ghetto are acutely conscious of a system which appears to offer rewards to those who illegally exploit others, and failure to those who struggle under traditional responsibilities. Under these circumstrate to the people, and especially to the 'hustle' as a way of life, disclaiming both work and marriage in favor of casual and temporary liaisons. This pattern reinforces itself from one generation to the next, creating a 'culture of poverty' and an ingrained cynicism about society and its institutions." [4]

So far as urban ghettos are concerned, Cosa Nostra is comparable to an invading army. Its troops have conquered territory and now these troops, with the assistance of the local Quislings who serve them, have made a certain peace with the residents, including law-enforcement agents. The alliances of organized criminals operating in inner-city areas contribute to more general crime and delinquency rates in three inter-

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related ways. *First,* by their opulence the persons engaged in organized crime demonstrate to the people, and especially to the young, that crime does pay. *Second,* by their very presence, organized criminals demonstrate the existence of a rich vein of corruption in political and law-enforcement organizations, making it difficult for parents and others to convince children that people get ahead in the world by good, hard, honest labor in service of family, country, man, and God. *Third,* the presence of organized crime in a neighborhood lowers the status of the people in the district, just as do conditions of squalor, with the result that anti-criminal admonitions lose their effectiveness—the people have less to lose if convicted of crime.

Attraction. If an organization is to survive, it must have an institutional process for recruiting new members and inculcating them with organizational values and ways of behaving. But the most successful recruitment processes are those which do not appear to be recruiting techniques at all. These are the process by which membership becomes highly desirable because of the rewards and benefits prospective members believe it confers on them. These, also, are the processes which enable inner-city youth to find niches in the world of crime.

Some boys grow up knowing that it is a "good thing" to be a banker, to belong to a certain club, to attend a certain university. They know these are "good things" because men they emulate have done them. Other boys—those in the central areas of our large cities—grow up knowing that it is a "good thing" to be a street-level organized criminal, to have the respect of established organized criminals, and to be given the opportunity to learn the skills and attitudes necessary to bookmaking or numbers selling. Still other slum boys grow up knowing that if they have the right qualifications and connections they might be admitted to membership in Cosa Nostra itself, thus becoming eligible for a share of the billions of dollars Cosa Nostra makes annually from the illegal bets placed with the street-level workers who are employed by Cosa Nostra.

Most slum boys grow up in social situations in which the desire for participation in organized crime comes naturally and painlessly. Raymond V. Martin, formerly Assistant Chief of Brooklyn South Detectives, has reported that in some Brooklyn neighborhoods, boys grow up under two "flags." [5] One is the flag of the United States, symbolizing middle-class institutions, tradition, and culture. The other is the flag of organized crime, symbolizing criminal society. Stated in more general terms, the principle is this: Persons growing up in some geographic and social areas have a better chance than do others to come into contact with norms and values which support legitimate activities, in contrast to criminal activities, while in other areas the reverse is true. In many areas, alternative educational processes are in operation, so that a child may be educated in either conventional or criminal means of achieving success. In inner city areas, organized criminals efficiently and effectively provide youngsters with criminalistic norms, values, and ways of behaving.

Boys growing up in areas where the "syndicate flag" is flying learn that success comes to "real men," to "stand-up guys" who violate the law with impunity. Accordingly, they train themselves in skills and attitudes which they believe will be as valuable to their success as they have been in the careers of the men they admire. A recent study by Irving Spergel suggests that these include, especially, personal values about silence, honor, and loyalty—values which make the boys controllable by the adult criminals about whom they are silent, to whom they behave honorably, and to whom they are loyal.[6]

Spergel studied juvenile delinquents in three different neighborhoods of Chicago. One of them was given the ficticious name "Racketville" because organized-crime activities flourish there. In this neighborhood, like many other American slum neighborhoods, organized criminal activities such as lotteries, bookmaking, and usury employ a sizable proportion of the population. Some delinquents were observed participating in lottery operations, primarily through family connections. For example, one boy drove his uncle's Cadillac to pick up the receipts from a numbers writer. Another boy was elated when a man he said was "big" in the numbers asked him to perform a minor errand. He said this might be a "break" for him, that this "big shot" might give him a job paying "a couple hundred dollars a week for hardly doing nothing," that he would be able to get up late in the morning, have girls, and go to night clubs.

The boys viewed minor organized-crime work assignment as opportunities to do small favors for the racketeers, thus demonstrating willingness and trustworthiness. Usurers were viewed as respectable businessmen by the boys, who emulated them. The boys themselves participated in money-lending, and during the course of the study two boys were arrested for systematic loansharking while still attending school.

Spergel concluded, however, that it is more important for an organized-crime aspirant to display evidence that he is a "stand-up guy" than to learn specific criminal skills. A "stand-up guy" shows courage and "heart." He does not whine or complain in the face of adversity, including arrest, interrogation and punishment. He has learned to rate criminals higher than noncriminals.

Racketeers placed a premium on smooth and unobtrusive operation of their employees. The undisciplined, trouble-making young "punk" was not acceptable. The primary condition for admission to the racket organization was not necessarily involvement in delinquent acts but training in attitudes and beliefs which would facilitate the smooth operation of the criminal organization. Prior development of specific skills and experiences seemed less necessary than the learning of an underlying illegitimate orientation or point of view conducive to the development of organized crime.[7]

The following transcript of a bugged conversation between a New York Cosa Nostra soldier and his captain indicates that this "underlying illegitimate orientation" is sought in neighborhoods other than Racketville. The speaker is praising the qualities of his captain's regime by telling him his members have the desired criminalistic attitudes. They are "stand-up kids." The conversation refers to an FBI investigation:

"They are telling them everything. Who's Cosa Nostra. What's the picture here. Who the bosses are. Who's the bosses? These are kids that don't know nothing. They are schooling them. They are telling them up and down the line what everything is here. They are actually exposing the whole . . . thing to innocent kids. (Inaudible.) Innocent kids. Exposing the whole thing. "He's a captain." (Inaudible.) And so forth, I said. Good. *Your kids, now, you know, are stand-up kids. . . . They are going to tell them not a word."* [8]

Spergel asked the delinquents in his study, "What is the occupation of the adult in your neighborhood whom you most want to be like ten years from now?" Racketville boys did not name bankers, or policemen, or Congressmen, or teachers, or businessmen, or skilled workers. Eight out of ten responded to the question by naming some aspect of organized crime. Similarly, Racketville delinquents believed that the most important quality in "getting ahead" is "connections," not ability, or good luck, or education.

There is an important lesson here for administrators of programs designed to encourage inner-city youth to remain in school and "get a good education" so they can contribute to their own welfare and the welfare of the nation. This message is not getting across. It does not fit the reality of daily street experiences in ghettos. By watching the part of organized crime available for them to see—the street operations—inner-city boys learn that men who take the illegitimate route to success fare better than those taking the legitimate route. The same experiences also convince them that it is who you know, not what you know, that counts. Seven out of ten of Spergel's delinquents chose education as the *least* important factor in achieving success, perhaps indicating a belief that "education" and "connections" are antithetical.

Slum boys who think this way are factually incorrect, even with reference to organized crime. The orientation sought by inner-city boys—the attitudes of the "stand-up guy" helps prepare them for street crime like burglary and robbery, and for street-level involvement in organized crime. But positions of leadership in organized crime, like positions of leadership everywhere in this day and age, increasingly require skills learned in colleges and universities, not on the streets. Moreover, being a "stand-up guy" might get a boy a position as a bookmaker or a numbers seller if he has good connections, but to become a Cosa Nostra member he must have better connections than this. And if he is to advance in Cosa Nostra he now must have the skills of a purchasing agent, an accountant, a lawyer, an executive. Spergel found, in fact, that significant upper-echelon opportunities in organized crime were not open even to the youth of Racketville. Some delinquents, he says, eventually became racketeers "without necessarily starting at the bottom." [9]

Occasionally, even honest government officials inadvertently contribute to the glory of organized criminals and, thus, to a more general illegitimate orientation among slum youth. For example, in the summer of 1966 the director of New York City's Youth Board asked two Cosa Nostra soldiers, Albert and Lawrence Gallo, to help halt racial violence in the East New York section of Brooklyn. The implication, probably correct, was that Cosa Nostra men could keep order where the police and social workers could not. But another implication, also correct, was that boys who want to be neighborhood leaders should go into organized crime. John J. Cassesse, President of the New York Patrolmen's Benevolent Association, commented that the use of the two organized criminals by city officials both sapped the morale of the police force and made "tin gods" of the organized criminals involved:

"I can just see what will happen. It's this way. When a police officer goes up to some juveniles who have been misbehaving and tells them to quiet down and move along, what will they say to him? "You're not the boss around here, Mr. Gallo is." When you single people like that out, you make them tin gods in the neighborhood—people known for their habitual lawlessness." [10]

Corruption. The problem of organized crime is clearly a problem of political corruption. The American Bar Association's report on organized crime concluded, "The largest single factor in the breakdown of law enforcement dealing with organized crime is the corruption and connivance of many public officials." [11] Similarly, at a 1967 conference of law-enforcement officials, the then Chief Justice of the United States, Earl Warren, stated that it could be taken as a "rule of thumb" that corruption is the basis of organized crime.[12] And the President's Commission on Law Enforcement and Administration of Justice made the same observation: "All available data indicate that organized crime flourishes only where it has corrupted local officials." [13]

The political objective of Cosa Nostra is

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not competition with established agencies of legitimate government. Unlike the Communist party, organized crime is not interested in political and economic reform. Its political objective is a negative one: nullification of government.

Nullification is sought on two different levels. At the lower level are the agencies for law enforcement and the administration of justice. When an organized criminal bribes a policeman, a police chief, a prosecutor, a judge, or a license administrator, he does so in an attempt to nullify the law-enforcement process. At the upper level are legislative agencies, including federal and state legislatures as well as city councils and county boards of supervisors. When an organized criminal supports a candidate for political office, he does so in an attempt to deprive honest citizens of their democratic voice, thus nullifying the democratic process.

The fact that organized criminal activities float on a swamp of corruption teaches an insidious lesson to American youth, and especially to the inner-city youth who, in order to survive, must be astute observers of the facts of life: The government is for sale; lawlessness is the road to wealth; honesty is a pitfall; morality is a trap for suckers.

Our most eloquent Evangelists and our best-trained school teachers, combined, could not teach this lesson as effectively as it is taught by the every-day experiences of central-city youth. This policeman—perhaps the one who arrested me for shoplifting or for loitering—is "on the take" from organized criminals. That doorman for a Cosa Nostra crap game is an off-duty cop. This bookmaker avoided a jail term by paying someone off. The loanshark is in a crooked partnership with someone in the mayor's office.

Alliances between organized crime and public officials permit organized crime to bilk the poor out of the quarters and dollars they hand to bet takers in the futile hope that doing so will enable them to get rich in a hurry. But, viewed in a broader sense, these alliances are even more damaging than the culture of futility and despair they create. They directly, certainly, and rapidly break down the "respect for law and order" we are begging for. How can a boy be expected to "respect authority" when his model authority figure is known to be on the payroll of criminals? How can we expect boys of the inner city to have standards of honesty, decency and morality higher than the standards they observe in their own public officials?

Contamination. The areas of high delinquency and crime in American cities are also the areas of low socio-economic status and poverty. It is not correct to conclude from this fact, however, that poverty is the direct cause of delinquency and crime. Rather, it should be concluded that in some areas of poverty lawlessness has become traditional. It is not poverty that causes ghetto youth to admire the organized criminal more than the policeman, the banker, or the preacher. It is not poverty that transmits criminal techniques, codes, and standards from older to younger offenders, and from criminals in city hall to criminals on the street. It is not poverty that teaches boys the techniques of "fixing," of intimidating witnesses, of telling plausible lies in court, or appeals to sympathy. The fact is that in the areas of poverty the values, norms, and behavior patterns most favorable to crime and delinquency are strong and constant. And the dominant purveyors of these illicit values, norms and behavior patterns are organized criminals.

Respectable residents of affluent neighborhoods can protect themselves from the direct corrupting effects of organized crime. Respectable but politically weaker inner-city residents cannot. In every community there are interests in morality, efficiency, and law enforcement. But, in every community there also are interests in immorality, political jobs and favors, and evasion of the law. The first set of interests is reflected when we pass laws and ordinances against organized crime activities. The second set becomes manifest when we argue that any policy which does not tolerate organized crime activities—despite what the law says—is bad for business, especially for the "convention business." Just as inner-city residents buy organized crime's services because they hope to "get rich quick," more affluent businessmen demand these services because they hope they will help business.

But the "respectable" persons who, in effect, argue that organized crime is not "all bad" do not want organized crime in their areas of residence or even in their business areas. Their solution is to pressure the police and other officials to insure that organized crime activities take place in neighborhoods populated by the powerless. This means that political corruption—at least the corruption of indifference—in large American cities drives organized crime into ghettos, especially black ghettos.

The Reverend Martin Luther King, Jr., was keenly aware of this fundamental principle of city management. Because the tendency to let organized crime flourish in ghettos is so pervasive, he called organized crime "permissive crime":

"Permissive crime in ghettos is the nightmare of the slum family. Permissive crime is the name for organized crime that flourishes in the ghettos—designed, directed, and cultivated by the white national crime syndicates oprcrating numbers, narcotics, and prostitution rackets freely in the protected sanctuaries of the ghettos. Because no one, including the police, cares particularly about ghetto crime, it pervades every area of life." [14]

The principle noted by Dr. King has not changed much since 1912—over a half century ago—when the Chicago chief of police warned prostitutes that so long as they confined their residence to districts west of Wabash Avenue and east of Wentworth Avenue, they would not be disturbed. At that time this area contained the largest concentration of Negroes in the city.

Neither has the principle changed much since 1922, when a Chicago Commission on Race Relations published the following statement:

"That many Negroes live near vice districts is not due to their choice, nor to low moral standards, but to three causes; (1) Negroes are unwelcome in desirable white residence localities; (2) small incomes compel them to live in the least expensive places regardless of surroundings; while premises rented for immoral purposes bring notoriously high rentals, they make the neighborhood undesirable and the rent of other living quarters there abnormally low; and (3) Negroes lack sufficient influence and power to protest effectively against the encroachments of vice." [15]

The practice of keeping vice out of affluent areas but tolerating it in less affluent areas is, together with the corruption that supports the practice, a great contributor to the traditions of delinquency and crime characterizing our inner-city areas. Because we drive organized crime into the slums, the residents of these areas—even the respectable residents—know better than do most members of the middle classes and the upper classes the details of any graft or dishonesty in their city's politics. The American culture they see is a culture of competition, corruption, deceit, graft, delinquency, crime, and immorality. They are practically nothing of the culture of cooperation, decency, beauty, and law-abidingness in which some Americans are immersed from infancy, and in which middle-class people are now telling them to participate. Thus, they come into intimate and frequent contact with a rather lawless neighborhood and the rather lawless public culture of America.

At the same time, anti-delinquency and anti-criminal influences are few in the poverty pockets of America. Ghetto dwellers are isolated from the predominantly law-abiding culture (so far as street crime is concerned) of the American middle-class population. Moreover, in inner-city areas, organized opposition to delinquency and crime is weak. Because the population is poor, mobile, and heterogeneous, it is unable to act with concert in dealing with its own problems. Schools, businesses, social work agencies, and even churches are administered by people who reside elsewhere. Accordingly, these agencies are for the most part simply formal and external appendages to the life of the neighborhood. "Society" and "community" are meaningless, except as they refer to ethnic identity, and even "neighborhood" is likely to refer to delinquent or criminal "turf" of some kind. Under such conditions the processes of arrest, conviction, and incarceration are not likely to stimulate reactions of guilt and shame in their recipients. When there is not much to lose, not much can be lost.

In our society, no one should live in poverty. But the "poverty problem" and the "delinquency problem" are not identical. In fact, many persons residing in areas of low income or poverty are not delinquents or criminals. Some persons live under the same conditions of housing and low income as do the delinquents and criminals of inner-city areas, yet do not get into serious trouble with the law. Either they are somehow isolated from behavior patterns favorable to delinquency—including those patterns inexorably accompanying organized crime activities—or they are in contact with anti-criminal influences which somehow offset those favorable to delinquency. We can reduce the incidence of inner-city delinquency by eradicating the kind of behavior pattern diffused by organized criminals. We can reduce the incidence even further by discovering and then maximizing those anti-criminal behavior patterns that somehow keep many inner-city children out of trouble, even in organized crime areas.

FOOTNOTES

[1] *Hearings Before the Permanent Subcommittee on Investigations of the Senate Committee of Governmental Operations,* 88th Congress, 1st Session, 1963.

[2] *Task Force Report: Organized Crime,* U.S. President's Commission on Law Enforcement and Administration of Justice, Washington: Government Printing Office, 1967.

[3] Peter Maas, *The Valachi Papers,* New York: Putam, 1969; Ed Reid, *The Grim Reapers,* Chicago: Regnery, 1969; Donald R. Cressey, *Theft of the Nation,* New York: Harper and Row, 1969.

[4] *Report of the National Advisory Commission on Civil Disorders,* New York: Bantam Books, 1968, P. 262.

[5] Raymond V. Martin, *Revolt in the Mafia,* New York: Duell, Sloan and Pearce, 1963.

[6] Irving Spergel, *Racketville, Slumtown, Haulburg,* Chicago: University of Chicago Press, 1964.

[7] *Ibid.,* pp. 35–36.

[8] *The Voices of Organized Crime,* an educational tape prepared by the New York State Joint Legislative Committee on Crime: Its Causes, Control and Effect on Society, 1968.

[9] *Op. cit.,* p. 31.

[10] *The New York Times,* August 15, 1966.

[11] American Bar Association, *Report on Organized Crime and Law Enforcement,* 1952, p. 16.

[12] Earl Warren, "Address," *Proceedings of the First National Conference on Crime Control,* Washington, March 28–29, 1967, pp. 7–13. At p. 9.

[13] *Task Force Report: Organized Crime, op. cit.,* p. 6.

[14] Martin Luther King, Jr., "Beyond the Los Angeles Riots: Next Stop: The North," *Saturday Review,* 48 (November 13, 1965), p. 34.

[15] Chicago Commission on Race Relations, *A Study of Race Relations and a Race Riot,* Chicago: Author, 1922, p. 343.

[16] *Ibid.,* pp. 343–344.

THE USE OF TITLE II OF THE OMNIBUS CRIME CONTROL ACT

Mr. McCLELLAN. Mr. President, for quite some time I have been concerned that the U.S. Supreme Court in a large number of untenable decisions has been seriously weakening the Government's ability to combat the growing menace of crime in the United States. While we respect and fully support our courts and their constitutional powers, I think it may be questioned whether the judicial process is the proper instrument for innovating reforms in the criminal justice system. For as the Court has moved on and on to more and more attenuated questions of fairness, the single-minded pursuit by some jurist of individual rights defined by an 18th-century ideal, but applied to a 20th-century society, is threatening to alter the nature of the criminal trial from a test of the defendant's guilt or innocence to an inquiry into the propriety of the policeman's conduct. In *Kaffman* v. *United States*, No. 50, October Term, 1968, decided March 24, 1969, Mr. Justice Black, in a dissenting opinion, said:

It is seemingly becoming more and more difficult to gain acceptance for the proposition that punishment of the guilty is desirable, other things being equal. One commentator, who attempted in vain to dissuade this Court from today's holding, thought it necessary to point out that there is a "strong public interest in convicting the guilty." Indeed the day may soon come when the ever-cautious law reviews will actually be forced to offer the timid and uncertain contention, recently suggested satirically, that "crime may be thought socially undesirable, and its control a 'valid governmental objective' to which the criminal law is 'rationally related.'"

Again, in *Foster* v. *California*, No. 47, October Term, 1968, decided April 1, 1969, Mr. Justice Black, in a dissenting opinion, commented:

It has become fashionable to talk of the Court's power to hold governmental laws and practices unconstitutional whenever this Court believes them to be "unfair," contrary to basic standards of decency, implicit in ordered liberty, or offensive to "those canons of decency and fairness which express the notions of justice of English-speaking peoples. . . ." All of these different general and indefinable words or phrases are the fruit of the same, what I consider to be poisonous, tree, namely, the doctrine that this Court has power to make its own ideas of fairness, decency, and so forth, enforceable as though they were constitutional precepts. When I consider the incontrovertible fact that our Constitution was written to limit and define the powers of the Federal Government as distinguished from the powers of States, and to divide those powers granted the United States among the separate Executive, Legislative and Judicial branches, I cannot accept the premise that our Constitution grants any powers except those specifically written into it, or absolutely necessary and proper to carry out the powers expressly granted.

Indeed, statistics dramatically portray the picture. Since 1960, the Supreme Court has reviewed 112 Federal criminal cases and 144 State criminal cases in which it handed down written opinions.

Out of 112 Federal convictions, 63—60 percent—were reversed; out of the 144 State convictions, 113—80 percent—were reversed. In that same period of time the Supreme Court heard 21 habeas corpus petitions of which 18—85 percent—were granted.

I simply cannot believe that our Federal circuit judges are so incapable and lacking in qualifications or that our State supreme courts are so incompetent and prone to error as to warrant such an overwhelming record of reversals by the Supreme Court.

Since 1960, in the criminal justice area alone, the Supreme Court has specifically overruled its previous decisions or rejected the reasoning of 25 of its own precedents—often by 5 to 4 margins. Seventeen of these decisions involved a change in constitutional doctrine, seven represented a new interpretation of statutory language, and one may be classified as modifying the common law.

There are those—some few—who mistakenly assert that these reversal decisions are having no adverse impact on law enforcement and on the rising incidence of crime. Their contention is completely repudiated by facts and statistics.

Since 1960, our population has increased 10 percent. Serious crime in that same 8-year period has increased 89 percent. It is very significant and quite revealing that, operating under the new standards and requirements imposed by recent Supreme Court decisions, police clearance—solving—of serious crime has experienced a steady, across-the-board decline. For example: The clearance for robbery has dropped 25.9 percent and for burglary 38.8 percent. Verdicts of not guilty in robbery cases have increased 23 percent and in burglary 53 percent.

This deterioration in the protection of society has caused the American people to become disillusioned and disturbed. They want these trends reversed—and rightly so. Public confidence in the Supreme Court has greatly declined. A Gallup poll last year reflected that 60 percent of the people are dissatisfied with and disapprove of the performance of the Court. A recent Harris poll found that a majority of the American people attribute the breakdown in law and order to our courts. The Court cannot rightly receive the whole blame, yet this feeling of the people is a sad commentary, indeed. It denotes a serious weakness in our people's confidence in our system of criminal jurisprudence and strongly suggests a reflection upon those who administer the system.

It was in this context, therefore, that I was gratified recently to learn that the Department of Justice has decided to reverse the policy of the previous administration and utilize title II of the Omnibus Crime Control and Safe Streets Act of 1968. This provision would restore to the evidence-gathering process those voluntary confessions which would otherwise be suppressed under the Miranda decision, 384 U.S. 436 (1966). I recognize, of course, that the utilization of title II by Federal authorities will occasion sharp criticism from those who wrongfully place the rights of criminals above the rights of law-abiding members of our society. In the last analysis, however, I am confident that the judgment of the Senate and the Congress in acting affirmatively on title II will be vindicated. Others will support this action as not only reasonable, but necessary to restore safety to our streets.

Mr. President, I ask unanimous consent that an editorial entitled "Confession," commenting on the Department of Justice position published in the Washington Evening Star of Tuesday, August 5, 1969, together with the memorandum setting out the Department of Justice provisions, be printed in the RECORD immediately following my remarks.

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

CONFESSIONS

Some of Attorney General Mitchell's critics have been giving him a hard time. To hear the critics tell it, the attorney general is trying to subvert the Supreme Court, cut the heart out of the Fifth Amendment's ban on self-incrimination, and, generally, is seeking to substitute injustice for justice in his department.

These critics, as most of them fully realize, are not telling the truth, the whole truth and nothing but the truth. Some people know this. But many do not, since memories are short and understanding often can be severely limited.

What is involved here is the Supreme Court's decision in the so-called Miranda case. One fact which most of the critics conveniently neglect to mention is that this was a 5-to-4 decision. The four dissenting justices were highly critical of the majority ruling. Another overlooked fact is that the Miranda ruling itself made "new law" in the sense that it spelled out certain warnings which must be given a criminal suspect before his confession, no matter how truthful and voluntary, could be used in evidence against him. Finally, and the critics also ignore this, it is not especially unusual for the Supreme Court to modify or overrule some of its own prior decisions. Certainly the court under Chief Justice Warren did not hesitate to do this upon occasion, and these about-faces on the part of the court tend to come as its membership changes.

For many, many years the test of the admissibility of a confession was whether it was voluntary or not. A confession obtained by improper inducements or coercion could not be used by the prosecution. If given voluntarily, however, it could be used as evidence in court, and the question as to whether it was voluntary or not generally was a matter for the trial jury and judge to decide.

Congress last year undertook to modify the Miranda ruling by providing that the warnings it called for were not mandatory. If not given, this failure could be considered at the trial as bearing upon the voluntariness of the confession but need not invalidate it. In other words, a confession in which some or all the warnings had not been given could still be admissible if the trial judge and jury nevertheless believed it was a voluntary confession.

Apparently what the attorney general intends to do is follow this congressional lead and use as evidence one or more confessions in which all of the warnings were not given. His purpose, we suppose, is to have a case in this posture which can be appealed, thereby giving the Supreme Court an opportunity to take another look at Miranda.

This would not be an exercise in futility because at least two of the justices who voted with the majority in Miranda would not be on the court when such a new case is reached for decision. And their replacements might well join with the Miranda dissenters to overrule or modify that decision.

Should this come to pass, it would not mean that the clock had been turned back to the days when men sometimes were convicted on the basis of extorted, even false, confessions. It would mean, presumably, that a legal principle of long-standing had been revived, that a confesison, if given voluntarily, could be used as evidence. To our way of thinking, this would serve the true ends of justice and would be a very desirable modification of the judge-made law as it stands today.

DEPARTMENT OF JUSTICE,
Washington, D.C., June 11, 1969.

Memo No. 584 Supplement No. 3.
To: United States Attorneys.
Subject: Title II of the Omnibus Crime Control and Safe Streets Act of 1968.

The attached memorandum sets forth the Department's position in respect to implementing Title II of the Omnibus Crime Control and Safe Streets Act of 1968 (concerning the admissibility of confessions and eye-witness testimony in federal criminal prosecutions). All cases presenting problems under *Miranda* or *Wade* should be examined in light of the arguments suggested by the memorandum. Those arguments, in brief, are as follows:

Section 3501—Under this section, the failure to give all aspects of the warnings required by *Miranda* will not necessarily require exclusion of a resulting confession; Congress has reasonably directed that an inflexible exclusionary rule be applied only where the consitutional privilege against compelled self incrimination itself has been violated, not where a particular protective safeguard has been violated without affecting the privilege itself.

Section 3502—Under this section, the positive testimony by a witness that he saw the accused commit the crime will suffice, for the purpose of admitting his identifying testimony at trial, to show that the basis of his ability to identify the accused is independent of any observation of a lineup at which the accused was not accorded the right to the presence of counsel.

In enacting Title II, Congress was, in effect, expressing its concern with the inflexible results of the *Miranda* and *Wade* decisions, and seeking to induce a judicial reexamination of the underlying bases for those holdings. The interpretation of Title II expressed in the attached memorandum attempts to avoid a direct conflict between the legislation and the constitutional requirements of *Miranda* and *Wade*, and yet to achieve the benefit to law enforcement intended by Congress. The arguments outlined, if adopted by the courts, could salvage some cases which otherwise might be lost. As emphasized in the memorandum, however, the arguments presuppose the necessity of continuing to have federal agents give the *Miranda* warnings before interrogations, and afford an opportunity for the presence of counsel at lineups, as matters of standard practice.

WILL WILSON,
Assistant Attorney General,
Criminal Division.

MEMORANDUM

SUBJECT: TITLE II OF THE OMNIBUS CRIME CONTROL AND SAFE STREETS ACT OF 1968

Title II of the Omnibus Crime Control and Safe Streets Act of 1968 (Public Law 90–351) contains provisions relating to the admissibility of confession in federal criminal prosecutions which differ from the rules regarding such admissibility as announced by the Supreme Court in *Miranda* v. *Arizona*, 384 U.S. 436, and further contains a provision relating to the admissibility of eyewitness testimony which does not expressly set forth the limitations upon such admissibility as announced by the Court in *United States* v. *Wade*, 388 U.S. 218, and *Stovall* v. *Denno*, 388 U.S. 293. This memorandum sets forth the Department's position with respect to interpreting and relying upon provisions of Title II in cases tried subsequent to June 19, 1968, the effective date of the Act.

Section 3501 and Miranda

Title II of the Act amends Title 18 of the United States Code by adding Section 3501. That section provides in pertinent part:

§ 3501. Admissibility of confessions

(a) In any criminal prosecution brought by the United States or by the District of Columbia, a confession, as defined in subsection (e) hereof, shall be admissible in evidence if it is voluntarily given. Before such confession is received in evidence, the trial judge shall, out of the presence of the jury, determine any issue as to voluntariness. If the trial judge determines that the confession was voluntarily made it shall be admitted in evidence and the trial judge shall permit the jury to hear relevant evidence on the issue of voluntariness and shall instruct the jury to give such weight to the confession as the jury feels it deserves under all the circumstances.

(b) The trial judge in determining the issue of voluntariness shall take into consideration all the circumstances surrounding the giving of the confession, including (1) the time elapsing between arrest and arraignment of the defendant making the confession, if it was made after arrest and before arraignment, (2) whether such defendant knew the nature of the offense with which he was charged or of which he was suspected at the time of making the confession, (3) whether or not such defendant was advised or knew that he was not required to make any statement and that any such statement could be used against him, (4) whether or not such defendant had been advised prior to questioning of his right to the assistance of counsel; and (5) whether or not such defendant was without the assistance of counsel when questioned and when giving such confession.

The presence or absence of any of the above-mentioned factors to be taken into consideration by the judge need not be conclusive on the issue of voluntariness of the confession.

The various factors set forth in subsection (b) do refer to the matters specified in *Miranda* as well as the prompt hearing element earlier laid down in *Mallory* v. *United States*, 354 U.S. 449, although a modification of the *Mallory* rule appears in Section 3501(c). Aside from any constitutional issues, therefore, it is impossible to predict how much weight a particular court will give to the absence of any one of the factors mentioned. For this reason, the only safe course for federal investigative agents, and for such United States Attorneys as may have occasion to talk with defendants, is to continue their present practice of giving the full *Miranda* warnings.

The area where we believe the statute can be effective and where a legitimate constitutional argument can be made is the situation where a voluntary confession is obtained after a less than perfect warning or a less than conclusive waiver, as, for example, where an agent inadvertently fails to fully explain the right to have counsel appointed for an indigent, or a written waiver is not obtained. The admissibility of the confession may be urged in an argument framed along the following lines:

In *Miranda* v. *Arizona*, 384 U.S. 439, the Supreme Court stated that confessions by persons accused of crime were "a proper element in law enforcement" and that "[a]ny statement given freely and voluntarily without any compelling influences is, of course, admissible in evidence." 384 U.S. at 478. The Court found, however, that persons in police custody are, by virtue of that custody alone, subject to a form of "compulsion inherent in custodial surroundings." *Id.*, at 458; see *id.*, 465, 467, 478. In order to dispel this inherent compulsion and thus to safeguard the individual's Fifth Amendment right "to remain silent unless he chooses to speak in the unfettered exercise of his own will" (*id.*, at 460), the Court held that accused persons must be made aware of their "right of silence" and assured a "continuous opportunity to exercise it." *Id.*, at 444; see *id.*, at 467, 479, 490.

The Court stated that it "cannot say that the Constitution necessarily requires adherence to any particular solution for the inherent compulsions of the interrogation process" (*id.*, at 467), as long as any solution devised is "effective in apprising accused persons of their right of silence and in assuring a continuous opportunity to exercise it" (*ibid.*). Various solutions, the Court noted, "might be devised by Congress or the States in the exercise of their creative rule-making capacities" (*ibid.*). However, the Court stated, until such "potential alternatives for protecting the privilege" are devised by Congress and the States (*ibid.*), a person must be warned prior to any in-custody questioning that he has a right to remain silent, that anything he says can be used against him in court, that he has a right to the presence of an attorney, and that if he cannot afford an attorney one will be appointed for him prior to any questioning (*id.*, at 444, 479). The warnings are thus "procedural safeguards." *Id.*, at 444, 478; see *id.*, at 467.

The core of the *Miranda* decision is that, in order for a statement by an accused who has been questioned in police custody to be considered free from any form of compelling influence, it must have been made with the understanding on the part of the accused that he did not have to speak at all. The specific warnings enunciated by the decision constitute a means, suggested by the Court, by which the accused's Fifth Amendment privilege may be safeguarded in the custodial situation. It was *some* "system" to safeguard against inherently compulsive circumstances which the Court found necessary under the Constitution; it did not find a *particular* system necessary. The effect of the statute, in our view, is to instruct the courts that exact compliance with *Miranda* is not the only means by which the requirements of the privilege can be said to have been met. Section 3501(b) directs district court judges to look to "all the circumstances surrounding the giving of the confession" in determining whether a breach of a protective measure resulted in an actual breach of the privilege itself. If it did not, the confession is admissible even if a particular aspect of the *Miranda* warnings was not fully complied with. Since those specific warnings are not themselves constitutional absolutes, the determination by Congress—that their absence in a *case should* not entail an inflexible imposition of the exclusionary rule—is within the power of Congress. The Court stated in *Miranda* that "[w]here rights secured by the Constitution are involved, there can be no rule making or legislation which would abrogate them." 384 U.S. at 491. Clearly the Court was referring to the privilege, not the delineated means of protecting it. In the same paragraph, the Court emphasized that "the Constitution does not require any specific code of procedures for protecting the privilege against self-incrimination during custodial interrogation." *Id.*, at 490; see *id.*, at 467.

In short, while the Court in *Miranda* tried to set forth a set of rules which would avoid the necessity of considering all the circumstances of a particular case,[1] Congress has, in effect, told the courts that it does want

[1] It was in this context that the Court characterized the expedient of giving "a warning as to the availability of the privilege" as so simple that it would not "pause

the cases considered on an individualized basis. "The rigid, mechanical exclusion of an otherwise voluntary and competent confession," the Senate Committee on the Judiciary stated, "is a very high price to pay for a 'constable's blunder.'" S. Rep. No. 1097, 90th Cong., 2d Sess. 38 (1968). The statute, however, clearly recognizes that a statement must be voluntary in the sense that it must not only be free of physical coercion, but must be made with awareness of the individual's Fifth Amendment rights; the statute does not abrogate constitutional rights. Congress has reasonably directed that an inflexible exclusionary rule be applied only where the constitutional privilege itself has been violated, but not where a protective safeguard system suggested by the Court has been violated in a particular case without affecting the privilege itself. The determination of Congress that an inflexible exclusionary rule is unnecessary is within its constitutional power.[2]

Section 3502, Wade, and Stovall

Section 3502 of Title 18 of the United States Code provides:

Admissibility in evidence of eyewitness testimony—

The testimony of a witness that he saw the accused commit or participate in the commission of the crime for which the accused is being tried shall be admissible in evidence in a criminal prosecution in any trial court ordained and established under article III of the Constitution of the United States.

1. The purpose and effect of the statute must be considered against its judicial background.

In *Stovall* v. *Denno*, 388 U.S. 293, 302, the Court held that if a district court finds, upon considering "the totality of the circumstances surrounding" a pretrial identification, that the procedure "was so unnecessarily suggestive and conducive to irreparable mistaken identification that * * * [the accused] was denied due process of law," the identifying testimony of the witnesses who observed the procedure must be suppressed. See also *Simmons* v. *United States*, 390 U.S. 377, 384. These decisions apply to any means of identification held to be unfair, whether by lineup or otherwise.

Specifically, with respect to a lineup, the Supreme Court found in *United States* v. *Wade*, 388 U.S. 218, 235–237, that "there is a grave potential for prejudice, intentional or not, in the pretrial lineup, which may not be capable of reconstruction at trial" by the usual cross-examination of government witnesses. Therefore, "[i]nsofar as the accused's conviction may rest on a courtroom identification in fact the fruit of a suspect pretrial identification which the accused is helpless to subject to effective scrutiny at trial," the Court stated, "the accused is deprived of that right of cross-examination which is an essential safeguard to his right to confront the witnesses against him." Since the "presence of counsel * * * [at a lineup] can often avert prejudice and assure a meaningful confrontation at trial," the Court concluded that under existing practice a pretrial lineup was a "critical stage of the prosecution" at which an accused is entitled to have counsel present. *Id.*, at 236–237.

Although the broad language of Section 3502 might be read as affecting *Stovall* as well as *Wade*, the legislative history indicates that Congress was concerned with the *Wade* requirement of counsel at a lineup.[3] Moreover, it would be difficult to assert that Congress could overrule a constitutional right to due process in protecting an accused from basically unfair means of identification.

The question thus is to what extent the new statute constitutionally permits the use of testimony of an eyewitness, even though the witness did identify the accused at a lineup at which the accused was not represented by counsel.

2. To some extent, the necessity for counsel's presence may be eliminated even without resort to the statute. The Court in *Wade* made clear that its announcement of a right of an accused to the presence of counsel at a lineup was only as a means of safeguarding the accused's rights to due process and to a meaningful confrontation of the identifying witnesses at trial. It emphasized that the decision "in no way creates a constitutional straitjacket" which would handicap the development of alternative safeguards. It said "Legislative or other regulations, such as those of local police departments, which eliminate the risks of abuse and unintentional suggestion at lineup proceedings and the impediments to meaningful confrontation at trial may also remove the basis for regarding the stage as 'critical.'" 388 U.S. at 239.

Since *Wade* was decided, some federal law enforcement agencies have issued instructions to their agents regarding the manner of conducting lineups. Some of these instructions have directed, *inter alia*, that a lineup contain at least six persons of generally similar physical characteristics, that any opportunity for suggestive influences be avoided, and that the witnesses' identifications be communicated to the agents singly and privately. The instructions have also directed that a photograph be taken of the lineup, that the witnesses' identifying statements be transcribed, and that the agent conducting the lineup describe the event in writing. The requirements designed to assure the fairness of the proceedings, together with the requirements designed to permit a reconstruction of the event, may well be sufficient to qualify as adequate alternative safeguards under the decision in *Wade*. In an appropriate case, such an argument should be tried.

With respect to identifications conducted by local police departments, it is necessary, of course, if counsel was not present at a lineup, to ascertain whether they have equivalent rules before any such argument can be made.

3. Beyond that, it should be noted that the *Wade* decision did not hold that the fact that a witness saw the accused at a lineup where counsel was not present automatically results in exclusion of the testimony of the witness. The Court held that, where an accused is identified at a lineup without having been accorded the right to the presence of counsel, he may raise the matter at a hearing at which the government will have the burden of establishing "by clear and convincing evidence" that the ability of the eyewitnesses to identify the accused is "based upon observations of the suspect other than the lineup identification." *Id.*, at 240. If, after "consideration of various factors" which would bear upon the foundation of the witnesses' memories, the trial judge concludes that the witnesses' ability to identify the accused has not been "come at by exploitation of" the improper lineup, but had "an independent origin," the testimony of the witnesses identifying the accused as the perpetrator of the offense will be admissible in evidence at trial. *Id.*, at 241–242. If, on the contrary, the trial judge finds that the lineup substantially contributed to the ability of the witnesses to identify the accused, their identifying testimony will be excluded at trial.[4] In our view, Section 3502 can constitutionally be read as directed to the collateral rule of evidence under which the government must show by "clear and convincing" evidence that, where a pretrial identification occurred without an opportunity for counsel or other safeguards, a proposed in-court identification by a witness is based upon observations of the suspect other than the pretrial identification proceeding.

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to inquire in individual cases whether the defendant was aware of his rights without a warning being given." *Id.*, at 468. The "system," the Court felt, should require giving this warning even to a person who might be presumed to know of the right. It was this aspect of the *Miranda* holding—that even a lawyer would have to be warned under this system—that apparently prompted the Senate sponsors to specify as a factor in the district court's assessment of voluntariness under 3501(b) "whether or not such a defendant was advised *or knew* that he was not required to make any statement" (emphasis added). See *e.g.*, 114 Cong. Rec. S5007 (daily ed., May 6, 1968). While this does not change the necessity of giving this warning even to a lawyer under the "system" currently in effect, it does indicate that the reason for the phrase "or knew" is the conclusion by Congress that *obvious* knowledge is logically equitable with a warning in this situation. In light of this background, and in light of the overall import of the entire section, this phrase cannot properly be read as indicating that a district court could find a statement free from inherently compulsory influences when elicited from a person who was in fact totally unaware that he need not make a statement.

[2] The English practice is comparable. Although a warning is required under the Judges' Rules, a failure to give the warning in a particular case will not necessarily result in exclusion from evidence of a resulting statement; the matter lies within the discretion of the court. See Developments in the Law—Confessions, 79 Harv. L. Rev. 935, 1091, 1093–1094 (1966).

[3] The *Wade*, *Gilbert*, and *Stovall* decisions were announced on June 17, 1967. When the Senate hearings on the general subjects later embodied in the Omnibus Crime Bill resumed on July 10, 1967, Senator McClellan adverted to the fact that "the Supreme Court, since out last hearing, has laid down a new rule affording suspects the right to counsel at a police lineup." Hearings Before the Subcommittee on Criminal Laws and Procedures of the Senate Committee on the Judiciary, 90th Cong., 1st Sess. 840. The hearings, which ended two days later, contained no further reference to any of the lineup decisions. Thereafter, on April 29, 1968, the present Section 3502 appeared as an amendment to S. 917 in the bill reported on that date. S. 917, 90th Con., 2d Sess., § 701(a), at p. 46. The accompanying report of the Senate Committee on the Judiciary, in discussing the bill's provision regarding the admissibility of eyewitness testimony, referred only to the *Wade* case, noted its holding that "an in-court identification of the suspect by an eyewitness is inadmissible unless the prosecution can show that the identification is independent of any prior identification by the witness while the suspect was in custody [and without counsel]," stated that this "rule of evidence" appeared unwarranted, and stated that the provisions of the preesnt Section 3502 were intended "to counter this harmful effect." S. Rep. No. 1097, 90th Cong', 2d Sess. 53 (1968). While the report of the minority views at one point stated that the section would conflict with *Wade*, *Gilbert*, and *Stovall*, both the headnote to that criticism and the ensuing discussion made it clear that the minority considered only *Wade* to be really affected. *Id.*, at 154–155. Similarly, although the later debate on the floor of the Senate included occasional combined references to all three cases, most references and arguments involved only *Wade*.

[4] Where a witness testified before the jury on direct that he had identified the accused at a lineup, the conviction was reversed because of the illegality of the lineup on the theory that this testimony was a "direct result of the illegal lineup." *Gilbert* v. *California*, 388 U.S. 263.

Congress, in providing that "[t]he testimony of a witness that he saw the accused commit * * * the crime * * * shall be admissible in evidence," has, in effect, established a simple but adequate statutory measure by which the independent basis of the witness's memory may be gauged for the purpose of determining the admissibility of his identifying testimony. That measure is whether the witness is able to testify positively that he did in fact see "the accused commit * * * the crime." In other words, it has simplified and clarified the "clear and convincing" standard of independent origin. It is the uncertainty caused by the employment of this term, in a situation where an independent origin may almost be assumed, that appears to be at the heart of Congress's concern with the *Wade* decision. See, *e.g.*, 114 Cong. Rec. S. 5222, S. 5546 (daily ed., May 9 and 14, 1968 (remarks of Senator Ervin).

As a practical matter, if an accused moves to suppress an eyewitness's proposed identification testimony on the ground that it is the product of a defective lineup, there must still be a hearing on such a motion. At that hearing the district court must first determine if any alleged unfairness was so unnecessarily suggestive as to violate due process. If not, the court must then determine whether the witness's ability to identify the accused is the product of seeing him commit the offense or rather of seeing him at the lineup. If the witness is able to testify flatly that he did, in fact, see "the *accused* commit * * * the crime," an independent basis for his current ability to identify the accused is thereby demonstrated under the statute, at least to the degree necessary to justify submiting the issue for consideration of the jury. If, to the contrary, the witness is able to testify only to the general effect that the accused resembles the man he saw commit the crime, the witness's testimony by itself is insufficiently positive to meet the standard set by Congress. In such a situation the district court must examine various other factors set forth in the *Wade* opinion as pertinent to an evaluation of the basis for the witness's current memory of the offender (388 U.S. at 241) in order to determine whether such an ability to identify the accused as does exist has been "come at by exploitation" of the lineup. Congress has thus provided, in effect, that a positive identification of an accused as the person observed committing the offense will itself be sufficient to warrant a finding that the witness's identification had a basis independent of the lineup, and thereby to justify admission of the witness's identifying testimony at trial where its foundation will be subject to the customary testing by cross-examination and its weight will be subject to evaluation by the jury.

The effect of the statute is to elevate positiveness from an important factor among several relevant factors (see *Simmons* v. *United States*, 390 U.S. 377, 385) to an initially controlling factor. This is neither unreasonable nor impermissible. In the situation involved in an attempt to suppress eyewitness identification, a true independent origin is the rule rather than the exception. Under the circumstances, the action of Congress in making an eyewitness's positiveness a simple, expedient, but logical preliminary test of admissibility appears to be an appropriate exercise of its traditional rule-making power.[5]

[5] It should be noted that the statute as drafted is not applicable to the testimony of an eyewitness whose observation of the accused occurred shortly before or after the commission of the offense, if, at the time of the observation, the accused could not be said to be "participat[ing] in the commission of the crime."

WIRETAPPING, PRIVACY, AND TITLE III

Mr. McCLELLAN. Mr. President, on June 19, 1968, at 7:14 p.m., President Johnson signed Public Law 90–351, the "Omnibus Crime Control and Safe Streets Act of 1968." Title III of that act, which dealt with wiretapping and electronic surveillance, represented the culmination of an attempt, over the past 40 years, embracing approximately 50 bills, resolutions, and joint resolutions, to arm law enforcement with a sorely needed tool to combat the forces of organized crime. District Attorney Frank S. Hogan, who has been one of our Nation's outstanding district attorneys for over 27 years, has aptly described this tool as: "The single most valuable weapon in law enforcement's fight against organized crime."

Mr. President, I worked hard to secure the enactment of title III of the Omnibus Crime Control Act, of the Senate on this point, and we were supported by a large majority. When a motion was offered on the floor to strike title III of the bill, it was defeated, as I recall, by a vote of 68 to 12. Nevertheless, more was involved in that fight than an attempt to strengthen the hand of law enforcement. Each of us who worked so long and hard for title III had as an equally important goal: the protection of the privacy of the law-abiding citizen. And it is to that aspect of title III that I now rise to speak.

Mr. President, on April 30, 1969, the Administrative Office of the U.S. Courts filed its first annual report on wiretapping and bugging to the Congress in accordance with the provisions of title III. Under the statute, the Administrative Office of the U.S. Courts is required to transmit to the Congress in April of each year a full and complete report concerning the number of applications for orders authorizing or approving the interception of wire or oral communications and the number of orders and extensions granted or denied during the preceding calendar year, along with a summary and analysis of certain data required under the act to be filed with the Administrative Office of the U.S. Courts by State and Federal judicial and prosecutional officials. These data must include the following:

First, the fact that an order or extension was applied for;

Second, the kind of order or extension applied for;

Third, the fact that the order or extension was granted as applied for, was modified, or was denied;

Fourth, the period of interceptions authorized by the order, and the number and duration of any extensions of the order;

Fifth, the offense specified in the order or application, or extension of an order;

Sixth, the identity of the applying investigative or law-enforcement officer and agency making the application and the person authorizing the application;

Seventh, the nature of the facilities from which or the place where communications were to be intercepted;

Eighth, a general description of the interceptions made under such order or extension, including (i) the approximate nature and frequency of incriminating communications intercepted, (ii) the approximate number of persons whose communications were intercepted, and (iii) the approximate nature, amount and cost of the manpower and other resources used in the interceptions;

Ninth, the number of arrests resulting from interceptions made under such order or extension, and the offenses for which arrests were made;

Tenth, the number of trials resulting from such interceptions;

Eleventh, the number of motions to suppress made with respect to such interceptions, and the number granted or denied;

Twelfth, the number of convictions resulting from such interceptions and the offenses for which the convictions were obtained and a general assessment of the importance of the interceptions.

This first report covers a period just in excess of 6 months—from June 20, 1968, to December 31, 1968. In addition, the report covers only those few States, including New York, Arizona, Georgia, and Massachusetts, which have electronic surveillance statutes. I add, incidentally, that New Jersey, Colorado, Florida, and Minnesota have recently enacted electronic surveillance statutes. Pursuant to the policy of the previous administration—a policy I am glad to report has now been modified—no applications were made on behalf of the Federal Government during this period. The report, therefore, covers only State activity.

I recognize, of course, that it is premature to draw sweeping conclusions from this preliminary information, information, too, which is wholly statistical in character. Indeed, it was with this in mind that I directed the staff of the Subcommittee on Criminal Laws and Procedures to undertake a confidential survey of the use of wiretapping and bugging techniques in a selected number of instances in New York to test at firsthand the degree to which inferences might be validly drawn from this first report under the new Federal legislation. That survey of State action has now been completed. In addition, I have satisfied myself as to the present quality and quantity of Federal electronic surveillance. Consequently, I now believe that certain remarks are appropriate.

My initial reaction to the report itself and our investigation is that the opponents of this legislation who predicted widespread and promiscuous use of wiretaps and bugs by law enforcement authorities are being proven wrong in their prognostications. Indeed, the indications are that few orders have been applied for or granted and that most of those granted were for wiretaps. I note, too, that statute is fast proving itself on the Federal level to be the valuable law enforcement tool that we had expected. The most spectacular success to date has been the seizure of 124 pounds of heroin in New York. This seizure was reported in the New York Times on March 11, 13, and 16. It was valued at $8 million. Since it is under active prosecution, I do not want to discuss the case in great detail now, but I note that a challenge to the

statute's constitutionality has already been turned aside by U.S. District Judge Palmieri and that wiretaps under title III were instrumental in the discovery of the details of the heroin importation organization and resulted in more defendants' arrest, as well as insuring an arrest of the principal defendant, to whom the heroin was consigned.

In another important case, title III was a key element in an interstate counterfeiting ring conducted by racketeering elements. This ring has circulated at least $500,000 in counterfeit money, and an additional $100,000 was seized as a result of the wiretap.

Nevertheless, Mr. President, it is not this aspect of title III that I wish to discuss at this time. Instead, I wish to emphasize that title III also protects the privacy of our citizens by forbidding unauthorized wiretaps. This provision is being as actively employed, I am advised, by the Department of Justice as is the wiretap authorization. I am informed by Attorney General Mitchell that several former large suppliers of interception devices have ceased to deal in them at all.

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

Mr. McCLELLAN. I yield.

Mr. TYDINGS. Mr. President, does the Senator have any information from the Department of Justice which indicates that the Department is either conducting an investigation or has brought an indictment with respect to the provisions the Senator just referred to—namely, the illegality of any person or police officer making a wiretap without a court order?

Mr. McCLELLAN. I will make several references to this here, if the Senator will bear with me. I will get to it in just a moment.

Other suppliers give every indication that their transactions are confined to lawful sales to enforcement agencies. Reputable suppliers and private investigators have proved cooperative with the Department of Justice, since elimination of illegal activities on the part of their competitors is preferable to the risk of engaging in such activities themselves. No suitable case for prosecution of a large-scale supplier, however, has yet been undertaken. In addition, most devices found in unlawful use were on hand before last June. This was the case in the first two convictions obtained under title III. In August 1968 the Department obtained a conviction for interstate transportation of a prohibited device in Minneapolis, Minn.

I say to the Senator from Maryland that I believe this is somewhat helpful in reference to his inquiry.

Recently, a private detective in Salt Lake City, Utah, pleaded guilty to a 10-count indictment for use and possession of interception devices which the statute we passed prohibited. There are about 60 investigations underway at the moment, and during the past year over 200 possible violations have been considered for action. Three indictments involving private detectives are awaiting trial. One indictment is outstanding against a bookmaker in Maryland, and the indictment of Enid Roth for activities at the National Democratic Convention in Chicago last August is set for trial in September.

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

Mr. McCLELLAN. I am glad to yield.

Mr. TYDINGS. Mr. President, I am happy that the distinguished Senator from Arkansas has made this information available. If he will recall, during the debate last year on title III of the Safe Streets Act, there was considerable argument that title III would open up eavesdropping and electronic surveillance all across the country and that it would cause increasing violations of the right of privacy.

Actually, as the Senator has pointed out, the arguments have been borne out that he and I and several others who were defending title III made—namely, that the provision of title III that made it illegal for any citizen—police officer or otherwise—anywhere in the United States to tap a wire or use an electronic listening device without first getting a court order would provide far greater protection and afford a much greater right of privacy than before the enactment of the bill. The statistics that the Senator has provided for the Senate today—namely, the number of pending indictments of private detectives—is actually the proof that the argument we made on the floor of the Senate last year, that the public would be better protected with title III from illegal electronic surveillance than before, has proved to be accurate.

Mr. McCLELLAN. Mr. President, the distinguished Senator from Maryland was one of the strongest advocates of this title in the bill, and with his support and his influence we were able at that time to overcome much of the opposition by making them understand that this bill was not something which would open the floodgates, as he has just said; that it not only was a bill to aid law-enforcement officials in detecting crime and apprehending the criminals but it was also a bill to protect the private citizen from invasion of his privacy.

I commend the administration for recognizing both aspects of this statute and enforcing each objective, pursuing them apparently with equal emphasis and with equal enthusiasm. It is a two-prong law. It gives protection to the citizen, on one side, from the invasion of his privacy by promiscuous wiretapping or electronic surveillance, and, on the other, it gives to the law-enforcement officials the power to make use of this weapon, under court authority and court supervision, to reach out and apprehend the criminal and, particularly in organized crime, to get at the boss instead of just the worker, so to speak, on the street.

If it is administered judiciously and the court sustains it—and I think we will all have to concede, with the record as stated here, as it is beginning—if it continues to unfold this way—that this will be one of the strongest and most effective weapons provided in the Safe Streets and Crime Control Act of last year for the strengthening of law enforcement in this land, particularly in the field of organized crime.

I am pleased to report to the Senate, therefore, that title III is successfully working not only to ensnare criminals who otherwise would be flooding our country with counterfeit money and selling narcotics to reduce men to slavery, but also to prevent intrusions into the privacy of our citizens by limiting electronic surveillance to the prevention of crime and apprehension of criminals.

Nevertheless, there are several sections of the report and aspects of the survey and my personal investigation which I should like to discuss in greater detail.

Mr. President, since it would be helpful to have available the pertinent provisions of the act dealing with the procedure for obtaining a warrant to intercept wire and oral communications, I ask unanimous consent that the text of 18 U.S.C. § 2518 be printed in the RECORD at this point.

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

18 U.S.C. § 2518

(1) Each application for an order authorizing or approving the interception of a wire or oral communication shall be made in writing upon oath or affirmation to a judge of competent jurisdiction and shall state the applicant's authority to make such application. Each application shall include the following information:

(a) the identity of the investigative or law enforcement officer making the application, and the officer authorizing the application;

(b) a full and complete statement of the facts and circumstances relied upon by the applicant, to justify his belief that an order should be issued, including (i) details as to the particular offense that has been, is being, or is about to be committed, (ii) a particular description of the nature and location of the facilities from which or the place where the communication is to be intercepted, (iii) a particular description of the type of communications sought to be intercepted, (iv) the identity of the person, if known, committing the offense and whose communications are to be intercepted;

(c) a full and complete statement as to whether or not other investigative procedures have been tried and failed or why they reasonably appear to be unlikely to succeed if tried or to be too dangerous;

(d) a statement of the period of time for which the interception is required to be maintained. If the nature of the investigation is such that the authorization for interception should not automatically terminate when the described type of communication has been first obtained, a particular description of facts establishing probable cause to believe that additional communications of the same type will occur thereafter;

(e) a full and complete statement of the facts concerning all previous applications known to the individual authorizing and making the application, made to any judge for authorization to intercept, or for approval of interception of, wire or oral communications involving any of the same persons, facilities or places specified in the application, and the action taken by the judge on each such application; and

(f) where the application is for the extension of an order, a statement setting forth the results thus far obtained from the interception, or a reasonable explanation of the failure to obtain such results.

(2) The judge may require the applicant to furnish additional testimony or documentary evidence in support of the application.

(3) Upon such application the judge may enter an ex parte order, as requested or as modified, authorizing or approving intercep-

tion of wire or oral communications within the territorial jurisdiction of the court in which the judge is sitting, if the judge determines on the basis of the facts submitted by the applicant that—

(a) there is probable cause for belief that an individual is committing, has committed, or is about to commit a particular offense enumerated in section 2516 of this chapter;

(b) there is probable cause for belief that particular communications concerning that offense will be obtained through such interception;

(c) normal investigative procedures have been tried and have failed or reasonably appear to be unlikely to succeed if tried or to be too dangerous;

(d) a statement of the period of time for which the interception is required to be maintained. If the nature of the investigation is such that the authorization for interception should not automatically terminate when the described type of communication has been first obtained, a particular description of facts establishing probable cause to believe that additional communications of the same type will occur thereafter;

(e) a full and complete statement of the facts concerning all previous applications known to the individual authorizing and making the application, made to any judge for authorization to intercept, or for approval of interception of, wire or oral communications involving any of the same persons, facilities or places specified in the application, and the action taken by the judge on each such application; and

(f) where the application is for the extension of an order, a statement setting forth the results thus far obtained from the interception, or a reasonable explanation of the failure to obtain such results.

(4) Each order authorizing or approving the interception of any wire or oral communication shall specify—

(a) the identity of the person, if known, whose communications are to be intercepted;

(b) there is probable cause for belief that particular communications facilities as to which, or the place where, authority to intercept is granted;

(c) a particular description of the type of communication sought to be intercepted, and a statement of the particular offense to which it relates;

(d) the identity of the agency authorized to intercept the communication, and of the person authorizing the application; and

(e) the period of time during which such interception is authorized, including a statement as to whether or not the interception shall automatically terminate when the described communication has been first obtained.

Mr. McCLELLAN. Mr. President, even a cursory reading of these provisions demonstrates that the standard set out in title III cannot be too easily met. Not only must the applicant establish by a showing of probable cause a link between person, place, time, communication, and offense, but he must, as well, demonstrate that "normal investigative procedures have been tried and have failed or reasonably appear to be unlikely to succeed if tried or to be too dangerous," a requirement designed to make the use of these techniques a tool of last resort. Such normal investigative procedures would include, as the committee report notes—Senate Report No. 1097, 90th Congress, second session, 101, 1968: "standard visual or aural surveillance techniques by law enforcement officers, general questioning or interrogation under an immunity grant, use of regular search warrants, and the infiltration of conspiratorial groups by undercover agents or informants."

It was in this context, therefore, that I was initially disturbed to learn that virtually all applications for warrants have been approved. This apprehension, however, was relieved by the results of our own investigations. For example, our study shows that many applications made by police agencies to prosecuting officials for approval prior to submission to a court—both Federal and State—were not approved by the prosecuting officials for submission to the courts. Apparently, the prosecutor-screening process is, in fact, having a healthy effect on the number of orders applied for and thus granted. Indeed, it appears that a majority of the 167 applications that were approved for submission to the New York courts were not approved in their original form.

More often than not, the police agencies were required by the prosecutors to obtain more information prior to seeking court approval of the surveillance. In some cases, the process of submission, rejection, and resubmission extended to 3 to 4 weeks. Generally, the final form of the applications reviewed demonstrated a more than adequate showing of probable cause. A number of affidavits, for example, that we reviewed in the office of District Attorney Frank Hogan were models of precise compliance with the standards of title III. Although adequate, some of those reviewed elsewhere were not as detailed. This was to be expected, since "probable cause" represents a traditional legal requirement around which a considerable body of experience has developed.

Nevertheless, a number of the affidavits left something to be desired when it came to demonstrating that "normal investigative techniques" had been exhausted. Here, too often, the affidavits were phrased in conclusionary terms, and not enough of the agency's law enforcement experiences that bore on the decision to use a technique of surveillance was made explicit for the court. For example, little attempt was made to explain or to describe to the court organized crime's code of silence or even simply to refer to studies of the President's Crime Commission, congressional committees, or other legislative bodies to demonstrate the futility of general interview techniques where organized crime is concerned. Apparently, the courts are aware of these matters, and the obvious was left unstated.

I would suggest, however, that the applications should be more complete on their face. Our thought was that mandating prosecutor involvement in the warrant process would strengthen it by guaranteeing that the decision to use these techniques would be preceded by a careful law enforcement screening process. Apparently, this practice is being meaningfully followed in the majority of cases.

Mr. President, I hope that the use of electronic surveillance techniques will not, contrary to some of the predictions of opponents of this legislation, be diluted into a shortcut or substitute for normal investigative procedures and that this will only be utilized under appropriate circumstances. Prosecutors, on whom the administration of the statute rests heavily, should always carefully prepare and review these applications in light of the law. What may have been permissible under old practice is not necessarily legal now. I hope, too, that our judiciary, even with crowded dockets, is always taking the necessary time to examine and pass on all applications thoroughly. The part that they must play in scrutinizing and questioning these applications as well as requiring strict adherence to the statutory standards cannot be overemphasized. As the Supreme Court observed in *Katz* v. *United States*, 389 U.S. 347, 357 (1967):

> The Constitution requires that the deliberate impartial judgment of a judicial officer . . . be interposed between the citizen and the police . . .

Next, Mr. President, I note that out of 128 requests for extensions, only two were denied. As in the case of the applications themselves, these statistics, standing by themselves, call for some explanation. In order to obtain an extension, title III requires that an applicant go through the same detailed steps which are required to obtain an original order, and the presiding judge must make the same findings required for the granting of an original order. This requirement was placed in title III to comply with *Berger* v. *New York*, 388 U.S. 41, 59 (1967), the decision which declared unconstitutional the New York eavesdrop law, holding that using the original grounds on which the order was issued to form the basis for the renewal was "insufficient without a showing of present probable cause for the continuance of the eavesdrop." The report indicates that 174 applications were followed by 126 extensions. One county in New York had 68 orders and 60 extensions. Again, as our study indicated in the case of most of the applications we reviewed, I hope that the situation here was always the product of careful work, not mechanical review.

Another possible problem, if one looks only at the bare statistics, is the reported length of the authorized interceptions. One of the key constitutional defects in the New York eavesdrop statute, struck down in Berger, was that termination of the eavesdrop was not required once the conversation sought had been seized. A blanket order for a lengthy period of time gives, the Court noted—388 U.S. 41, 57 (1967)—"a passkey" to search beyond what is necessary and fails to "minimize" the "danger" of an "unlawful search and seizure."

To comply with this aspect of the Berger decision, title III of the omnibus crime bill provides that:

> No order entered . . . may authorize or approve the interception of any wire or oral communication for any period longer than is necessary to achieve the objective of the authorization, nor in any event longer than the authorizing judge deems necessary to achieve the purposes for which it was granted and in no event for longer than

thirty days. Every order and extension thereof shall contain a provision that the authorization to intercept shall be executed as soon as practicable, shall be conducted in such a way as to minimize the interception of communications not otherwise subject to interception under this chapter, and must terminate upon attainment of the authorized objective or in any event in thirty days.

As the committee report notes—the same references at 103—the statute "requires the time of the warrant to be carefully tailored to the showing of probable cause." The report states—the same references—at 101:

[The statute] require[s] that the duration of the interception not be longer than is necessary under the facts of the particular case. * * * Where it is necessary to obtain coverage of only one meeting, the order should not authorize additional surveillance. * * *

Where a course of conduct embracing multiple parties and extending over a period of time is involved, the order may properly authorize proportionately longer surveillance. . . . What is important is that the facts in the application on a case by case basis justify the period of time in the surveillance.

In apparent contrast with title III's strict standards, however, the report of the administrative office indicates that all interceptions during this first 6-month period utilized the maximum number of days authorized. No matter how much time was authorized for surveillance, all was used. If an order was for 30 days, all 30 days were utilized. If the order was for 20 days, all 20 days were utilized. In addition, all but one of the 128 extensions granted were for the same length of time authorized in the original authorization. Indeed, one surveillance in Georgia lasted twice as long as the number of days for which it was authorized, although no extension was sought or approved.

Mr. President, I found it somewhat difficult to believe that in every original application and each extension, it was necessary to use all of the allotted time authorized. Here I note that the reporting forms should be clarified so that the details of this situation will in the future be more clearly called for. It is not clear now on some of the reports, for example, whether the reported figure is the "authorized" or the "used" period of time. The impression was thus left by the report that the full period was used in the execution of every order. This would mean that each order involved a continuing operation, and that the pertinent information was not intercepted in each of the other cases until the last day of the period of each authorized interception or extension.

In New York, however, our survey indicated that a majority of the orders did involve this sort of continuing, organized crime operation, in which this would not be that unusual. In addition, our investigation revealed that some agencies, to simplify their bookkeeping, carried all taps at the full authorized period, even though the actual surveillance had terminated. Obviously, this last practice is contrary to the intent of the statute, and now that the problem has been identified, we may expect that it will not be continued.

I was thus relieved to find that here again at least a large portion of my concern was caused by poor reporting, not by poor investigative procedures. I do not know, of course, if all of these figures are in each case the fault of bad record-keeping and not the fault of bad practices. But if there is any faulty practice, such action is not furthering the cause of good law enforcement.

The Supreme Court has repeatedly emphasized that law enforcement must work within the confines of the Constitution. Title III of the omnibus crime bill was drafted in conformity with the constitutional standards for lawful electronic surveillance set out in the Berger and Katz decisions. Unless the standards contained in the Constitution and in this legislation are followed, many of the convictions that may be obtained through the use of wiretap evidence will be overturned.

There is a danger, too, that the files of other law enforcement agencies, State and Federal, will become inadvertently polluted by illegal information. What is now happening on the Federal level as a result of the Supreme Court's recent *Alderman* decision, decided March 10, 1969—394 U.S. 165 (1969)—which authorized, incident to determining what was unlawfully obtained by the use of illegal information, the wholesale disclosure of confidential Government files—a practice that will prejudice the national security, endanger informants' lives, and unnecessarily blacken the reputations of innocent third parties—should teach us not to view this possibility with equanimity.

I realize, too, that we are dealing with a new reporting system, as well as new legislation, and I do not want to be overly critical. I do, however, want to admonish every law enforcement officer, prosecutor, and judge involved in this area that the only way this legislation will be effective in combating crime is by strict adherence to the standards it contains.

The offenses covered in the 174 applications were sorted into five broad categories in the report as follows: drugs—narcotics, 71; extortion, 13; gambling, 20; homicide, 21; and larceny, 19. Most of these offenses appear to be areas in which organized criminals are very active, and our survey in New York confirms that most orders were used in the organized crime field. Indeed, these large crime cartels are involved in so many illicit and illegal activities that it is difficult to forecast just what area they will exploit and corrupt next. What is apparently happening thus fulfills congressional intent, since our major purpose in enacting title III was to strike at organized crime. In addition to these 144 orders falling into these categories, 29 en- involved such miscellaneous offenses as kidnaping, arson, and possession of forged instruments.

The wiretaps resulted in intercepted telephone conversations ranging in frequency from one every 10 days to 46 per day. This, too, is an area that needs some clarification. The information sought is the average frequency of interceptions per day, week or month. Some of the responses to this question included replies such as "varied," "daily," or "every other day." This sort of response is not particularly helpful. This question, as well as several others which I have mentioned, also contained a number of blank spaces instead of answers. If there is a reason for not giving an answer, it should be given. Otherwise, an accurate answer should be given. Here I note that the provisions of title 18, United States Code, section 1001, dealing with false statements, are applicable to these reports. See the same at 107.

One category which apparently involved particularly lax reporting was the section dealing with the cost of the interceptions. The cost of 54 of the wiretaps was not reported. Of the 120 wiretaps where cost information was reported, 75 cost less than $1,000; 21 cost $1,000 to $2,000; 18 cost $2,000 to $5,000; and six cost $5,000 or more. The range went from a low of $6.33 for one wiretap to a high of $9,325 for another. Here, too, it might be helpful if the Director of the Administrative Office of the U.S. Courts were to develop some regulations which would call for a uniform determination of reported costs in this area.

The figures showing the number of people involved, the total interceptions, and the number of incriminating interceptions, seemed to be generally proportionate to the number of wiretaps installed. There were two instances, however, in which the figures were somewhat disproportionate. Here, I note again the requirement of title III, quoted above, that there must be an attempt to "minimize" the interception of innocent communications. One instance involved 400 interceptions with only one incriminating interception, while the other involved only 68 incriminating interceptions out of a total of 911. It is, of course, difficult to foresee whether any number of interceptions will produce an incriminating statement. Nevertheless, we must recognize that under *Katz* v. *United States*, 389 U.S. 347, 355 (1967):

[N]o greater invasion of privacy [must be] permitted than [is] necessary under the circumstances.

At the time the report was filed, no trials or convictions had been reported, but a total of 263 persons had been arrested as a result of 174 wiretaps. As time moves on, the figures in these categories should go toward laying to rest the controversy over the effectiveness of these techniques.

Lastly, I note that the report indicates that "all applications seemed to request telephone taps" and "none involved eavesdropping through the use of a microphone." Our survey in New York, however, indicated that orders authorizing bugging were obtained. Apparently, a clear-cut distinction is not being drawn between "wire" and "oral" communications, that is, between "wiretapping" and "bugging." Some orders have been ambiguously reported as "eavesdropping" without a further specification. Obvi-

ously, there is a need here for clarifying and making more explicit the present administration regulations and for more care in filling out the forms.

Mr. President, the chief problems here apparently lie with the all-too-human difficulty that is experienced in accurately and meticulously reporting what one has done. However, the stakes are too high to allow for any omission or inaccuracies in these reports. This is an invaluable and powerful tool that must not be subjected to abuse. Those who violate the standards can and must either be punished and if they cannot learn to follow the law they must face loss of this law enforcement tool. Fortunately, my investigation to date has revealed no such abuses.

Mr. President, my purpose for mentioning these reporting problems and drawing the attention of this body to them is not to discredit anyone, or to be critical of law enforcement officials, prosecutors, or the judiciary. I am well aware of the fact that we are dealing with new legislation and a novel reporting system, and that, like anything else new, some rough edges will have to be smoothed out. Past practices have to be brought up to new standards. This, too, takes adjustments. Indeed, I do not think it would be inappropriate for the Attorney General, acting through the Law Enforcement Assistance Administration, and in cooperation with the Director of the Administrative Office of the U.S. Courts, to call together at an early date representatives of the police agencies and prosecuting officers throughout the United States involved in the administration of the statute for a conference to explore how best to utilize this most important investigative tool. This is a complicated and sophisticated statute. It changes past practices and mandates new procedures. There is a need here for careful training and close State and Federal cooperation. The Attorney General, as the Nation's chief law enforcement officer, quite properly can fulfill a leadership role here.

I am hopeful, however, that my primary purpose for making these remarks is served. The Supreme Court in its recent decision in Alderman against the United States, noted above, at one point turned aside an argument that, had it been followed, would have further restricted the use of electronic surveillance techniques, saying:

> The general rule under [Title III] is that official eavesdropping and wiretapping are permitted only with probable cause and a warrant. Without experience showing the contrary, we should not assume that this new statute will be cavalierly disregarded or will not be enforced against transgressors.

Mr. President, my purpose in making these remarks has been to help assure that this legislation will be, in fact, followed to the strictest letter of the law—both bringing criminals to book and protecting citizens' privacy. That is the only way in which it can be utilized as an effective tool in reducing crime. A good beginning to this end is to make sure that these reports which are required by law to be filed are meticulously accurate and complete; 263 persons have been arrested as a result of this electronic surveillance legislation. Let us make sure that none of those who may be convicted can ask for a reversal because the law was not strictly followed. And that when this legislation comes before the Supreme Court it will be upheld.

Mr. President, that concludes my remarks on this subject today. I intend, as cases develop and as experience is gained with the administration of this statute, however, to keep the Senate informed of it and to comment on it from time to time.

As I have indicated, my only concern at the moment is that the prosecutors and courts that have the responsibility under the statute will not become careless, but will remain firm in their determination to see that the statute is strictly followed. If the statute is strictly followed, it is certainly not to be expected that any unnecessary invasion of privacy will result.

I wish to thank the distinguished Senator from Maryland for his contribution and for yielding his time to me so that I might proceed with these remarks.

Mr. President, I ask unanimous consent to have printed in the Record a letter dated August 4, 1969, addressed to me from the Attorney General, following his testimony before the Committee on Appropriations, commenting on title III, three newspaper clippings, and the report, together with its appendixes, regulations and forms.

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

AUGUST 4, 1969.

HON. JOHN L. MCCLELLAN,
U.S. Senate,
Washington, D.C.

DEAR SENATOR MCCLELLAN: As requested in your letter of July 29, 1969, I am setting forth more detailed information regarding the narcotics case and the prosecutions against private individuals under Title III of the Omnibus Crime Control Act of 1968, concerning which I testified on July 28th. I am also setting forth similar information relating to a recent counterfeiting case in which wiretapping conducted under Title III was also extremely effective.

Since both the narcotics case and the counterfeiting case are the subjects of pending criminal litigation, however, I would request that the information, other than matters of public record, be treated as confidential in order that the defendants' right to a fair trial shall not be prejudiced.

The narcotics case I referred to is *United States* v. *Hysohion, et al.*, in which an indictment was returned on May 8, 1969, in the Southern District of New York, charging Christian Serge Hysohion and Eduardo Rimbaud, French nationals residing in New York City on temporary visas, with the unlawful importation of narcotics in violation of 21 U.S.C. 174. A hearing on defendant's motion for suppression of the contents of intercepted wire communications was held before United States District Judge Palmieri in July and the motion was denied.

For the past two years the Bureau of Customs has been conducting an investigation of an international narcotics smuggling ring involving a group of foreign nationals, including the defendant Hysohion, whom it discovered had traveled from Geneva, Switzerland, to the United States in September 1968 to prepare to receive shipments of heroin. The investigation subsequently disclosed that the scheme used to import the heroin into the United States was to conceal it in cans of fish consigned to Hysohion's address in New York City from Spain. In February 1969 Customs Bureau agents using a high-powered X-ray machine examined a shipment of some 700 cans of fish consigned to Hysohion and awaiting shipment to him on the Brooklyn pier. This examination disclosed that the visual density of the cause in several of the cases was different in great degree from the usual density of the large majority of the cases in the shipment. One of the cans was opened and was discovered to contain a quantity of white powder and two weights. Subsequent chemical analysis disclosed that the can contained ¼ kilogram of high grade heroin.

As a result of wiretaps conducted under Title III on the telephone facilities of the New York City residence where Hysohion was residing, Customs Bureau agents were able to determine that the 700 cans of fish were to be transported from the Brooklyn pier to Hysohion's residence on March 7, 1969. On the afternoon of March 7th, a truck loaded with the cases of fish arrived at Hysohion's residence and that evening the cases were unloaded into the garage. Late Saturday evening an individual, later identified as the defendant Eduardo Rimbaud, arrived at the residence, and early on Sunday morning, March 9th, this individual and Hysohion emerged from the house carrying a large leather satchel and entered a taxi. They were intercepted by Customs agents and arrested, and the satchel was found to contain 26 kilos of heroin. A search warrant for Hysohion's residence was obtained and executed on March 9th, and examination of the cases of food products taken from the garage disclosed additional amounts of heroin, the total seizure amounting to 62 pounds.

Additional interceptions from the telephone facilities at Hysohion's residence disclosed that he was expecting a second shipment of some 400 cases of foodstuffs consigned to him to be arriving soon on the SS Grand Sunda. This shipment was unloaded on March 10th, and examination by Customs agents disclosed another 62 pounds of heroin concealed in the cans of fish.

[Confidential information deleted.]

As a result of wiretaps in Youngstown, Ohio, on the telephone facilities at the residence of Mario Guerrieri and on the telephone facilities at a nightclub known as the "Guys and Dolls", Secret Service agents recently broke up a major interstate counterfeiting ring. Prior to the use of the wiretaps, all investigative efforts had failed to uncover the manner in which counterfeit $20 and $100 Federal Reserve Notes were flooding the Midwest. From January 1964 to February 1969, well over $500,000 worth of these notes have been recovered by the United States Secret Service primarily in the Cleveland-Pittsburgh area.

The information which was uncovered through the use of the wiretaps directly led to the recovery of over $100,000 in this counterfeit currency and the indictment in the Northern District of Ohio in June of this year of seven persons on counterfeiting charges, including Guerrieri, Youngstown rackets kingpin, and three of his associates. The interceptions in this case also disclosed substantial evidence of other serious Federal and state crimes which are also expected to result in prosecutions at a later date.

Several convictions have been obtained against individuals under Title III, the first of which occurred in August 1968 in Minneapolis, Minnesota, against an employee of a former supplier, who was convicted for interstate transportation of a prohibited device.

Recently a private detective in Salt Lake City, Utah, pleaded guilty to a ten-count indictment for use and possession of prohibited ining use and possession of such devices by terception devices. Three indictments involvprivate detectives are presently awaiting trial. One indictment is pending against a bookmaker in Maryland for use of such a device, and the indictment of NBC Television News Executive, Enid Roth, for activities at the National Democratic Convention in Chicago last August is set for trial in September.

[Information deleted.]

Sincerely,

———— ————,

Attorney General.

[From the New York Times, Mar. 11, 1969]

A FORTUNE IN HEROIN IS SEIZED WITH FISH

Federal agents yesterday reported the confiscation of what they said was $8-million worth of pure heroin that arrived in this country in a shipment of canned fish.

The officials said that the drugs arrived here from Spain. They were packed in five of 702 cases addressed to a fish importer who had no knowledge of the drugs. All the cases were dropped off at a Queens warehouse, where Federal narcotics agents moved in and arrested four men whom they characterized as middle men in an international ring.

The four were identified as Serge Christian Hysohion, 23 years old, a native of Paris and a supermarket manager; Eduardo Rimbaud, 49, a fiction writer, of Salon, France; Mayo Mastronardi, 48, a building contractor, of 157-20 22d Avenue, Queens, and Antonio Flores, 31, of New Rochelle, a captain of waiters.

The first two were held in $100,000 bail each for a hearing on Friday, Mr. Mastronardi was held in $5,000 bail and Mr. Flores in $20,000 bail for hearing March 20.

[From the New York Times, Mar. 13, 1969]

CACHE OF HEROIN IS REPORTED FOUND IN PAELLA CARGO

Customs officials announced yesterday afternoon that they had found 62 pounds of heroin hidden in a cargo of canned food from Spain—the second such seizure in three days.

The almost-pure heroin powder, said to be worth $8-million on the illicit market, was sealed in cans marked "paella," a Spanish rice and fish dish, aboard the Swedish Grundsunda at the 21st Street pier in Brooklyn.

Stanley R. Spinola, supervising customs agent for the Northeastern region, made the announcement at a news conference at the United States customs office, 201 Varick Street.

The heroin-packed cans, which were in six of 400 cases of paella, Mr. Spinola said, were found with the help of a new X-ray inspecting device.

Monday's confiscation of the same amount of heroin, in cans of "Basque-style codfish stew" in a Queens warehouse. Yesterday's seizure, and a third expected "in a few days" are part of a crackdown of "one of the largest narcotics smuggling rings we've ever seen," Mr. Spinola said.

He said the ring had been operating for the last two years in Switzerland, Spain, France and Italy.

Four persons were arrested here Monday, and a fifth identified as Charles Darge, was arrested Tuesday by customs agents as he stepped off a flight from Puerto Rico.

The cans of food involved were all from "Ribas and Sons," a Spanish company, but Customs and Federal narcotics agents, who are cooperating in the investigation, believed the shipments were diverted and tampered with before being sent here.

Like the cans seized Monday, those discovered yesterday contained lead with the plastic bags of heroin to make the cans weigh the same as others.

[From the New York Times, Mar. 16, 1969]

EX-BANKER CALLED DRUG-SMUGGLING RING "BRAIN"—SWISS POLICE HOLD HIM AND SAY HE DEVISED PLAN TO CAN HEROIN IN SPAIN

GENEVA, March 15.—Geneva police officials said today that André Hirsch, a former Geneva banker now under arrest here, was the brains behind an international heroin smuggling ring broken in New York this week.

According to the police, it was Hirsch who thought up the idea of concealing the heroin in cans of fish products that were shipped from Spain to New York aboard Swedish freighters.

They said some heroin also had been shipped to the United States from Europe on commercial airliners. No Swiss aircraft were involved, they said, but they declined to give any details.

FREQUENTED NIGHTCLUBS

Police officials emphasized that while only a tiny part of the heroin ever reached Switzerland, Geneva was the payoff point for the ring's operations.

They said they had seized documents here giving detailed instructions for operations at the canning plant in Spain, where the heroin was sealed in cans labeled as paella and codfish stew.

In his days as a prosperous banker, Hirsch was widely known in Geneva cafe society, and his friends say he went to nightclubs nine nights out of ten. Even then, however, he was known to be associated with underworld characters, the police said.

In 1962, after his bank, the Banque Mercantile, failed under suspicious circumstances, Hirsch was arrested and held in prison for months. He was finally released because of poor health without being brought to trial.

The police said that after his release, Hirsch, now 61 years old, promised to stay within the law and that he was living with his wife in a modest apartment in Geneva when he was arrested.

Hirsch, it was understood, was picked up early last week following the discovery in New York of the heroin shipped in fish cans. Under Swiss legal procedure, no charges have yet been filed against him pending completion of the investigation.

Other suspects arrested in the investigation into the heroin ring, are Louis Brique, 43, of Fribourg, Switzerland; Daniel (Bille) Vuille, 39, of Neuchatel, Switzerland; Gilbert Grandi, 48, of Geneva, and a fifth person identified only as Marcel G., 57, of Bern, since he has steadfastly denied any participation in the drug traffic.

A woman who was associated with the suspects was detained but released because it was established that she was not involved, the police said.

REPORT ON APPLICATIONS FOR ORDERS AUTHORIZING OR APPROVING THE INTERCEPTION OF WIRE OR ORAL COMMUNICATIONS—FOR THE PERIOD JUNE 20, 1968, TO DECEMBER 31, 1968

To the Senate and House of Representatives of the United States of America in Congress Assembled:

This report is submitted in accordance with the provisions of Section 2519(3) of Title 18, United States Code, which require that in April of each year the Director of the Administrative Office of the United States Courts transmit to the Congress a full and complete report concerning the number of applications for orders authorizing or approving the interception of wire or oral communications and the number of orders and extensions granted or denied during the preceding calendar year, together with a summary and analysis of the data required by law to be filed with the Administrative Office of the United States Courts by State and Federal Judges and by prosecuting officials of Federal, State and Local Governments.

This is the first report submitted under the Wiretapping and Electronic Surveillance provisions of Title III of the Omnibus Crime Control and Safe Streets Act of 1968, which was approved on June 19, 1968 (82 Stat. 218). This report thus covers only the period from June 20, 1968 to December 31, 1968.

I. REPORTING REQUIREMENTS OF THE STATUTE

In general the new law requires every State and Federal Judge to file a written report with the Director of the Administrative Office of the United States Courts on each application made to him in accordance with the provisions of title 18, United States Code, Section 2518 for an order authorizing the interception of a wire or oral communication. The report is to be furnished within 30 days "after the expiration of an order (or each extension thereof) entered under section 2518, or the denial of an order . . ." and must contain certain detailed information including the name of the applicant, offense specified in the application, and the duration of the authorized intercept.

Prosecuting officials who have authorized applications for intercept orders are required to file reports in January of each year setting forth various information concerning the communications that were actually intercepted, the cost of the intercepts in regard to the use of manpower and other resources, and the results of the intercepts in terms of arrests, trials, convictions and the number of motions to suppress the use of the intercepts.

II. REGULATIONS

Regulations, including reporting forms, were promulgated by the Director of the Administrative Office of the United States Courts in October 1968 and were distributed to the Chief Justice of the highest appellate court in each State, the Attorneys General of the States, and to numerous trial judges. They were also reprinted in the *State Trial Judges Journal* and were the subject of news items in two publications of the Council of State Governments. The regulations were also distributed to all United States Circuit and District judges and to officials in the Department of Justice. A copy of the regulations is attached as Appendix A.

III. RESPONSE TO THE REGULATIONS

The statute requires that orders by state judges approving applications for orders authorizing communication intercepts by state officials may be made only by judges of courts of competent jurisdiction and that applications can be made only by a prosecuting attorney, "if such attorney is authorized, by a statute of that State to make application to a State court judge of competent jurisdiction." The initial response disclosed that only a few states have laws authorizing courts to issue orders permitting wiretapping or eavesdropping.

IV. SUMMARY OF REPORTS BY JUDGES

In the approximate six month period from June 20th to December 31, 1968 there were 174 reports on interception orders issued by state judges in the States of Arizona, Georgia, Massachusetts and New York. Of these 167 or 96 percent were entered by judges in the State of New York.

The following summary shows by state and county the number of intercepts authorized, the number of extensions granted and the average length of the authorization and extensions and the facilities from which or the place where the intercepts were to occur.

WIRETAP ORDERS ISSUED BY STATE JUDGES DURING THE PERIOD JUNE 20, 1968 TO DECEMBER 31, 1968, BY STATE AND COUNTY

State and county	Number of intercepts authorized	Number of extensions	Average length (in days)		Place or facility			
			Original authorization	Extension	Residence	Apartment	Multi-dwelling	Business
Arizona:								
Maricopa	1		30		1			
Pima	1		30					1
Georgia:								
Fulton	2	1	10	10	1			1
Monroe	1		10		1			
Massachusetts:								
Plymouth	1		15					1
Suffolk	1	1	30	15		1		
New York:								
Albany	1	7	20	20				1
Bronx	33	16	20	20	20	4	1	8
Dutchess	1		20		1			
Erie	2	1	20	20	2			
Kings	68	60	20	20	17	24	2	25
Nassau	5	11	20	20	4	1		
New York	13	6	20	20	7	3		3
Onondaga	21	5	20	20	8	6	2	5
Queens	21	18	20	20	4	10	5	
Schnectady	1	1	20	20				
Suffolk	1	1	20	20	1			

Note: In some instances the reports from judges were incomplete and information concerning the intercepts was inserted from the reports of prosecuting officials.

A. *Grants, Denials and Authorized Length of Intercepts:* All original applications were approved as requested by prosecuting officials, but two applications for extensions were denied. In the State of New York the original wiretap was always granted for a period of 20 days and extensions were granted in increments of 20 days. In Arizona the authorized initial period for the wiretap was 30 days; in Georgia it was 10 days; and in Massachusetts one order allowed 15 days and the other allowed 30 days with an additional 15-day extension.

All applications seemed to request telephone taps, although the reports used such terms "telephone tap", "wiretap", "eavesdrop", etc. None of the applications involved eavesdropping through the use of a listening device such as a microphone.

B. *Offenses:* The offenses specified in the applications for court orders covered a wide range and usually each application specified several crimes that were being investigated. However, there were five broad categories of crime predominately listed in the 174 applications. They were Drugs (including narcotics), 71; Extortion, 13; Gambling, 20; Homicide, 21; and Larceny, 19. The following table shows the offenses set forth in the applications, by state, and within the State of New York, by county.

OFFENSE FOR WHICH COURT-AUTHORIZED INTERCEPTS WERE GRANTED PURSUANT TO TITLE 18, UNITED STATES CODE, SEC. 2518

Offense	Total	New York Counties						Arizona	Georgia	Massachusetts
		Bronx	Kings	New York	Onondaga	Queens	All other			
Total	174	33	68	13	21	21	11	2	3	2
Arson	1	1								
Assault	1		1							
Auto theft	4		3				1			
Bribery	5		1	1					3	
Burglary	2				1					1
Drugs and narcotics	71	24	17	7	3	16	2	1		1
Escape	1						1			
Extortion	13		13							
Forgery	1		1							
Fraud	1	1								
Gambling	20	2			16		2			
Gun laws	3		3							
Homicide	21	5	9	2		3	2			
Kidnaping	1		1							
Larceny	19		13	3			2	1		
Public order	1						1			
Robbery	8		6		1	1				
Not reported	1					1				

C. *Type of Facility*: The locations of the telephones being tapped were reported to include 67 residences, 49 apartments, 10 multiple dwellings, and 45 business locations.

V. REPORTS BY PROSECUTING OFFICIALS

In the initial period of statistical reporting under the new law reports were received from the prosecuting officials as they were from the judges, except in a few instances. Some reports, however, were incomplete as to some items of information. Prosecuting officials in several states reported that no applications for interception orders had been made in their jurisdictions and the Attorney General of the United States reported that no applications had been made during this period under the authority of the United States Department of Justice. In some instances court approved wiretaps were never installed.

A. *Nature of Intercepts.* The wiretaps installed in accordance with the 174 court authorizations resulted in intercepted telephone conversations ranging in frequency from one every 10 days to 46 per day. In one investigation the conversation of an estimated 467 persons were intercepted and in another investigation 950 out of 1,188 telephone conversations were reported to be incriminating.

The following table shows the *average* number of persons whose conversations were intercepted, the average number of total *intercepts* and the average number of intercepts which were reported as incriminating.

SUMMARY OF WIRETAPS, JUNE 20 TO DEC. 31, 1968, BY STATE AND COUNTY (EXCLUDING WIRETAPS AUTHORIZED, BUT NOT INSTALLED, AND WIRETAPS WHERE INFORMATION IS INCOMPLETE)

State and county	Number of wiretaps	Average number of intercepts per wiretap		
		Persons involved	Total intercepts	Incriminating intercepts
Arizona:				
Maricopa	1	3	60	10
Pima	1			3
Georgia:				
Fulton	2	264	304	43
Monroe	1	202	202	78
Massachusetts:				
Suffolk	1	78	102	90
Plymouth	1			
New York:				
Albany	1			
New York—Continued				
Bronx	33	24	244	45
Dutchess	1			
Erie	2	21	760	745
Kings	68	5	466	73
Nassau	5	18	911	68
New York	13	12	71	44
Onondaga	21	51	506	206
Queens	21	48	380	44
Schenectady	1			
Suffolk	1	2	400	1

B. *Cost of Intercepts:* The total cost of a wiretap (in terms of manpower, equipment and other costs) ranged from a low of $6.33 for one wiretap to a high of $9,325.00 for another. Of the 120 wiretaps where cost information was reported, 75 cost less than $1,000; 21 cost $1,000 to $2,000; 18 cost $2,000 to $5,000; and only 6 cost $5,000 or more. The average cost per wiretap, by jurisdiction is as follows:

AVERAGE COST PER WIRETAP JUNE 20 TO DEC. 31, 1968, BY STATE AND COUNTY

State and county	Number of wiretaps: Total number	Number of wiretaps: Cost reported	Average cost per wiretap: Manpower	Average cost per wiretap: Other	Average cost per wiretap: Total
Arizona:					
Maricopa	1	1	$500.00		$500.00
Pima	1	1	500.00	$350.00	850.00
Georgia:					
Fulton	2	2	890.88	469.67	1,360.55
Monroe	1	1	890.88	469.67	1,360.55
Massachusetts:					
Suffolk	1	1	9,000.00	325.00	9,325.00
Plymouth	1				
New York:					
Albany	1				
New York—Continued					
Bronx	33	4	$3,631.78	$2.50	$3,634.28
Dutchess	1				
Erie	2	2	261.50		261.50
Kings	68	61	1,386.48	46.55	1,433.03
Nassau	5	3	1,992.52	77.27	2,069.79
New York	13	8	2,693.75	15.63	2,709.38
Onondaga	21	19	507.73	37.42	545.15
Queens	21	16	423.79	18.65	442.44
Schenectady	1				
Suffolk	1	1	330.00	48.00	378.00

C. *Arrests, Trials, Convictions and Motions to Suppress:* Most of the cases in which there were wiretaps were reported as still under active investigation. Arrests had already been made in numerous cases in which there were wiretaps, but no trials or convictions were reported. In one instance a motion had been made to suppress the results of the wiretap, and it was denied.

The following table shows the number of persons arrested in these cases as of the date of the prosecutor's report:

State and county	Number of wiretaps	Number of persons arrested up to Dec. 31, 1968
Total	174	263
Arizona:		
Maricopa	1	3
Pima	1	
Georgia:		
Fulton	2	27
Monroe	1	
Massachusetts:		
Suffolk	1	17
Plymouth	1	
New York:		
Albany	1	
Bronx	33	78
Dutchess	1	
Erie	2	6
Kings	68	60
Nassau	5	1
New York	13	4
Onondaga	21	48
Queens	21	19
Schenectady	1	
Suffolk	1	

This first report on wiretap orders under the new law is limited, first because it covers only a six-month period and secondly because the information reported is incomplete due to the fact that investigations for the most part have not progressed to prosecutions and convictions. Future reports should contain more detailed information.

Respectfully submitted,

ERNEST C. FRIESEN, Jr.,
Director, Administrative Office of the U.S. Courts.

April 30, 1969.

APPENDIX TABLES

TABLE A.—REPORTS BY STATE JUDGES PURSUANT TO TITLE 18, UNITED STATES CODE, SEC. 2519, ON APPLICATIONS FOR COURT ORDERS TO AUTHORIZE THE INTERCEPTION OF WIRE OR ORAL COMMUNICATIONS

State, county, and reporting number	Name of judge	Applicant	Offense specified	Kind—(W) wire, (O) oral	Date of application	Original period authorized (days)	Number of extensions	Total length of intercepts (days)	Place
Arizona:									
(1) Maricopa	Chatwin	Corbin	Drugs	W	Sept. 27, 1968	30		30	Residence.
(2) Pima	Roylston	Patchell	Transfer of stolen property	W	Nov. 21, 1968	30		30	Business.
Georgia:									
(1) Fulton	Holt	Bolton	Bribery	W	Aug. 12, 1968	10		20	Do.
(2) Fulton	do	do	do	W	Sept. 13, 1968	10		10	Residence.
(3) Monroe	Sosebee	do	do	W	Sept. 10, 1968	10		10	Do.
Massachusetts:									
(1) Suffolk	Tauro	Byrne	Narcotics	W	Dec. 16, 1968	30	1	45	Apartment.
(2) Plymouth	Lurie	Wheatley	Burglary	W	Sept. 20, 1968	15		15	Business.
New York:									
(1) Albany	Pennock	District attorney	Public order	W	June 1968	20	7	160	Clubhouse.
(1) Dutchess	Juidice	Heilman	Escape	W	July 17, 1968	20		20	Residence.
(1) Erie	Heffron	Dillon	Gambling	W	July 12, 1968	20	1	40	Do.
(2) Erie	do	do	Larceny	W	Dec. 13, 1968	20		20	Do.
(1) Nassau	Oppido	Cahn	Narcotics	W	Aug. 28, 1968	20		20	Residence.
(2) Nassau	Wachtler	Mackell	Auto theft	W	July 23, 1968	20	2	60	Apartment.
(3) Nassau	do	do	Homicide	W	July 8, 1968	20	8	180	Residence.
(4) Nassau	Widlitz	Williams (Sullivan)	Murder	W	Aug. 20, 1968	20		20	Do.
(5) Nassau	do	North (Clinton)	Narcotics	W	Oct. 11, 1968	20	1	40	Do.
(1) Schenectady	Wemple	Levine	Gambling	W	June 28, 1968	20	1	?	?
(1) Suffolk	Geiler	Koota	Larceny	W	Sept. 5, 1968	20	1	40	Residence.
(1) New York	Postel	Clinton County district attorney.	Narcotics	W	Oct. 12, 1968	20	1	40	Do.
(2) New York	do	do	do	W	do	20		20	Do.
(3) New York	do	Sullivan County district attorney.	do	W	Aug. 21, 1968	20		20	Do.
(4) New York	do	do	do	W	Aug. 20, 1968	20		20	Do.
(5) New York	do	do	do	W	Sept. 13, 1968	20		20	Business.
(6) New York	Culkin	Hogan	Drugs	W	Nov. 29, 1968	20		20	Apartment.
(7) New York	Murtagh	do	Murder	W	Aug. 22, 1968	20	1	40	Do.
(8) New York	Schweitzer	do	Larceny	W	Sept. 4, 1968	20	2	60	Residence.
(9) New York	do	do	do	W	Sept. 27, 1968	20	1	40	Do.
(10) New York	do	do	Bribery	W	Oct. 30, 1968	20		20	Business.
(11) New York	do	do	Larceny	W	do	20	1	40	Residence.
(12) New York	do	do	Drugs	W	Nov. 12, 1968	20		20	Apartment.
(13) New York	Tierney	do	Murder	W	July 26, 1968	20		20	Home and office.

TABLE B.—REPORTS BY STATE PROSECUTING OFFICERS, PURSUANT TO TITLE 15, UNITED STATES CODE, SEC. 2519, CONCERNING COURT AUTHORIZED INTERCEPTS OF WIRE OR ORAL COMMUNICATIONS

State, county, and reporting No.	Name of prosecutor	Nature of intercepts: Type	Nature of intercepts: Average frequency	Number of: Persons	Number of: Intercepts	Number of: Incriminating intercepts	Cost: Manpower	Cost: Other resources	Cost: Total cost	Number of persons arrested	Number of trials	Motions to suppress intercepts
Arizona:												
(1) Maricopa	Corbin	Phone call		3	60	10	500.00			3		
(2) Pima	Patchell	do	Every other day			3	500.00	350.00	850.00			
Georgia:												
(1) Fulton	Bolton	do		467	548	84						
(2) Fulton	do	do		60	60	1	2,672.65	1,409.00	4,081.65	27		Filed and denied.
(3) Monroe	do	do		202	202	78						
Massachusetts:												
(1) Suffolk	Byrne	do	Varied	78	102	90	9,000.00	325.00	9,325.00	17		
(2) Plymouth	Lurie	do										
New York:												
(1) Albany												
(1) Dutchess												
(1) Erie	Dillon	Wire	50	35	1,500	1,490	438.00		438.00	6		
(2) Erie	do	do	3	7	21		85.00		85.00	(1)		
(1) Nassau	Cahn	Phone call		25	255	35			550.00			
(2) Nassau	Mackell	do	15 per day	25	840	30	1,775.00	125.00	1,900.00			
(3) Nassau	do	do	10	3	1,637	140	3,652.56	106.80	3,759.36			
(4) Nassau												
(5) Nassau												
(1) Schenectady												
(1) Suffolk	Koota	Wire	10 per day	2	400	1	330.00	48.00	378.00	None		
(1) New York												
(2) New York												
(3) New York												
(4) New York												
(5) New York												
(6) New York	Hogan	Phone call	15 per day	60	31	31	200.00		200.00	2		
(7) New York	do	do	1 per week	2	2	2	1,000.00		1,000.00			
(8) New York	do	do	2 per week	4	16	16	7,500.00		7,500.00			
(9) New York	do	do	1 every 10 days	4	4	4	5,000.00		5,000.00			
(10) New York	do	do	6 per day	22	84	70	1,100.00		1,100.00			
(11) New York	do	do	3 per week	3	8	8	3,250.00	125.00	3,375.00	2		
(12) New York	do	do	20 per day	10	400	200	2,500.00		2,500.00			
(13) New York	do	do	None	19	19	18	1,000.00		1,000.00			

[1] To be presented to grand jury.

TABLE A.—REPORTS BY STATE JUDGES PURSUANT TO TITLE 18, UNITED STATES CODE, SEC. 2519, ON APPLICATIONS FOR COURT ORDERS TO AUTHORIZE THE INTERCEPTION OF WIRE OR ORAL COMMUNICATIONS

STATE OF NEW YORK, BRONX COUNTY

Reporting No.	Name of judge	Applicant	Offense specified	Kind: (W) Wire; (O) Oral	Date of application	Original period authorized (days)	Number of extensions	Total length of intercepts (days)	Place
1	Ascione	Dollinger	Narcotics	W	July 8, 1968	20		20	Bar and grill.
2	do	Mackell	Arson	W	July 11, 1968	20		20	Residence.
3	do	Dollinger	Narcotics	W	July 17, 1968	20		20	Do.
4	do	do	do	W	July 23, 1968	20		20	Do.
5	do	do	do	W	do	20		20	Do.
6	do	do	do	W	July 29, 1968	20		20	Dry cleaners.
7	do	do	do	W	Aug. 1, 1968	20		20	Residence.
8	do	do	do	W	Aug. 2, 1968	20		20	Do.
9	Brust	Mackell	do	W	Aug. 22, 1968	20		20	Multiple dwelling.
10	do	Roberts	do	W	Sept. 3, 1968	20	1	40	Residence.
11	do	do	do	W	Oct. 21, 1968	20		20	Do.
12	Fine	do	do	W	Nov. 14, 1968	20	1	40	Do.
13	do	do	do	W	Nov. 15, 1968	20		20	Do.
14	do	do	do	W	Nov. 6, 1968	20		20	Restaurant.
15	Frank	Dollinger	do	W	Aug. 14, 1968	20	2	60	Residence.
16	do	do	do	W	Aug. 15, 1968	20		20	Do.
17	do	do	do	W	Aug. 22, 1968	20	1	40	Do.
18	Markewich	do	do	W	Sept. 18, 1968	20	1	40	Do.
19	do	do	do	W	do	20	1	40	Do.
20	do	do	do	W	Sept. 24, 1968	20		20	Do.
21	do	do	do	W	Sept. 9, 1968	20	1	40	Do.
22	do	do	do	W	Sept. 4, 1968	20		20	Store.
23	do	Hogan	Murder	W	July 12, 1968	20	1	40	Apartment.
24	do	do	do	W	July 26, 1968	20	3	80	Do.
25	Marks	Roberts	Narcotics	W	Oct. 14, 1968	20		20	Residence.
26	Spector	Dollinger	Homicide	W	June 21, 1968	20		20	Bar and grill.
27	do	do	do	W	do	20		20	Bar.
28	do	do	do	W	do	20		20	Apartment.
29	Spiegel	do	Narcotics	W	Aug. 19, 1968	20	1	40	Residence.
30	do	do	do	W	do	20		20	Do.
31	Waltemade	Roberts	Fraud	W	Nov. 21, 1968	20		20	Apartment.
32	do	Dollinger	Gambling	W	Aug. 7, 1968	20	1	40	Social club.
33	Marks	do	do	W	Sept. 11, 1968	20	2	60	Bar and grill.

STATE OF NEW YORK, KINGS COUNTY

1	Benjamin	Golden	Extortion	W	Nov. 21, 1968	20		20	Business.
2	do	do	do	W	do	20		20	Do.
3	do	do	do	W	do	20		20	Do.
4	do	do	do	W	Dec. 19, 1968	20		20	Residence.
5	do	do	do	W	do	20		20	Do.
6	Beldock	do	do	W	Nov. 20, 1968	20		20	Apartment.
7	do	do	do	W	do	20		20	Do.
8	do	do	do	W	do	20		20	Do.
9	do	do	Auto theft	W	Nov. 13, 1968	20	1	40	Do.
10	do	do	do	W	do	20		40	Do.
11	do	do	Homicide	W	Dec. 24, 1968	20	2	60	Do.

TABLE A.—REPORTS BY STATE JUDGES PURSUANT TO TITLE 18, UNITED STATES CODE, SEC. 2519, ON APPLICATIONS FOR COURT ORDERS TO AUTHORIZE THE INTERCEPTION OF WIRE OR ORAL COMMUNICATIONS—Continued

STATE OF NEW YORK, KINGS COUNTY—Continued

Reporting No.	Name of judge	Applicant	Offense specified	Kind: (W) Wire; (O) Oral	Date of application	Original period authorized (days)	Number of extensions	Total length of intercepts (days)	Place
12	Beldock	Golden	Homicide	W	do	20	2	60	Residence.
13	do	do	do	W	do	20	2	60	Do.
14	do	do	do	W	Dec. 26, 1968	20	2	60	Do.
15	Damiani	Hogan	Robbery	W	July 31, 1968	20	1	40	Do.
16	do	Koota	do	W	Aug. 19, 1968	20		20	Apartment.
17	do	do	do	W	do	20		20	Business.
18	do	do	do	W	do	20		20	Apartment.
19	do	Mackell	Stolen property	W	July 17, 1968	20	2	60	Multiple dwelling.
20	do	Koota	Stolen guns	W	Aug. 7, 1969	20	1	40	Residence.

TABLE B.—REPORTS BY STATE PROSECUTING OFFICERS, PURSUANT TO TITLE 18, UNITED STATES CODE, SEC. 2519, CONCERNING COURT AUTHORIZED INTERCEPTS OF WIRE OR ORAL COMMUNICATIONS

STATE OF NEW YORK, BRONX COUNTY

Reporting No.	Name of prosecutor	Nature of intercepts: Type	Nature of intercepts: Average frequency	Number of—: Persons	Intercepts	Incriminating intercepts	Cost: Manpower	Other resources	Total cost	Number of persons arrested
1	Dollinger	Phone call	Daily	25	200	22				2
2	Mackell	do	20 per day	2	103	2	$205.20	$6.00	$211.20	1
3	Dollinger	do	Daily	7	400	60				
4	do	do	do	6	51	8				
5	do	do	do	6	27	9				2
6	do	do	do	30	300	94				
7	do	do	do	8	65	15				4
8	do	do	do	4	35	3				
9	Mackell	do	9 per day	64	175	9	321.90	9.00	330.90	
10	Dollinger	do	Daily	6	200	75				6
11	Roberts	do	do	7	84	3				
12	do	do	do	13	145	41				
13	do	do	do	10	85	5				
14	do	do	do	15	350	25				
15	Dollinger	do	do	35	500	150				6
16	do	do	do	10	87					
17	do	do	do	9	140	27				
18	Roberts	do	do	25	370	100				10
19	do	do	do	20	450	75				6
20	do	do	do	20	465	270				6
21	Dollinger	do	do	8	625	75				6
22	do	do	do	5	82	26				2
23	Hogan	do	2 per day	19	33	15	8,000.00		8,000.00	
24	do	do	1 per day	12	37	35	6,000.00		6,000.00	
25	Roberts	do	Daily	15	220	80				2
26	Dollinger	do	do	150	600	3				
27	do	do	do	100	650	9				
28	do	do	do	2	150					
29	do	do	do	8	115	5				
30	do	do	do	5	250	71				2
31	Roberts	do	do	10	150	35				6
32	Dollinger	do	do	75	400	50				
33	do	do	do	75	500	75				17

STATE OF NEW YORK, KINGS COUNTY

1	Golden	Phone call	24 per day	5	120		$60.00	$6.00	$66.00	
2	do	do	20 per day	5	45		40.00	4.00	44.00	
3	do	do	15 per day	5	45		40.00	4.00	44.00	
4	do	do	29 per day	6	260	10	120.00	12.00	132.00	
5	do	do	25 per day	6	225		640.00	22.00	662.00	
6	do	do	42 per day	5	510	1	420.00	110.50	530.50	
7	do	do	10 per day	4	105		200.00	20.00	220.00	
8	do	do	13 per day	4	169	2	560.00	68.40	628.40	
9	do	do	25 per day	4	1,000	100	4,850.00	53.70	4,903.70	
10	do	do	10 per day	3	400	10	4,850.00	44.70	4,894.70	6
11	do	Dedicated wire (not installed).								
12	do	Phone call	36 per day	2	479	171	2,062.00	17.10	2,089.10	2
13	do	do	33 per day	2	431	365	1,775.00	17.25	1,892.25	1
14	do	do	23 per day	2	474	355	2,046.50	25.10	2,071.60	2
15	do	No report								
16	do	Phone call	17 per day	8	106		2,600.00	49.50	2,649.50	
17	do	do	10 per day	20	50	2	1,200.00	11.50	1,211.50	15
18	do	do	15 per day	7	107		2,600.00	11.50	2,611.50	
19	Mackell	do	3 per day	30	183	16	165.00	9.60	174.60	3
20	Golden	do	6 per day	1	55	4	155.00	32.00	187.00	1

TABLE A.—REPORTS BY STATE JUDGES PURSUANT TO TITLE 18, UNITED STATES CODE, SEC. 2519, ON APPLICATIONS FOR COURT ORDERS TO AUTHORIZE THE INTERCEPTION OF WIRE OR ORAL COMMUNICATIONS.

STATE OF NEW YORK, KINGS COUNTY

Reporting No.	Name of judge	Applicant	Offense specified	Kind (W) Wire (O) Oral	Date of application	Original period authorized (days)	Number of extensions	Total length of intercepts (days)	Place
21	Damiani	Koota	Stolen property	W	Aug. 29, 1968	20	1	40	Multiple dwelling.
22	do	Hogan	Stolen guns	W	Aug. 23, 1968	20	1	40	Residence.
23	do	Golden	Narcotics	W	Sept. 10, 1968	20	1	40	Apartment.
24	do	do	do	W	do	20	3	80	Do.

TABLE A.—REPORTS BY STATE JUDGES PURSUANT TO TITLE 18, UNITED STATES CODE, SEC. 2519, ON APPLICATIONS FOR COURT ORDERS TO AUTHORIZE THE INTERCEPTION OF WIRE OR ORAL COMMUNICATIONS—Continued

STATE OF NEW YORK, KINGS COUNTY—Continued

Reporting No.	Name of judge	Applicant	Offense specified	Kind (W) Wire (O) Oral	Date of application	Original period authorized (days)	Number of extensions	Total length of intercepts (days)	Place
25	Damiani	Hogan	Possession of forged instruments.	W	Aug. 23, 1968	20	1	40	Apartment.
26	do	Koota	Auto theft	W	Sept. 3, 1968	20	1	40	Do.
27	do	Golden	Larceny	W	Sept. 11, 1968	20	2	60	Business.
28	do	do	do	W	do	20	2	60	Do.
29	do	do	do	W	do	20	2	60	Do.
30	do	do	do	W	do	20	2	60	Do.
31	do	do	do	W	do	20	2	60	Do.
32	do	do	do	W	do	20	2	60	Do.
33	do	do	do	W	do	20	2	60	Do.
34	do	do	do	W	do	20	2	60	Do.
35	do	do	do	W	do	20	2	60	Do.
36	do	do	do	W	do	20	2	60	Do.
37	do	Hogan	Bribery	W	Oct. 9, 1968	20		20	Residence.
38	do	Golden	Assault	W	Oct. 4, 1968	20	1	40	Do.
39	Kern	Koota	Gun law	W	Aug. 2, 1968	20		20	Do.
40	do	Hogan	Robbery	W	Aug. 31, 1968	20	1	40	Apartment.
41	McDonald	Ingrassia	Drugs	W	Aug. 5, 1968	20	2	60	Residence.
42	do	do	do	W	do	20	2	60	Do.
43	do	do	do	W	do	20	2	60	Beauty parlor.
44	do	North	do	W	Oct. 10, 1968	20		20	Funeral parlor.
45	do	do	do	W	do	20		20	Residence.
46	do	do	do	W	Nov. 4, 1968	20	2	60	Funeral parlor.
47	Rinaldi	Golden	Narcotics	W	Oct. 8, 1968	20	1	40	Apartment.
48	do	do	do	W	do	20	1	40	Do.
49	Ryan	Mackell	Drugs	W	Aug. 7, 1968	20		20	Multiple dwelling.
50	do	do	Robbery	W	Aug. 5, 1968	20		20	Residence.
51	Starkey	Golden	Narcotics	W	Nov. 21, 1968	20		20	Apartment.
52	do	do	Homicide	W	do	20	1	40	Do.
53	do	do	do	W	do	20	1	40	Do.
54	do	do	do	W	do	20		20	Do.
55	do	do	do	W	do	20		20	Do.
56	do	do	do	W	do	20		20	Do.
57	do	do	Extortion	W	Nov. 27, 1968	20	1	40	Business.
58	do	do	do	W	do	20	1	40	Do.
59	do	do	do	W	do	20	1	40	Do.
60	do	do	do	W	do	20	1	40	Do.
61	do	do	do	W	do	20	1	40	Do.
62	do	do	Narcotics	W	Nov. 25, 1968	20		20	Residence.
63	do	do	do	W	Dec. 4, 1968	20		20	Do.
64	do	Hogan	Kidnaping	W	Dec. 10, 1968	20		20	Business.
65	do	Golden	Larceny	W	Dec. 19, 1968	20		20	Apartment.
66	do	do	Narcotics	W	Dec. 24, 1968	20		20	Do.
67	do	do	do	W	do	20		20	Do.
68	do	do	do	W	do	20		20	Business.

TABLE B.—REPORTS BY STATE PROSECUTING OFFICERS, PURSUANT TO TITLE 18, UNITED STATES CODE, SEC. 2519, CONCERNING COURT AUTHORIZED INTERCEPTS OF WIRE OR ORAL COMMUNICATIONS

STATE OF NEW YORK, KINGS COUNTY

Reporting No.	Name of prosecutor	Nature of intercepts		Number of—			Cost			Number of persons arrested
		Type	Average frequency	Persons	Intercepts	Incriminating intercepts	Manpower	Other resources	Total cost	
21										
22	Hogan	Phone call	3 per day	8	25	25	$1,500.00	$50.00	$1,550.00	2
23	Golden	do	10 per day	1	66		1,140.00	8.85	1,148.85	
24	do	do	25 per day	2	78	23	240.00	20.50	260.50	1
25	Hogan	do	1 in 3 days	6	13	11	6,500.00	300.00	6,800.00	3
26	Golden	do	15 per day	2	600	300	4,120.00	12.75	4,132.75	3
27	do	do	35 per day	4	1,845	2	542.50	59.50	602.00	
28	do	do	25 per day	3	1,050	3	710.00	56.80	766.80	
29	do	do	35 per day	5	1,470	24	610.00	90.50	700.50	
30	do	do	12 per day	3	474	3	532.50	56.50	589.00	
31	do	do	10 per day	3	333	2	497.50	54.50	552.00	
32	do	do	25 per day	2	940	8	520.00	76.50	596.50	
33	do	do	14 per day	3	546	7	695.00	70.50	765.50	
34	do	do	15 per day	2	570	2	505.00	76.50	581.50	
35	do	do	10 per day	2	360	1	480.00	74.50	554.50	
36	do	do	20 per day	3	720	3	510.00	78.20	588.20	
37	Hogan	do	16 per day	24	119	77	1,900.00	20.00	1,920.00	5
38	Golden	do	27 per day	2	876	360	1,017.00	39.40	1,056.40	1
39	Koota	do	5 per day	2	100	9	155.00	16.00	171.00	
40	Hogan	do	4 per day	26	166	145	8,125.00		8,125.00	8
41	Ingrassia	do	15 per day	10	5,500		600.00	400.00	1,000.00	
42	do	do	8 per day	3	500		300.00	100.00	400.00	
43	do	do	10 to 20 per day	4	800		300.00	100.00	400.00	
44	North	do								
45	do	do								
46	do	do								
47	Golden	do	45 per day	2	732	226	4,580.00	19.70	4,599.70	
48	do	do	1 per day	1	37		400.00	14.10	414.10	
49	Mackell	do	6 per day	14	63	3	134.40	3.60	138.00	
50	do	do	1 per day	2	2	4	5.13	1.20	6.33	
51	Golden	do	7 per day	2	46	2	120.00	7.70	127.70	
52	do	do	22 per day	2	2,188	950	2,217.00	72.00	2,289.00	
53	do	Not installed								
54	do	Phone call	17 per day	2	429	322	2,093.00	41.70	2,134.70	
55	do	do	18 per day	2	259	207	1,852.00	41.85	1,894.35	
56	do	do	32 per day	2	482	192	2,093.00	21.00	2,114.00	
57	do	do	30 per day	5	360	6	480.00	70.00	550.00	
58	do	do	12 per day	3	158	1	146.00	11.00	157.00	
59	do	do	10 per day	3	107		383.00	7.00	390.00	
60	do	do	14 per day	3	182	2	239.00	58.50	297.50	
61	do	do	35 per day	5	385	14	275.00	22.00	297.00	
62	do	do	30 per day	7	719	234	3,090.00	69.40	3,159.40	
63	do	do	15 per day	2	298	139	4,520.00	30.85	4,550.85	
64	Hogan	do	1 per day	22	24	24	3,450.00		3,450.00	7
65	Golden	do	13 per day	4	143	11	205.00	27.65	232.65	
66	do	do	18 per day	7	372	61	750.00	14.00	764.00	
67	do	do	15 per day	2	380	5	1,280.00	7.25	1,287.25	
68	do	do	8 per day	2	125		690.00	19.00	709.00	

TABLE A.—REPORTS BY STATE JUDGES PURSUANT TO TITLE 18, UNITED STATES CODE, SEC. 2519, ON APPLICATIONS FOR COURT ORDERS TO AUTHORIZE THE INTERCEPTION OF WIRE OR ORAL COMMUNICATIONS

STATE OF NEW YORK, ONONDAGA COUNTY

Reporting number	Name of judge	Applicant	Offense specified	Kind (W) Wire (O) Oral	Date of application	Original period authorized (days)	Number of extensions	Total length of intercepts (days)	Place
1	Farnham	Gualtieri	Drugs	W	July 11, 1968	20		20	Multiple dwelling.
2	do	do	do	W	Aug. 20, 1968	20		20	Residence.
3	do	do	Robbery	W	Oct. 1, 1968	20	1	40	Do.
4	do	do	Gambling	W	Oct. 1, 1968	20		20	Market.
5	do	do	do	W	Oct. 31, 1968	20		20	Residence.
6	do	do	do	W	Nov. 16, 1968	20		20	Do.
7	do	do	do	W	Nov. 26, 1968	20		(1)	Apartment.
8	do	do	do	W	Nov. 26, 1968	20		20	Do.
9	do	do	do	W	Dec. 5, 1966	20		20	Business.
10	do	do	do	W	Nov. 26, 1968	20		20	Do.
11	do	do	do	W	Dec. 5, 1968	20		20	Residence.
12	do	do	do	W	Dec. 12, 1968	20		(1)	Apartment.
13	do	do	do	W	do	20		20	Residence.
14	do	do	do	W	Dec. 19, 1968	20		20	Apartment.
15	Orenstein	do	Drugs	W	Dec. 3, 1968	20	2	60	Multiple dwelling.
16	do	do	Burglary	W	Dec. 20, 1968	20		20	Apartment.
17	Moran	do	Gambling	W	Dec. 27, 1968	20		20	Residence.
18	do	do	do	W	July 31, 1968	20		20	Restaurant.
19	do	do	do	W	Dec. 27, 1968	20		20	Apartment.
20	Aronson	do	do	W	Nov. 13, 1968	20	1	40	Business.
21	Mead	do	do	W	Nov. 7, 1968	20	1	40	Residence.

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1	H	Mackell		W		20	6	140	Multiple dwelling.
2	Balsam	do	Drugs	W	June 28, 1968	20		20	Apartment.
3	do	do	do	W	July 22, 1968	20		20	Do.
4	do	do	do	W	Aug. 1, 1968	20		20	Multiple dwelling.
5	do	do	Robbery	W	Aug. 5, 1968	20		20	Residence.
6	do	do	Drugs	W	Aug. 5, 1968	20		20	Do.
7	do	do	do	W	Aug. 9, 1968	20	1	40	Apartment.
8	do	do	do	W	Sept. 10, 1968	20		20	Do.
9	do	do	do	W	Sept. 25, 1968	20		20	Residence.
10	do	do	do	W	do	20	1	40	Apartment.
11	do	do	do	W	do	20	1	40	Residence.
12	do	do	do	W	Oct. 22, 1968	20	1	40	Apartment.
13	do	do	do	W	Oct. 23, 1968	20	2	60	Do.
14	do	do	do	W	Nov. 21, 1968	20		(1)	Multiple dwelling.
15	do	do	do	W	Dec. 10, 1968	20		(1)	Do.
16	Bosch	do	do	W	Aug. 15, 1968	20		20	Apartment.
17	do	do	Homicide	W	Aug. 30, 1968	20	2	60	Do.
18	Livoti	do	Drugs	W	Sept. 16, 1968	20	2	60	Do.
19	Schweitzer	do	do	W	Oct. 30, 1968	20	2	60	Multiple dwelling.
20	Shapiro	Williams	Homicide	W	Aug. 19, 1968	20		20	
21	do	do	do	W	Oct. 14, 1968	20		20	

(1) Not executed.

TABLE B.—REPORTS BY STATE PROSECUTING OFFICERS, PURSUANT TO TITLE 18, UNITED STATES CODE, SEC. 2519, CONCERNING COURT AUTHORIZED INTERCEPTS OF WIRE OR ORAL COMMUNICATIONS

STATE OF NEW YORK, ONONDAGA COUNTY

Reporting No.	Name of prosecutor	Nature of intercepts: Type	Nature of intercepts: Average frequency	Number of—: Persons	Number of—: Intercepts	Number of—: Incriminating intercepts	Cost: Manpower	Cost: Other resources	Cost: Total cost	Number of persons arrested
1	Gualtieri	Phone call	3 per day	15	61	50	$121.36		$121.36	1
2	do	do	5 minutes	42	210	41	1,200.00		1,200.00	
3	do	do		53	516	40	235.00		235.00	
4	do	do	23 per day	100	425		122.36		122.36	
5	do	do	Daily	25	366	331	660.00	$60.00	720.00	4
6	do	do	do	15	315	70	660.00	54.00	714.00	3
7	do	Not executed								
8	do	Phone call	Daily	35	619	553	660.00	57.00	717.00	3
9	do	do	do	25	288	101	500.00	54.00	554.00	5
10	do	do	do	50	230	30	525.00	57.00	582.00	1
11	do	do	do	9	218	14	400.00	33.00	433.00	1
12	do	Not executed								
13	do	Phone call	Daily	15	355	15	660.00	75.00	735.00	3
14	do	do	do	20	179	159	300.00	15.00	315.00	3
15	do	do	28 per day	60	1,669	177	432.00		432.00	
16	do	do	5 milnues	34	194	15	115.00		115.00	
17	do	do	Daily	25	366	213	440.00	45.00	485.00	3
18	do	do	46 per day	350	916		216.08		261.08	
19	do	do	Daily	30	52	52	440.00	9.00	449.00	2
20	do	do	do	45	1,732	1,688	1,110.00	141.00	1,251.00	10
21	do	do	do	30	900	360	850.00	111.00	961.00	8

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1	Mackell									
2	do	Phone call	4 per day	12	80		44.80	2.40	47.20	
3	do	do	8 per day	19	77	10	61.56	3.60	65.16	1
4	do	do	19 per day	33	241	21	384.84	10.40	359.24	2
5	do	do	40 per day	15	800	6	224.00	12.00	236.00	
6	do	do	15 per day	72	276	7	241.23	13.20	254.43	
7	do	do	7 per day	49	273	90	112.00	6.00	118.00	
8	do	do	9 per day	22	148	10	82.08	4.80	86.88	
9	do	do	7 per day	26	119		205.20	12.00	217.20	
10	do	do	do	37	199	41	313.60	8.40	322.00	
11	do	do	14 per day	35	573	192	403.20	10.80	414.00	5
12	do	do	40 per day	277	1,437	106	1,707.12	91.20	1,798.32	4
13	do	do	4 per day	30	200	15	143.61	8.40	152.01	1
14	do	Device not installed								
15	do	Interception never executed, subscriber had phone disconnected.								
16	do	Phone call, no conversations recorded, phone was dead.					20.52	1.20	21.72	
17	do	Phone call	5 per day	3	310	38	1,600.56	46.80	1,647.36	
18	do	do	7 per day	44	415	61	264.24	7.20	253.44	3
19	do	do	11 per day	39	558	63	10.26	.60	10.86	3

ADMINISTRATIVE OFFICE OF THE U.S. COURTS

REGULATIONS RELATING TO REPORTS ON INTERCEPTED WIRE OR ORAL COMMUNICATIONS REQUIRED TO BE MADE UNDER THE OMNIBUS CRIME CONTROL AND SAFE STREETS ACT OF 1968, TITLE 18, UNITED STATES CODE, SECTION 2519

Introduction

These regulations are issued pursuant to the authority contained in Section 802 of Title III of the Omnibus Crime Control and Safe Streets Act of 1968, approved June 19, 1968, 82 Stat. 197; Title 18, United States Code, Section 2519(3). They prescribe the form of reports which are required by that subsection to be filed with the Director of the Administrative Office of the United States Courts—(1) by any state or federal judge approving or denying an application for a court order authorizing the interception of an oral or wire communication, and (2) by any prosecuting officer, state or federal, who has authorized an application for such a court order by an investigative or law enforcement officer.

The regulations are in three parts. Part I prescribes the content and form of reports required to be filed by a state or federal judge. Part II prescribes the content and form of reports required to be filed by the Attorney General of the United States or his designee, or by the principal prosecuting attorney of a state or political subdivision thereof. Part III prescribes the procedure for submitting reports.

The text of Title III of the Omnibus Crime Control and Safe Streets Act of 1968 is set out in Appendix A.

Part I—Reports by State and Federal judges

Sec. 100. Judges required to file reports

Judges required by law to file reports include:

(1) A judge of any court of general criminal jurisdiction of a State *who is authorized by a specific statute of that State to enter orders* authorizing interceptions of wire or oral communications, including judges in the District of Columbia, the Commonwealth of Puerto Rico and any territory or possession of the United States;

(2) A judge of a United States court of appeals; or

(3) A judge of a United States district court.

Sec. 101. Time of Filing

(1) Reports required to be filed by a judge are to be forwarded:

(a) In the case of the denial of an application, on or before the 30th day following the denial.

(b) In the case of the issuance, or extension, of an order entered in accordance with Title 18, United States Code, Section 2518—

(i) On or before the 30th day following the expiration of the order, or

(ii) If there has been an extension of an order (granted prior to its expiration), on or before the 30th day following the expiration of the extended period.

(2) No report submitted by a judge under these regulations should be filed until *after* the authorized period of the interception, or extension thereof, has expired.

Sec. 102. Content of Reports Filed by Judges

(1) A report by a judge issuing or denying an application for the interception of an oral or wire communication should conform as nearly as possible to the format of *Form No. 1*, attached to these regulations as Appendix B. The use of this form, however, is not mandatory. A letter or statement containing the essential information set forth in subsection (2) of this section will be satisfactory.

(2) The report by a judge must contain the following items of information:

(a) The name and title of the judge and the name and address of the court.

(b) The date of the original application and the identifying number of the application, if a number identification system is used.

(c) The name, title and address of the prosecuting officer who authorized the application.

(d) The name and address of the applying investigative or law enforcement officer and the agency involved.

(e) An indication as to whether the application was for the interception of either an oral or a wire communication.

(f) The offense specified in the order or application for an extension of the order. A general description of the offense such as gambling, narcotics, racketeering, murder, etc. will suffice. See the offenses set forth in Section 2516 of the Act.

(g) The dates of court action and a statement as to whether an application was granted as applied for, granted with modifications, or denied. If the order was made with modifications, a brief description should be provided.

(h) The period of interception authorized by the order and the number and duration of any extensions of the order.

(i) The nature of the facilities from which or the place where communications were to be intercepted—such as office, home, telephone booth, commercial or industrial establishment, etc.

(3) The report by a judge should not contain a disclosure of the name of any individual whose communication may have been intercepted, nor any disclosure that could be used to identify the specific address of the premises involved.

(4) A report is not required to be filed in regard to an order issued permitting the interception of an oral or wire communication, where the order is issued at the request of, or with the consent of, one of the principal parties to the communication, such as a wire interception to investigate obscene telephone calls, where the interception device was installed at the request of the victim.

Sec. 103. Submission of Reports

Instructions concerning the submission of reports are contained in Part III.

Part II—Reports by prosecuting officers

Sec. 200. Prosecuting Officers Required to File Reports

(1) Any prosecuting officer who has authorized an aplication to a judge for a court order to permit an interception of an oral or wire communication is required to file an *annual report* with respect to *each* such application that has been made. This is the responsibility of the following officials:

(a) The Attorney General of the United States or his designee;

(b) The Attorney General or Principal Prosecuting Officer of a State, the District of Columbia, the Commonwealth of Puerto Rico, and any territory or possession of the United States; and

(c) The principal prosecuting attorney for any political subdivision of a State at the county level or above.

Sec. 201. Time of Filing.

(1) Reports by prosecuting officers are required to be filed on or before January 31st of each year.

(2) No report by a prosecuting official should include any information regarding an application for a court order, where the period of the interception permitted by the court order has not expired.

Section 202. Content of Annual Reports by Prosecuting Officials

(1) The report by a prosecuting officer should conform as nearly as possible to the format of *Form No. 2* attached to these regulations as Appendix C. The use of this form, however, is not mandatory. A letter or statement containing the essential information set forth in subsection (3) of this section will be satisfactory.

(2) The report should include information concerning:

(a) All applications for court orders and extensions of court orders made during the immediate preceding year (provided that the period of the authorized interception has expired); and

(b) All applications aproved in prior years which resulted in arrests, trials, or convictions during the immediate preceding year.

(3) Each report must contain the following items of information regarding each application resulting in a communication intercept;

(a) The same nine items of information required to be furnished by a judge issuing or denying an application, as set forth in Section 102(2) of these regulations.

(b) A brief report on *each* authorized interception which should include a "general description of the interceptions made under such order or extension, including (i) the approximate nature and frequency of incriminating communications intercepted, (ii) the approximate nature and frequency of other communications intercepted (such as a friendly call, or a business call having no relation to the investigation), (iii) the approximate number of persons whose communications were intercepted, and (iv) the nature, amount, and cost of the manpower and other resources used in the interceptions."

(c) The number of arrests made and the offenses charged in the arrests (such as gambling, narcotics, racketeering, murder, etc.).

(d) The number of trials resulting from these interceptions.

(e) The number of motions to suppress (quash evidence) made with respect to the intercepted communications, together with the number of such motions granted or denied.

(f) The number of convictions resulting from such interceptions; the offenses for which the convictions were obtained; and a general assessment of the importance of the interceptions.

(4) The report by a prosecuting official should be statistical in character and should not disclose the name of any individual being investigated, nor any specific address of a place involved in the communication intercept.

Sec. 203. Submission of Reports

Instructions concerning the submission of reports are contained in Part III.

Part III—Filing of reports

Sec. 300. Submission of Reports

Reports submitted under Parts I and II of these regulations should cover only those applications made to a court on or after June 19, 1968, the effective date of the Act.

Sec. 301. Mailing Address

All reports should be addressed to:

Director, Administrative Office of the United States Courts, Supreme Court Building, Washington, D.C. 20544.

Sec. 302. Forms

The use of the suggested forms attached to these regulations (Forms No. 1 and No. 2) is not mandatory and no separate distribution of these forms will be made. However, they may be reproduced locally by the electrostatic process or other suitable means of reproduction.

TO: DIRECTOR; ADMINISTRATIVE OFFICE OF U.S. COURTS; SUPREME COURT BLDG.; WASHINGTON, D.C. 20544

REPORT OF APPLICATION AND/OR ORDER AUTHORIZING INTERCEPTION OF COMMUNICATION—FORM 1

Person making this report:

Judge's Name_____

Court address_____

Source of application

A. The official making application:
Person's name----------
Person's title----------
Agency's name----------
Agency's address----------
B. Official authorizing application:
(Show "Same" if same as "A")
Person's name----------
Person's title----------
Agency's name----------
Agency's address----------

Offenses

Application:
Offenses specified----------
Order or extension:
Denied ----------
Granted ----------
Granted with these changes----------
Date of order----------
Kind of communication being intercepted— Wire, Oral.
Date of application----------
Period originally requested----------

Duration of intercept

Length of extensions requested:
1st ----------
2nd ----------
3d ----------

Place

Residence ------, multiple dwelling ------, apartment ------, business location (specify) ------, other (specify) -------
Comments ----------
Date of report----------
Signature ----------

To: DIRECTOR; ADMINISTRATIVE OFFICE OF U.S. COURTS; SUPREME COURT BLDG.; WASHINGTON, D.C. 20544

REPORT OF POLICE & COURT ACTION RESULTING FROM INTERCEPTED COMMUNICATIONS— FORM 2

Court authorizing the intercepts:
Name of Judge----------
Court ----------
Address ----------
Person making this report and who authorized the interception application:
Name ----------
Title ----------
Agency ----------
Address ----------
Name & Agency of person making application for inteception (if different from above) ----------
Application:
Offenses specified----------
Order or extension:
Denied ----------
Granted----------
Granted with these changes----------
Date of order----------
Kind of communication being intercepted— Wire, Oral.
Date of application----------
Period originally requested----------
Length of extension requested:
1st ----------
2nd ----------
3d ----------
Residence ------, multiple dwelling ------, apartment ------, business location (specify) ------, other (specify) -------

Description of intercepts

Nature of interceptions:
Average frequency----------
Number of:
Persons whose communications were intercepted ----------
Communications intercepted----------
Incriminating communications intercepted ----------

Cost

Nature and quantity of manpower used--
Nature of other resources----------
Manpower cost, $----------; resource cost, $----------; total cost, $----------.

Results

Approximate number of actions resulting from interceptions:
Arrests and offenses charged----------
Trials ----------
Motions and suppress:
Made ----------, granted ----------, denied ----------.
Convictions and offenses----------
An assessment of the importance of the interceptions in obtaining such convictions
----
Date of report----------
Signature ----------

MESSAGES FROM THE PRESIDENT

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

THE PUBLIC WELFARE SYSTEM— MESSAGE FROM THE PRESIDENT (H. DOC. NO. 91–146)

The PRESIDING OFFICER laid before the Senate the following message from the President of the United States, which was referred to the Committee on Finance:

To the Congress of the United States:

A measure of the greatness of a powerful nation is the character of the life it creates for those who are powerless to make ends meet.

If we do not find the way to become a working nation that properly cares for the dependent, we shall become a Welfare State that undermines the incentive of the working man.

The present welfare system has failed us—it has fostered family breakup, has provided very little help in many States and has even deepened dependency by all-too-often making it more attractive to go on welfare than to go to work.

I propose a new approach that will make it more attractive to go to work than to go on welfare, and will establish a nationwide minimum payment to dependent families with children.

I propose that the Federal government pay a basic income to those American families who cannot care for themselves in whichever State they live.

I propose that dependent families receiving such income be given good reason to go to work *by making the first sixty dollars a month they earn completely their own, with no deductions from their benefits.*

I propose that we *make available an addition to the incomes of the "working poor,"* to encourage them to go on working and to eliminate the possibility of making more from welfare than from wages.

I propose that these payments be made upon certification of income, with demeaning and costly investigations replaced by simplified reviews and spot checks and with *no eligibility requirement that the household be without a father.* That present requirement in many States has the effect of breaking up families and contributes to delinquency and violence.

I propose that all employable persons who choose to accept these payments be required to register for work or job training and *be required to accept that work or training,* provided suitable jobs are available either locally or if transportation is provided. Adequate and convenient day care would be provided children wherever necessary to enable a parent to train or work. The only exception to this work requirement would be mothers of pre-school children.

I propose *a major expansion of job training and day care facilities,* so that current welfare recipients able to work can be set on the road to self-reliance.

I propose that we also *provide uniform Federal payment minimums for the present three categories of welfare aid to adults*—the aged, the blind and the disabled.

This would be total welfare reform—the transformation of a system frozen in failure and frustration into a system that would work and would encourage people to work.

Accordingly, we have stopped considering human welfare in isolation. The new plan is part of an overall approach which includes a comprehensive new Manpower Training Act, and a plan for a system of revenue sharing with the States to help provide all of them with necessary budget relief. Messages on manpower training and revenue sharing will follow this message tomorrow and the next day, and the three should be considered as parts of a whole approach to what is clearly a national problem.

NEED FOR NEW DEPARTURES

A welfare system is a success when it takes care of people who cannot take care of themselves and when it helps employable people climb toward independence.

A welfare system is a failure when it takes care of those who *can* take care of themselves, when it drastically varies payments in different areas, when it breaks up families, perpetuates a vicious cycle of dependency, when it strips human beings of their dignity.

America's welfare system is a failure that grows worse every day.

First, it fails the recipient: In many areas, benefits are so low that we have hardly begun to take care of the dependent. And there has been no light at the end of poverty's tunnel. After four years of inflation, the poor have generally become poorer.

Second, it fails the taxpayer: Since 1960, welfare costs have doubled and the number on the rolls has risen from 5.8 million to over 9 million, all in a time when unemployment was low. The taxpayer is entitled to expect government to devise a system that will help people lift themselves out of poverty.

Finally, it fails American society: By breaking up homes, the present welfare system has added to social unrest and robbed millions of children of the joy of

childhood; by widely varying payments among regions, it has helped to draw millions into the slums of our cities.

The situation has become intolerable. Let us examine the alternatives available:

—We could permit the welfare momentum to continue to gather speed by our inertia; by 1975 this would result in 4 million more Americans on welfare rolls at a cost of close to 11 billion dollars a year, with both recipients and taxpayers shortchanged.

—We could tinker with the system as it is, adding to the patchwork of modifications and exceptions. That has been the approach of the past, and it has failed.

We could adopt a "guaranteed minimum income for everyone," which would appear to wipe out poverty overnight. It would also wipe out the basic economic motivation for work, and place an enormous strain on the industrious to pay for the leisure of the lazy.

Or, we could adopt a totally new approach to welfare, designed to assist those left far behind the national norm, and provide all with the motivation to work and a fair share of the opportunity to train.

This Administration, after a careful analysis of all the alternatives, is committed to a new departure that will find a solution for the welfare problem. The time for denouncing the old is over; the time for devising the new is now.

RECOGNIZING THE PRACTICALITIES

People usually follow their self-interest.

This stark fact is distressing to many social planners who like to look at problems from the top down. Let us abandon the ivory tower and consider the real world in all we do.

In most States, welfare is provided only when there is no father at home to provide support. If a man's children would be better off on welfare than with the low wage he is able to bring home, wouldn't he be tempted to leave home?

If a person spent a great deal of time and effort to get on the welfare rolls, wouldn't he think twice about risking his eligibility by taking a job that might not last long?

In each case, welfare policy was intended to limit the spread of dependency; in practice, however, the effect has been to increase dependency and remove the incentive to work.

We fully expect people to follow their self-interest in their business dealings; why should we be surprised when people follow their self-interest in their welfare dealings? That is why we propose a plan in which it is in the interest of every employable person to do his fair share of work.

THE OPERATION OF THE NEW APPROACH

1. *We would assure an income foundation throughout every section of America for all parents who cannot adequately support themselves and their children.* For a family of four with less than $1,000 income, this payment would be $1600 a year; for a family of four with $2,000 income, this payment would supplement that income by $960 a year.

Under the present welfare system, each State provides "Aid to Families with Dependent Children," a program we propose to replace. The Federal government shares the cost, but each State establishes key eligibility rules and determines how much income support will be provided to poor families. The result has been an uneven and unequal system. The 1969 benefits average for a family of four is $171 a month across the Nation, but individual State averages range from $263 down to $39 a month.

A new Federal minimum of $1600 a year cannot claim to provide comfort to a family of four, but the present low of $468 a year cannot claim to provide even the basic necessities.

The new system would do away with the inequity of very low benefit levels in some States, and of State-by-State variations in eligibility tests, by establishing a Federally-financed income floor with a national definition of basic eligibility.

States will continue to carry an important responsibility. In 30 States the Federal basic payment will be less than the present levels of combined Federal and State payments. These States will be required to maintain the current level of benefits, but in no case will a State be required to spend more than 90% of its present welfare cost. The Federal government will not only provide the "floor," but it will assume 10% of the benefits now being paid by the States as their part of welfare costs.

In 20 States, the new payment would exceed the present average benefit payments, in some cases by a wide margin. In these States, where benefits are lowest and poverty often the most severe, the payments will raise benefit levels substantially. For 5 years, every State will be required to continue to spend at least half of what they are now spending on welfare, to supplement the Federal base.

For the *typical "welfare family"*—a mother with dependent children and no outside income—the new system would provide a basic national minimum payment. A mother with three small children would be assured an annual income of at least $1600.

For the *family headed by an employed father or working mother,* the same basic benefits would be received, but $60 per month of earnings would be "disregarded" in order to make up the costs of working and provide a strong advantage in holding a job. The wage earner could also keep 50% of his benefits as his earnings rise above that $60 per month. A family of four, in which the father earns $2,000 in a year, would receive payments of $960, for a total income of $2,960.

For the *aged, the blind and the disabled,* the present system varies benefit levels from $40 per month for an aged person in one State to $145 per month for the blind in another. The new system would establish a minimum payment of $65 per month for all three of these adult categories, with the Federal government contributing the first $50 and sharing in payments above that amount. This will raise the share of the financial burden borne by the Federal government for payments to these adults who cannot support themselves, and should pave the way for benefit increases in many States.

For the *single adult* who is not handicapped or aged, or for the *married couple without children,* the new system would not apply. Food stamps would continue to be available up to $300 per year per person, according to the plan I outlined last May in my message to the Congress on the food and nutrition needs of the population in poverty. For dependent families there will be an orderly substitution of food stamps by the new direct monetary payments.

2. *The new approach would end the blatant unfairness of the welfare system.*

In over half the States, families headed by unemployed men do not qualify for public assistance. In no State does a family headed by a father working full-time receive help in the current welfare system, no matter how little he earns. As we have seen, this approach to dependency has itself been a cause of dependency. It results in a policy that tends to force the father out of the house.

The new plan rejects a policy that undermines family life. It would end the substantial financial incentives to desertion. It would extend eligibility to *all* dependent families with children, without regard to whether the family is headed by a man or a woman. The effects of these changes upon human behavior would be an increased will to work, the survival of more marriages, the greater stability of families. We are determined to stop passing the cycle of dependency from generation to generation.

The most glaring inequity in the old welfare system is the exclusion of families who are working to pull themselves out of poverty. Families headed by a nonworker often receive more from welfare than families headed by a husband working full-time at very low wages. This has been rightly resented by the working poor, for the rewards are just the opposite of what they should be.

3. *The new plan would create a much stronger incentive to work.*

For people now on the welfare rolls, the present system discourages the move from welfare to work by cutting benefits too fast and too much as earnings begin. *The new system would encourage work by allowing the new worker to retain the first $720 of his yearly earnings without any benefit reduction.*

For people already working, but at poverty wages, the present system often encourages nothing but resentment and an incentive to quit and go on relief where that would pay more than work. The new plan, on the contrary, would provide a supplement that will help a low-wage worker—struggling to make ends meet—achieve a higher standard of living.

For an employable person who just chooses not to work, neither the present system nor the one we propose would support him, though both would continue to support other dependent members in his family.

However, a welfare mother with preschool children should not face benefit reductions if she decides to stay home. It is not our intent that mothers of preschool children must accept work. Those who can work and desire to do so, however, should have the opportunity for jobs and job training and access to day care centers for their children; this will enable them to support themselves after their children are grown.

A family with a member who gets a job would be permitted to retain all of the *first $60 monthly income,* amounting to $720 per year for a regular worker, *with no reduction of Federal payments.* The incentive to work in this provision is obvious. But there is another practical reason: Going to work costs money. Expenses such as clothes, transportation, personal care, Social Security taxes and loss of income from odd jobs amount to substantial costs for the average family. Since a family does not begin to *add* to its net income until it surpasses the cost of working, in fairness this amount should not be subtracted from the new payment.

After the first $720 of income, the *rest* of the earnings will result in a systematic reduction in payments.

I believe the vast majority of poor people in the United States prefer to work rather than have the government support their families. In 1968, 600,000 families left the welfare rolls out of an average caseload of 1,400,000 during the year, showing a considerable turnover, much of it voluntary.

However, there may be some who fail to seek or accept work, even with the strong incentives and training opportunities that will be provided. It would not be fair to those who willingly work, or to all taxpayers, to allow others to choose idleness when opportunity is available. Thus, they must accept training opportunities and jobs when offered, or give up their right to the new payments for themselves. No able-bodied person will have a "free ride" in a nation that provides opportunity for training and work.

4. *The bridge from welfare to work should be buttressed by training and child care programs.* For many, the incentives to work in this plan would be all that is necessary. However, there are other situations where these incentives need to be supported by measures that will overcome other barriers to employment.

I propose that funds be provided for expanded training and job development programs so that an additional 150,000 welfare recipients can become jobworthy during the first year.

Manpower training is a basic bridge to work for poor people, especially people with limited education, low skills and limited job experience. Manpower training programs can provide this bridge for many of our poor. In the new Manpower Training proposal to be sent to the Congress this week, the interrelationship with this new approach to welfare will be apparent.

I am also requesting authority, as a part of the new system, to provide child care for the 450,000 children of the 150,000 current welfare recipients to be trained.

The child care I propose is more than custodial. This Administration is committed to a new emphasis on child development in the first five years of life. The day care that could be part of this plan would be of a quality that will help in the development of the child and provide for its health and safety, and would break the poverty cycle for this new generation.

The expanded child care program would bring new opportunities along several lines: opportunities for the further involvement of private enterprise in providing high quality child care service; opportunities for volunteers; and opportunities for *training and employment in child care centers of many of the welfare mothers themselves.*

I am requesting a total of $600 million additional to fund these expanded training programs and child care centers.

5. *The new system will lessen welfare red tape and provide administrative cost savings.* To cut out the costly investigations so bitterly resented as "welfare snooping," the Federal payment will be based upon a certification of income, with spot checks sufficient to prevent abuses. The program will be administered on an automated basis, using the information and technical experience of the Social Security Administration, but, of course, will be entirely separate from the administration of the Social Security trust fund.

The States would be given the option of having the Federal Government handle the payment of the State supplemental benefits on a reimbursable basis, so that they would be spared their present administrative burdens and so a single check could be sent to the recipient. These simplifications will save money and eliminate indignities; at the same time, welfare fraud will be detected and lawbreakers prosecuted.

6. *This new departure would require a substantial initial investment, but will yield future returns to the Nation.* This transformation of the welfare system will set in motion forces that will lessen dependency rather than perpetuate and enlarge it. A more productive population adds to real economic growth without inflation. The initial investment is needed now to stop the momentum of work-to-welfare, and to start a new momentum in the opposite direction.

The costs of welfare benefits for families with dependent children have been rising alarmingly the past several years, increasing from $1 billion in 1960 to an estimated $3.3 billion in 1969, of which $1.8 billion is paid by the Federal government, and $1.5 billion is paid by the States. Based on current population and income data, the proposals I am making today will increase Federal costs during the first year by an estimated $4 billion, which includes $600 million for job training and child care centers.

The "start-up costs" of lifting many people out of dependency will ultimately cost the taxpayer far less than the chronic costs—in dollars and in national values—of creating a permanent underclass in America.

FROM WELFARE TO WORK

Since this Administration took office, members of the Urban Affairs Council, including officials of the Department of Health, Education and Welfare, the Department of Labor, the Office of Economic Opportunity, the Bureau of the Budget, and other key advisers, have been working to develop a coherent, fresh approach to welfare, manpower training and revenue sharing.

I have outlined our conclusions about an important component of this approach in this message; the Secretary of HEW will transmit to the Congress the proposed legislation after the summer recess.

I urge the Congress to begin its study of these proposals promptly so that laws can be enacted and funds authorized to begin the new system as soon as possible. Sound budgetary policy must be maintained in order to put this plan into effect—especially the portion supplementing the wages of the working poor.

With the establishment of the new approach, the Office of Economic Opportunity will concentrate on the important task of finding new ways of opening economic opportunity for those who are able to work. Rather than focusing on income support activities, it must find means of providing opportunities for individuals to contribute to the full extent of their capabilities, and of developing and improving those capabilities.

This would be the effect of the transformation of welfare into "workfare," a new work-rewarding system:

For the first time, all dependent families with children in America, regardless of where they live, would be assured of minimum standard payments based upon uniform and single eligibility standards.

For the first time, the more than two million families who make up the "working poor" would be helped toward self-sufficiency and away from future welfare dependency.

For the first time, training and work opportunity with effective incentives would be given millions of families who would otherwise be locked into a welfare system for generations.

For the first time, the Federal Government would make a strong contribution toward relieving the financial burden of welfare payments from State governments.

For the first time, every dependent family in America would be encouraged to stay together, free from economic pressure to split apart.

These are far-reaching effects. They cannot be purchased cheaply, or by piecemeal efforts. This total reform looks in a new direction; it requires new thinking, a new spirit and a fresh dedication to reverse the downhill course of welfare. In its first year, more than half the families participating in the program will have one member working or training.

We have it in our power to raise the standard of living and the realizable hopes of millions of our fellow citizens. By providing an equal chance at the

starting line, we can reinforce the traditional American spirit of self-reliance and self-respect.

RICHARD NIXON.

THE WHITE HOUSE, *August 11, 1969.*

EXECUTIVE MESSAGES REFERRED

As in executive session, the Presiding Officer laid before the Senate messages from the President of the United States submitting sundry nominations, and withdrawing the nomination of John G. Hurd, of Texas, to be Ambassador Extraordinary and Plenipotentiary to Venezuela, which nominating messages were referred to the appropriate committees.

(For nominations this day received, see the end of Senate proceedings.)

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 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.

AMENDMENT NO. 113

The PRESIDING OFFICER (Mr. BYRD of Virginia in the chair). The Chair recognizes the Senator from Maryland.

Mr. TYDINGS. Mr. President, I call up my amendment No. 113 and ask that it be read.

The PRESIDING OFFICER. The amendment will be stated.

The legislative clerk read as follows:

On page 3, line 9, strike out "$100,000,000" and insert in lieu thereof "$50,000,000".

ORDER OF BUSINESS

Mr. TYDINGS. Mr. President, I ask unanimous consent that I may yield 7 minutes to the Senator from Massachusetts (Mr. BROOKE), without losing my right to the floor.

The PRESIDING OFFICER. Is there objection? The Chair hears no objection, and it is so ordered.

The Senator from Massachusetts is recognized.

Mr. BROOKE. I thank the Senator from Maryland.

The PRESIDING OFFICER. The Senator is recognized for 7 minutes.

MIRV

Mr. BROOKE. Mr. President, now that the ABM decision has been taken, it behooves the Senate and the President to concentrate on the most urgent strategic question now facing the Nation; namely the looming prospect of new offensive deployments. There has now been considerable discussion of the so-called multiple independently targetable reentry vehicles and more than a quarter of the members of Congress, including almost one-half the Senate, have cosponsored resolutions calling for immediate efforts to obtain a joint Soviet-American moratorium on testing of MIRV systems. Such a moratorium, which enjoys much wider support in the informed technical and strategic community than the controversial ABM plan, would be a highly desirable means of buying time to explore the MIRV problem in the forthcoming strategic arms negotiations.

I wish to call the attention of the Senate to an important editorial in this morning's Wall Street Journal. This editorial makes clear the contradictory arguments which have been advanced by certain persons who are reluctant to endorse a MIRV test moratorium, and also sets forth the cogent reasons for pursuing this critical matter on an urgent basis.

The editorial alludes to one point in particular which should not become confused. It is quite misleading to suggest that U.S. MIRV systems would be stabilizing and healthy, because of their smaller size and relative accuracies, while the kind of Soviet tests which have been observed point toward systems which are dangerous.

While initial versions of U.S. MIRV's would not be accurate enough to threaten the Soviet missile force, continued testing and guidance modifications of those weapons could eventually improve their capability against hard targets. Accuracies have improved by a factor of 10 in recent years; a further improvement by a factor of only 2 would be sufficient to produce this result. And the Soviets would have to base their long-range planning on this expectation, not on dubious American assurances that our MIRV is safe and good.

Furthermore, while the Soviet Union's tests of the SS–9 multiple warheads appear to involve an intermediate technology somewhere between a simple cluster weapon and the sophisticated and flexible MIRV on which we are working, it is not clear that the system could serve exclusively a first-strike purpose. The tests do seem incompatible with a retaliatory role only; that is, they do not appear well suited to attacking cities. As the President has publicly implied, the footprints of the Soviet tests seem to match the distribution and layout of portions of the U.S. Minuteman force and they may be designed for that purpose. But in addition to a capacity for assured retaliation, we ourselves have long stressed the importance of a second-strike damage-limiting capability—it is one of the rationales the DOD applies in seeking unnecessarily accurate guidance for Poseidon and Minuteman III.

Thus, especially if the Soviet SS–9 force remains too small for an effective first-strike against the Minuteman fields, what we have seen may well turn out to be an effort to acquire a damage-limiting capability, that is, a weapon system which, in the event of war, would give the Soviet Union a capability to reduce damage to itself by striking U.S. missiles.

This is intricate and ambiguous analysis, and no one can be sure of the Soviet Union's exact attitude on MIRV. But it should be abundantly clear to both sides, first, that neither side needs a MIRV system unless the other deploys a thick city defense that is years away and, second, that perfection and deployment of MIRV by either side will stimulate the other to take countermeasures. If this process is not arrested soon, and I doubt that it can be arrested unless MIRV is forestalled, the arms race is virtually certain to soar upward to a higher and more dangerous plateau.

The Journal's editorial stresses that the United States could safely undertake a MIRV test moratorium because:

American MIRV development is intended to assure penetration of a large-scale Soviet ABM, of which there is no firm evidence so far. Dr. Foster has testified that if the Soviets do build such a system, its initial operational capability is five years off. MIRV evidently could be deployed in a far shorter time. Donald Brennan, a Hudson Institute strategic specialist who agrees with the Administration on most issues, put it well in seeing no need for immediate MIRV deployment "on the basis of any philosophy whatever."

And the Journal concludes:

Even if there were no other considerations, we can see little justification for deploying a weapon the nation does not yet need. In this case, with arms limitations talks impending, such deployment seems doubly questionable. A delay would give both the Soviets and arms-control advocates at home assurance that the Administration is deeply serious about the talks. We would be opposed to such gestures if they endanger U.S. security, but all public indications suggest a MIRV delay would not.

The Administration is far freer to respond to all of these considerations now that it has won the ABM fight. . . . In MIRV it now has the opportunity to demonstrate even more conclusively it has a firm hand on the strategic tiller, by proving it can also hold back on arms development that seems the advisable course.

The central challenge to strategic stability comes from the current efforts to perfect MIRV systems. Now that action on the ABM question has been taken, the focus of the debate on national security should shift to the MIRV problem.

I ask unanimous consent that the complete text of the Journal's editorial be printed in the RECORD.

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

BEYOND THE ABM VICTORY

Score one for the Administration in the anti-ballistic missile fight, and perhaps more importantly, also in the underlying fight over who should control the nation's strategic posture. Now that it has won the big fight, perhaps the Administration can even find new confidence to seriously consider a delay in plans to deploy multiple warheads, a strategic development far more questionable than the ABM ever was.

The ABM decision was on its merits a problematical one, and there is something to be said for resolving the close ones in favor of the President. He is the one in charge of negotiating any arms control agreement with the Soviets, and his negotiating position

would not be exactly solidified if the other side began to think a more acquiescent Senate would actually have more to say than the President about future strategic decisions.

As long as the ABM test loomed, further, we could sympathize with the Administration's hesitancy about a MIRV slowdown. Before the vote, this would have looked like an important concession to the dovish Senators, and thus would have left the President's influence and decision-making powers looking more nebulous than they have turned out to be. Also, if the ABM were defeated, the Administration would have wanted to proceed with MIRV to insure that something was done to counteract the very rapid recent advances in Soviet strategic strength.

None of these factors any longer applies, and the Administration can now consider MIRV far more on its own merits. Where the ABM is a defensive weapon, MIRV is an offensive one. MIRV is also far more destabilizing in the strategic balance, being intimately related with the possibility of one side launching a first strike to wipe out the other's deterrent. It is not clear that a U.S.-Soviet agreement to limit MIRV would be feasible, but it does seem pretty clear that MIRV depolyment can be delayed safely a year or two to explore that possibility.

Pentagon research chief John Foster probably was correct in testifying recently that the U.S. version of MIRV is not a first-strike weapon, unlike the Soviet version with far larger warheads ideal for use against hardened missile sites. But even this is not entirely clear. Secretary of Defense Melvin Laird has referred to the use of American submarine-based MIRVs against "hard targets."

For that matter, Dr. Foster himself * * * rent land-based missiles and the projected multiple-warhead version are "adequate with respect to warhead yield and guidance accuracy" when used for "a damage-limiting mission." Unless we have fallen behind in our Pentagonese, a damage-limiting mission would be a strike against missile sites. Perhaps the Pentagon's apparently contradictory statements can somehow be resolved, but if not, even the U.S.-type MIRV seems highly destabilizing.

Perhaps, of course, a U.S. MIRV may prove necessary even so. The Soviets are developing their own, and inspection difficulties both in the test stage and after deployment may make any kind of agreement impractical. But at least some competent witnesses believe a limitation could be enforced so long as the weapons are not deployed. Most importantly, holding back U.S. deployment long enough to explore both the inspection difficulties and the Soviet attitude would apparently not involve much risk.

American MIRV development is intended to assure penetration of a large-scale Soviet ABM, of which there is no firm evidence so far. Dr. Foster has testified that if the Soviets do build such a system, its initial operational capability is five years off. MIRV evidently could be deployed in a far shorter time. Donald Brennan, a Hudson Institute strategic specialist who agrees with the Administration on most issues, put it well in seeing no need for immediate MIRV deployment "on the basis of any philosophy whatever."

Even if there were no other considerations, we can see little justification for deploying a weapon the nation does not yet need. In this case, with arms limitations talks impending, such deployment seems doubly questionable. A delay would give both the Soviets and arms-control advocates at home assurance that the Administration is deeply serious about the talks. We would be opposed to such gestures if they endanger U.S. security, but all public indications suggest a MIRV delay would not.

The Administration is far freer to respond to all of these considerations now that it has won the ABM fight. It proved it can overcome opposition and proceed with arms advances when it considers them necessary. In MIRV it now has the opportunity to demonstrate even more conclusively it has a firm hand on the strategic tiller, by proving it can also hold back on arms development that seems the advisable course.

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 a concurrent resolution (H. Con. Res. 315) providing for an adjournment of Congress from Wednesday, August 13, 1969, until 12 o'clock noon on Wednesday, September 3, 1969, in which it requested the concurrence of the Senate.

ENROLLED BILLS AND JOINT RESOLUTION SIGNED

The message also announced that the Speaker had affixed his signature to the following enrolled bills, and they were signed by the Acting President protempore:

S. 912. An act to provide for the establishment of the Florissant Fossil Beds National Monument in the State of Colorado;

S. 1611. An act to amend Public Law 85-905 to provide for a National Center on Educational Media and Materials for the Handicapped, and for other purposes; and

H.J. Res. 864. Joint resolution to provide for a temporary extension of the authority conferred by the Export Control Act of 1949.

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 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.

AMENDMENT NO. 113

Mr. TYDINGS. Mr. President, I call up my amendment No. 113 which is proposed by myself and Mr. EAGLETON, Mr. FULBRIGHT, Mr. HARRIS, Mr. HART, Mr. HATFIELD, Mr. JAVITS, Mr. MONDALE, Mr. MOSS, Mr. PACKWOOD, and Mr. PROXMIRE.

I ask unanimous consent that the name of the Senator from Texas (Mr. YARBOROUGH) also be added as a cosponsor of this amendment.

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

The amendment will be stated.

The BILL CLERK. On page 3, line 9, strike out "$100,000,000" and insert in lieu thereof "$50,000,000".

Mr. TYDINGS. Mr. President, the Department of Defense has requested that its emergency fund for research and development be doubled from last year's $50 million appropriation to $100 million for fiscal year 1970. As I shall seek to document in my remarks that follow, there is no compelling case for doubling this fund. To the contrary, the facts dictate maintaining the emergency fund at last year's $50 million level or reducing it. No national security issues are involved. This is strictly an economy matter in an inflationary setting that has made superfluous government spending intolerable. Therefore, along with Senators EAGLETON, FULBRIGHT, HARRIS, HART, HATFIELD, JAVITS, MONDALE, MOSS, PACKWOOD, PROXMIRE, and YARBOROUGH, I have introduced an amendment to S. 2546 to reduce the emergency fund authorization from $100 million to the $50 million appropriation figure of last year.

The emergency fund is one of the devices available to the Department of Defense to provide the flexibility needed to respond to unanticipated military problems and to pursue unexpected technological breakthroughs. The fund may be used at the discretion of the Secretary of Defense, with the concurrence of the Bureau of the Budget and upon notification to the Congress, "for research, development, test and evaluation, or procurement or production related thereto."

As I stated earlier, the amount appropriated for the emergency fund last year, in fiscal year 1969, was $50 million. This is the same amount that was originally requested in January by the Department of Defense for fiscal year 1970. However, 2 months later, DOD revised its request by asking for $100 million, the amount contained in the authorization bill currently before us.

The argument offered by DOD in support of this request for an additional $50 million is that the extra money is needed for sufficient flexibility in the management of the Department's research and development program. This argument implies either that insufficient flexibility existed last year with respect to the Department's research and development efforts or that R. & D. demands relative to R. & D. resources are expected to increase in fiscal year 1970. As the facts will show, neither of these is the case.

Let us begin with an examination of the adequacy of last year's $50 million emergency fund. In fiscal year 1969, almost 82 percent of the emergency fund was allocated for research and development related to our operations in Southeast Asia—SEA. Therefore, the fund is most meaningfully viewed as a part of PROVOST—the Department of Defense code name under which are lumped all of our Southeast Asia-related research and development programs. So the question we are really asking is: Was there sufficient flexibility in the Defense Department budget last year to meet all of our PROVOST needs—both the expected and the unforeseen?

Mr. President, according to Dr. Foster's testimony before the Armed Services Committee in May of this year, and I refer at this time to page 1802 of the hear-

ings, part II, and also to page 1854, where according to Dr. Foster's testimony—and this was the testimony in May of a fiscal year that was going to end on June 30, a month and a half later, fiscal year 1969—$522 million was initially programed for PROVOST research and development, exclusive of the emergency fund. This $522 million was the amount initially programed, before any utilization of funds.

On that same day, in May of 1969, Dr. Foster predicted that by the end of fiscal 1969, PROVOST activities would require $353 million in addition to the $522 million programed. In reality, his estimate was $53 million too high, but I will not make a point of that. Nevertheless, that was approximately $100 million less than the additional $406 million which was added to the PROVOST funds in fiscal year 1968.

Mr. President, let me try to explain what this means. In 1968, the Department initially programed, for PROVOST, $450 million. However, the final amount spent was $856 million. So how did they make up the difference? They made up the difference by reprograming $222 million from a total research and development program of some $7.093 billion—and they are permitted to reprogram however much they want, which I will show they have done each year and will do next year. They had a supplemental appropriation of $96 million for which they came to the Congress, and they used $88 million from the emergency fund. That was in fiscal year 1968.

Last fiscal year—the fiscal year just ended in June 1969—they had an original budgeted program for PROVOST of $522 million. They reprogramed $263 million from a total research and development budget of $7.155 billion——

Mr. STENNIS. Mr. President, will the Senator yield right there on these figures?

Mr. TYDINGS. I yield.

Mr. STENNIS. For what year is the Senator talking about the PROVOST funds?

Mr. TYDINGS. Fiscal 1969, the year we have just completed.

Mr. STENNIS. The regular amount?

Mr. TYDINGS. The initial amount budgeted was $522 million.

Mr. STENNIS. I thank the Senator.

Mr. TYDINGS. However, they needed an additional $304 million added to their program for fiscal 1969, which ended June 30 past. So they took only $41 million from the $50 million emergency fund which had been authorized and appropriated last year. They also took $263 million through reprograming within the total research and development budget, and they came up with the $826 million that they needed. Now, Mr. President, they did not touch the $150 million discretionary power which the Secretary of Defense has to transfer funds from one appropriation of the Department of Defense to another. They did not touch that. Nor did they touch for this purpose, the special $10 million contingency fund which the Secretary of Defense has at his discretion. In other words, PROVOST was able to raise the full $826 million required to meet the demands placed upon it without exhausting all of the funding flexibility within the Defense Department.

Let me read from the report of the Armed Services Committee of the House, last year, dated July 5, 1968, on page 10, entitled "Emergency Fund."

Before I read what the report states, let me say the House struck out the emergency fund in its entirety last year. The Senate had arrived at a figure of $121 million. The House and Senate went to conference, and out of the conference came the figure of $50 million. I merely ask to return to the $50 million figure which was agreed to in the conference between the House and the Senate. But last year the Armed Services Committee of the House knocked out all the authorization.

I read from page 10 of the report of the Armed Services Committee of the House:

> Under the Department of Defense Appropriation Act of 1968, the Secretary of Defense was given authority to transfer funds, not to exceed $350 million, from other appropriations to the emergency fund.

Last year—fiscal year 1969—they had $150 million of that transfer authority, but only used $78 million of it.

> In view of the transfer authority previously granted to the Secretary of Defense and requested for inclusion in the fiscal year 1969 Appropriation Act, the committee believes that the amount requested for the emergency fund can be deleted in its entirety.

That was the position of the Armed Services Committee last year when there was a conference with the Senate.

Mr. PROXMIRE. Mr. President, will the Senator yield on that point?

Mr. TYDINGS. I am delighted to yield.

Mr. PROXMIRE. Did the Senator say the House Armed Services Committee knocked out the entire amount on the ground that it was possible to transfer funds from one part of the total appropriation to another?

Mr. TYDINGS. Exactly. That is the exact language found on page 10 of the report of the House Committee on Armed Services, July 5, 1968.

Mr. PROXMIRE. If that is the case, it seems to me there is no real argument for flexibility at all. Is there? There is simply an argument that we increase the overall funds by $100 million. That is really what is being proposed this year; is it not?

Mr. TYDINGS. Exactly. The flexibility which is presently available for the Secretary of Defense is, I think without question, without precedent in the executive branch. He has the authority to transfer funds from program to program within each appropriation without limit. Thus, this reprograming authority allows them to defer, for instance, non-SEA R. & D. programs undertaken by the Army and transfer the funds to a new Army SEA R. & D. project. There is no limit to the amount of money that can be programed within any one appropriation. Of course, since we are talking about the research and development program, assuming the committee's authorization is accepted, there would be for this year some $7.1 billion from which to reprogram if PROVOST falls short.

Last year, in fiscal 1969, with a $7.055 billion research and development program, the Secretary of Defense reprogramed into PROVOST from other parts of research and development budget $263 million. In 1968 he reprogramed $222 million. This is in addition to the $150 million authority which he has to transfer funds from one appropriation in the Defense Department, say, for aircraft carriers, submarines, or something like that, to another appropriation in the Defense Department such as research and development.

Mr. PROXMIRE. He has that flexibility within the research and development area; does he not?

Mr. TYDINGS. Yes.

Mr. PROXMIRE. And he can transfer from one to the other?

Mr. TYDINGS. That is correct. In addition, as I just explained, he has another $150 million worth of flexibility through the transfer authority. This is similar to the reprograming authority, in that it permits money to be transferred from one budgetary slot to another. The difference is that when the slots between which money is transferred are appropriations—that is, specific dollar amounts that appear in the appropriations bill—the term used is not "reprograming" but "transfer authority."

There is a $150 million limitation on transfer authority.

Also, DOD has another $10 million contingency fund.

Mr. PROXMIRE. How large is the research and development budget?

Mr. TYDINGS. The research and development budget reported by the Senate Committee on Armed Services is $7.18 billion. For the fiscal year 1969, it was $7.551 billion. For fiscal year 1968, it was $7.093 billion.

Mr. PROXMIRE. In view of the size of that budget, and the flexibility within it, would it not be more logical to call this a surplus fund instead of an emergency contingency fund? That is all it is. Any contingency can be met by tapping the $7 billion available in the research and development budget plus the additional resources available from the entire $75 billion or $80 billion defense budget.

Mr. TYDINGS. Exactly. One other thing that concerns me is that the Committee on Armed Services did an extremely thorough job on research and development programs requested by the Department of Defense this year. The committee reduced the request by some 12 percent. They scrutinized the research items of the various projects point by point.

What this $100 million really allows the Secretary of Defense to do is to make an end run around the Committee on Armed Services to avoid the congressional right of scrutiny and to pick programs, because congressional control of emergency fund utilization is quite limited.

Mr. MURPHY. Will the Senator yield?

Mr. TYDINGS. I am delighted to yield.

Mr. MURPHY. Is it not the understanding that the request for research and development was based on specific items, of which there are a great num-

ber in the bill: rifles; radar; research and development in the use of laser beams; and the rest? So when we speak in round numbers, we are thinking of the spread over a great many items, and we would assume that those who made the requests had some knowledge of what their needs would be.

As a member of the committee, this is my understanding; and that after careful scrutiny, we decided that we could cut back the overall round figure by some 12 percent.

Coming down to the question of the emergency or justification for the new fund, this is to cover a case where it might well happen that unexpectedly, some scientist comes up with an entirely new concept that might be of great value, and might in fact replace three or four other weapons, and the Secretary might want to permit him to proceed immediately. This fund has been created to be used only at the discretion of the Secretary of Defense, in order to provide for such a new situation or advance that had not been conceived or thought of previously.

At least that was my understanding of its purpose. It was not really just to give the Secretary of Defense or the research and development group another bundle of money to go ahead and use inadvertently, but for careful use within the judgment of the Secretary of Defense.

After the argument made by those witnesses from the Department, it was the feeling of the committee that this was a particularly important and needed sum of money, if for no other reason strictly in the light of the fact that we had cut back the overall figure that was mentioned by some 12 percent.

Although these figures, added up, are tremendously large, when you divide them up into the many areas in which they have to be used—and I have to assume that the experts know what they are asking for; I have to assume that they are not asking for more than they actually hope to receive or expect to need—is it not fair to assume that there might just be the possibility that great progress might be restrained, just for the lack of having this extra or emergency fund to be used at the disposal of the Secretary of Defense?

Mr. TYDINGS. Let me say, with the exception of the last sentence of the statement of the Senator from California, the Senator's understanding is the same as mine.

My point is, however, that with a total research and development budget of $7.18 billion for the coming year, there would be sufficient flexibility, because of the complete latitude in reprograming permitted the Secretary of Defense, to do the same type of reprograming in fiscal year 1970 that he did in fiscal year 1968, when he had a smaller total for research and development of $7.093 billion, and he reprogramed $222 million for PROVOST. He was able to do the same thing in 1969, when he reprogramed $263 million out of a total research and development budget of only $7.551 billion. On neither occasion did he even have to touch, for PROVOST purposes, the additional right to transfer $150 million from one appropriation of the defense budget to another.

So the question is, really, do we wish to give him an extra $100 million on top of what the research and development budget already is?

Mr. MURPHY. Is it not true that when he reprograms, he has to take from one in order to accommodate the other?

Mr. TYDINGS. Certainly.

Mr. MURPHY. Is it not true that in the light of the cut which the committee has already made, one might simply call this added fund simply "comfortable money"?

Mr. TYDINGS. I would call it luxury money.

Mr. MURPHY. I would hope there would not be any luxuries. As the Senator knows, I have had some experience in private industry with research and development. I am very conscious of the fact that they can go on indefinitely, and they sometimes spend much more than was anticipated. But I happen to have great confidence in the Secretary of Defense, and particularly in his assistant, Mr. Packard, who made not just a national but an international reputation not only a man of great talent, a great scientist, physicist, and electronic engineer, but also a man with complete knowledge and wisdom with regard to the use of funds. That is how he started in a garage with $300, I think it was, or $600, in the public competition and wound up with an astronomical fortune. I am told he would be hired quickly and eagerly by any industry in the country, or in the world, because of his expertise in these matters.

These are the kinds of fellows that we are asked to have confidence in, and I, for one, feel that after the cut the committee made, this would not be an extravagance. I would hope that unless it were necessary, these funds would not be used, but it would be nice to have them in the event that, due to some unforeseen happening, the availability of the funds might make a tremendous difference to the safety of the Nation, or enable us to cut costs elsewhere by making unnecessary other weapons that are now burgeoning.

Mr. TYDINGS. I thank the distinguished Senator from California. A little farther on, I shall quote directly from a statement given to me by Leonard Sullivan, Jr., the Deputy Director for Southeast Asia Matters of the Office of Defense Research and Engineering, where he points out that if the Senate should adopt the same figure we did last year, $50 million, there would be no PROVOST research and development programs neglected; it would merely mean that the Department of Defense would have to do a little dickering with the various services to get the additional moneys to meet certain priorities within the existing budget. I intend to put that statement in the RECORD in its entirety, and read specific lines, a little farther on in my remarks.

Suffice it to say that in the last fiscal year, 1969, there was $304 million additionally needed, which was not initially programed for Southeast Asia. This $304 million was obtained, as indicated, in two ways: $41 million was taken from the $50 million emergency fund; and $263 million was reprogramed into PROVOST from lower priority R. & D. programs. "Reprograming" is an authority given the Defense Department by Congress to reallocate funds without limit within a given appropriation. Since appropriations are generally for large and unspecified purposes, such as "Army aircraft" or "Navy R.D.T. & E.," the reprograming authority enables the Defense Department to move around a great deal of money. The purpose of reprograming, to quote this year's Senate Armed Services Committee report on the bill before us, is to provide DOD "considerable flexibility should events require changes in program emphasis or resource allocation."

The $263 million reprogramed into PROVOST for fiscal year 1969 represented only 3½ percent of the total Department of Defense R. & D. budget for fiscal year 1969 of $7.55 billion.

Now, according to Leonard Sullivan, the director of PROVOST and the emergency fund in the Pentagon, the total PROVOST budget for fiscal year 1969 enabled him to handle every important R. & D. request from Vietnam.

I hope the Senator from California is listening. This was a reduction from the $121 million which the Senate Armed Services Committee requested; the House of Representatives refused to agree with the request, and the $50 million was the eventual compromise. But, according to Mr. Sullivan, he has never been forced by lack of funds to turn down any request from General Abrams, our field commander in Vietnam. Furthermore, Mr. Sullivan contends that no R. & D. program suggested in fiscal year 1969 to aid our efforts in Vietnam which his office deemed meritorious was not undertaken.

In short, according to its Director, PROVOST did everything it wanted in fiscal year 1969 and did it with great success and did it with the $50 million which was appropriated last year.

At this time I ask unanimous consent to have printed in the RECORD at the conclusion of my remarks the statement to me from Mr. Leonard Sullivan, Jr., in its entirety, together with certain exhibits and attachments which he submitted to me.

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

EMERGENCY FUND, DEFENSE

Congress first important grant of financing flexibility to the Defense Department was made early in the Korean War in the First Supplemental Appropriations Act, 1951, approved on September 27, 1950. This Act established for the first time an Emergency Fund of $190,000,000 which would be available for transfer by the Secretary of Defense, with the approval of the Bureau of the Budget, to "any appropriation for military functions of the Department of Defense available for research and development or industrial mobilization to provide additional flexibility to the Secretary of Defense." In recommending this Emergency Fund, the House Appropriations Committee Report (No. 2987, 81st Cong., 2nd Sess.) stated:

"The committee is well aware that emergencies may arise where it would be most de-

sirable to have readily available funds with which to expedite basic research on a certain problem or to accelerate development on some item that research had disclosed as practicable and desirable, or to accelerate and intensify preparedness in the industrial field."

The Second Supplemental Act of 1951, approved January 6, 1951, added $50,000,000 to this Emergency Fund, and the Congress continued in subsequent years to make appropriations in varying amounts for this purpose. From FY 1952 onwards, the purposes of the Fund were limited to research and development and production related thereto.

The rationale for the Emergency Fund has not changed over the years since the need for such flexibility was first recognized during the Korean War. Indeed, the need is far more urgent now, by virtue of the conflict in Southeast Asia, than it was in the late 1950's and early 1960's when the Congress regularly appropriated $150 million per year. An examination of the use of the Fund during the past two or three years and its direct relationship to the conduct of the Vietnam conflict attests convincingly to the importance of having this financing flexibility during FY 1970.

A summary of the amounts appropriated from FY 1951 on and the amounts transferred and used from FY 1960 on is shown on the attached table.

STATEMENT OF LEONARD SULLIVAN, JR., DEPUTY DIRECTOR, SOUTHEAST ASIAN MATTERS, AUGUST 8, 1969

The Emergency Fund provides a special source of dollars at OSD level which can be applied at the discretion of the Secretary of Defense (with concurrence of the Bureau of the Budget and upon notification to the Congress). It is used to:

Exploit sudden unexpected breakthroughs in technology which could have a significant impact on our defense posture;

Provide rapid and timely response to urgent requirements from operational forces engaged in important cold or hot war situations.

The history of the Emergency Fund is provided at Tab A.

As a source of special dollars—not promised to the Services for established programs at the beginning of the fiscal year—it is an extremely valuable management asset to provide responsive development for critical items not foreseen during the normal one year budget development cycle preceding the fiscal year. Besides its use for the current Vietnam war, it is primarily used for highly classified developments for our strategic forces—in intelligence gathering, command and control problems, and weapon system component improvements. I cannot provide a list of these items because of their high classification.

At the $100M level, the Emergency Fund represents only 1.25% of the total RDT&E budget. In recent years, the DOD budget submissions to the Congress have been about 20% below that requested by the Services. Hence the budget is extremely tight; there is no "loose money" around; and reprogramming is a long ardous problem of debate, cajolery, etc.

With the onset of the large scale U.S. participation in the war in Vietnam, the Emergency Fund has been largely devoted to expediting new capabilities for our forces in Southeast Asia, in response to requirements stated by the operational forces.

It is generally accepted that the U.S. force committed in SEA were not ideally equipped for this new kind of war—hence our costs have probably been somewhat higher in dollars and lives, the duration longer, and the "deterrent" offered against "future Vietnams" somewhat less than if we had been fully equipped and "optimized" for this type of low intensity, jungle, counterinsurgency, counterinfiltration warfare. Moreover, we have been ill-prepared to train and equip our Asian Allies to take on more of the fighting burden themselves.

We in R&D have been trying to re-equip and tailor our committed forces to increase our effectiveness in this kind of war by learning the combat lessons fast enough to provide specially tailored equipment to our forces within the time span of the war—usually within 18–36 months. There are some instances where we have been quite successful—from individual soldier equipment and malaria preventatives to new anti-radar missiles and equipment for seeing at night. We have *not*, however, found any one magic solution: we are therefore attempting as broad-scale an attack on the problems as possible.

I should like to note that many new developments have been fielded in useful quantities and more are on the way—some are already being transferred to the Vietnamese. However, almost *all of* these new equipments have operational utility beyond Southeast Asia and will become part of our post-war standard equipment. Hence our efforts contribute not only to our combat capabilities in SEA, but to the combat potential of our future tactical forces, which have for many years received lesser priority than our strategic forces.

All our Southeast Asia-related RDT&E programs are lumped under an all-inclusive program code name of PROVOST—which is an OSD management device to ensure adequate attention during budget time (since there are hundreds of individual small projects), special procurement priorities, etc. Our current PROVOST efforts account for almost 10% of the RDT&E budget. The size and distribution of funding by year is shown at Tab B (not printed in RECORD). It should be noted that the cumulative RDT&E expenditures for the past six years are approximately equal to the total costs of fighting the war for six weeks. An unclassified article on PROVOST is at Tab C.

Tab B also shows the funding by source, and I would like to explain this. Most of our developments are small in dollars ($.5 to 5.0M), and short in development time (12–24 months). To be responsive, they cannot wait 12–18 months for initial funding. Hence they do not match well with the orderly, well-planned, long-debated, peacetime budget cycle. Yet the budget is too tight to allow much "contingency funding", although this is the obvious management tool to use to accommodate the urgent but unexpected. So we have adopted the following procedure:

1. We estimate our requirements in the Fall for the budget submission—which is why our PROVOST testimony tends to be general rather than specific.

2. Before the new fiscal year begins the next Summer, we update our needs at Apportionment time—increasing the PROVOST portion at the expense of non-war programs, even though they often are not as glamorous as ICBMs, ABMs, ASW, MBTs, AAFSS, etc., and even though the approved RDT&E budget is always smaller than we requested and had fully programmed. This becomes the "P" portion of the Tab B bar charts (not reproduced).

3. As new requirements unfold during the year and can be quantified in terms of dollars needed, we ask the Services to reprogram from lower priority programs, or from programs which have not progressed as planned. This is relatively easy at the beginning of the Fiscal Year but increasingly difficult as the year progresses and funds become committed—and we must compete with other high priority non-SEA programs whose additional needs are also unanticipated in the current budget process. This is the "B" portion of the Chart at Tab B (not reproduced).

4. Next, when an item is urgent, represents a "new start", or responds to an important known problem area, we tap the Emergency Fund for the required dollars, generally providing less than half the amounts requested by the Service. This is the "E" portion of the Tab E charts. We readily admit that some of these dollars have been put on "high risk" items—where the "pay-off", though not certain, would be quite significant if our goals could be achieved.

At Tab D is a Summary Table of dollars provided from the Emergency Fund, SEA and non-SEA oriented, showing the increasing, peaking, and falling percentage for the war-oriented projects. We would anticipate that 80% of this year's Emergency Fund would go to the PROVOST items. Charts showing the breakout by Service and Defense agencies, both requested and provided, are at Tab E. That the Emergency Fund is mainly spent about halfway through the fiscal year—when reprograming has become far more difficult—is shown at Tab F (not included).

5. Finally, in former years, when the war was still escalating and our RDT&E efforts still expanding, it became obvious that the reprograming and Emergency Funds together would be inadequate. In these years ('66, '61, & '68) we asked the Congress for, and received, Supplemental RDT&E appropriations—indicated by the "S" portion of the Tab B charts.

6. Several other sources of possible funding have been considered at times but have not been available for SEA needs. For instance, SecDef transfer authority would make it possible to "convert" production monies to RDT&E up to a $150M annual limit. But as you know in recent years, production budgets have also been inadequate to support the war (hence the Supplemental requests in '66, '67, '68 and '69). Therefore the transfer authority could not be fully used to support RDT&E problems. Actually, about 40% of the available transfer authority has been used over the past four years—but on direct transfers from production to RDT&E within the same non-SEA programs such as F–111, Minuteman II, etc. This device has thus been used to compensate for the Emergency Fund redirection to our wartime problems. A table of transfer authority utilization is at Tab G.

At Tab H, we have also attempted to rate the success of our Emergency Fund projects, by dividing all fund increments into one of three categories: "success", "failure", or "still in development". A success is one that has been accepted for operational use and is already in—or planned for—production. Failures are ideas which simply did not pan out either in development, test, or operational evaluation. Many items—particularly in the last two years, are of course still in development with their ultimate contribution still indeterminate. However, we are quite satisfied that for '65, '66, and '67, our success rate is over 75%, based on dollars spent, not on individual projects. We expect the same for '68 and '69.

A detailed classified listing of projects funded from Emergency Funds is included in a separate Tab I (not included).

A long classified discussion of the RDT&E "Lessons Learned" in Southeast Asia—and what we have done about them—is in a separate Tab J (not included): an article wrote recently for the Journal of Defense Research.

Last year, the Congress authorized an Emergency Fund of only $50M. Although a few million remained until near the end of the year, the preponderance of it was spent, as usual, near the middle of the fiscal year. The $50M was clearly inadequate and was recognized to be so from the beginning of the year. To compensate for the Congressional action, we therefore deferred

an additional $90M (approx) of funds already assigned to the Services and "earmarked" it for augmentation of the Emergency Fund by reprogramming if and when necessary. Hence we knew from the beginning of the year that we had an "equivalent Emergency Fund" of about $140M (approx)—and used almost all of it.

If the Congress insists on restricting the Emergency Fund for FY 70, we will again be forced to use some equivalent device to assume adequate funds to cover our unforeseen requirements. However, it would appear to be a needless, time-consuming, and direct approach to an otherwise straighforward management tool. Additionally, if as now appears possible, the overall RDT&E budget is cut by 12%—making it 5% lower than last year's—the problem in establishing the deferrals for reprogramming will be substantially more difficult, may run counter to the preferences of the Congress, and will cause additional sources of irritation and delay between the Services and OSD.

In *either* case—reprogramming or Emergency Funds dispersal—the Congress is notified of all appropriation transfers and reprogramming actions above the established $2M threshold, and is asked to give prior approval in instances of known Congressional interest. In fact, two of our important '69 Emergency Fund items have been delayed for four months this year by such Congressional concern. Hence Congressional control of our activities is essentially the same for reprogramming and Emergency Fund usage, but the reprogramming represents the less attractive alternative for internal Defense Management.

We know we are "over-the-hump" in our RDT&E expenditures for this war. We have learned to predict our funding requirements somewhat better. We no longer forsee the need for Supplemental Funding. However, we still have many problems without adequate solutions—solutions that will be needed as long as we are in Vietnam—even in reduced numbers. Solutions that could be provided to the Vietnamese to make their tasks easier after we go. Solutions that should be incorporated into our post-war General Purpose Forces as soon as we can perfect them—to reduce the chances of our military might being belittled again.

During the current "lull" for instance—which is an annual affair—our casualties (deaths) are very high from enemy mines and boobytraps, and from rockets and mortars (exact figures are classified). We still have no adequate, practical, means for deterring either. We still frequently cannot "find the enemy" in the jungles before he finds us. We still cannot adequately monitor and "track" infiltration across the borders from Cambodia and Laos. We frequently expend massive amounts of ordnance to kill a small target because we cannot find it accurately, or hit it the first time from an aircraft even when we can see it.

Thousands of scientists and engineers in the Defense laboratories and industries are working on these and other pressing problems which directly reflect on our losses, on our overall costs, and on our apparent "impotence" in discouraging continued North Vietnamese intervention. I think it is a matter of national urgency to continue to work on these problems with the same vigor as we have in the past four years.

The Emergency Fund provides flexibility, responsiveness, and emphasis. It is the important one percent of the RDT&E budget which provides an essential management tool for expediting our contribution to ending (or at least reducing our participation in) that unfortunate war. It is essential to our efforts, and provides the cleanest possible approach to the requisite "contingency funding".

TAB A

EMERGENCY FUND, DEFENSE SUMMARY TOTAL EXPENDITURES APPROVED

[In million dollars]

Fiscal year	Requested	Appropriated	Amounts transferred and used
1951		[1] 240	
1952		90	
1953		35	
1954		60	
1955		25	
1956		35	
1957		85	
1958		85	
1959	85	150	
1960	150	150	145
1961	150	150	146
1962	150	150	150
1963	150	150	145
1964	150	150	148
1965	150	125	113
1966	150	125	125
1967	125	125	125
1968	125	100	100
1969	125	50	50
1970	[2] 50	100	

[1] Nixon amendment.
[2] Includes $70,000,000 for industrial mobilization measures.

TAB A

Final summary of fiscal year 1969 emergency fund items approved

Initial fund	$50,000,000
Total of items approved	50,000,000
Army:	
Southeast Asia requirements (one time group)	36,790,000
Acoustic recording system development	750,000
Evaluation of aircraft weapons fire control	669,000
Clearing of helicopter landing zones with fuel air explosives (FAE)	179,000
Self-destructive device for artillery ammunition	200,000
Classified project	995,000
Total Army	39,583,000
Navy:	
Sensor systems development (non-SEA)	5,217,000
Tactical electronic warfare deception system	700,000
Total Navy	5,917,000
Air Force: Southeast Asia related item	500,000
Advanced Research Projects Agency (ARPA):	
Classified project	3,000,000
Southeast Asia related item	1,000,000
Total ARPA	4,000,000

Final summary of fiscal year 1968 emergency fund items approved

Initial fund	$100,000,000
Total of items approved	100,000,000
Army:	
Reduction of fire hazard to aircraft	1,500,000
Southeast Asia related items	36,963,000
Mortar locating system development	1,200,000
Southeast Asia related item	3,330,000
Border security/anti-infiltration	8,961,000
Total Army	51,954,000

Final summary of fiscal year 1968 emergency fund items approved—Continued

Navy:	
Advanced marine biological systems	$1,050,000
Southeast Asia related items	10,677,000
Classified project	6,000,000
Radar ground position location and identification devices for A–6A aircraft	712,000
Southeast Asia related item	683,000
Total Navy	19,122,000
Air Force:	
Southeast Asia related items	15,943,000
Airborne Warning and Control System (AWACS)	2,000,000
Southeast Asia related item	1,596,000
Southeast Asia related item	750,000
Total Air Force	20,289,000
Advanced Research Projects Agency (ARPA):	
Airborne radar	830,000
Modification of AN/FPS–16 radar	1,225,000
Classified project	1,580,000
Total ARPA	3,625,000
Defense Atomic Support Agency (DASA):	
Nuclear weapons effects research	2,000,000
Defense Communications Agency (DCA):	
Southeast Asia related item	3,000,000

Final summary of fiscal year 1967 emergency fund items approved

Initial fund	$125,000,000
Total of items approved	124,997,270
Army:	
Southeast Asia related items	16,998,000
Improved real time sensors for OV–1 aircraft	3,000,000
Southeast Asia related item	500,000
Southeast Asia related item	5,800,000
Southeast Asia related item	1,850,000
Classified Project	300,000
Classified Project	300,000
Total Army	28,748,000
Navy:	
Radar site pinpointing improvements (EELS)	3,000,000
Southeast Asia related item	305,000
Radar site pinpointing improvements	2,000,000
Southeast Asia related item	776,270
Classified project	6,600,000
Classified project	3,800,000
Southeast Asia related item	905,000
River warfare boats	7,050,000
Advanced command data system	2,400,000
Southeast Asia related item	14,000,000
TALOS ARM missile development	4,500,000
Fleet ballistic missile (FBM) command and control communications	1,450,000
Southeast Asia related item	1,972,000
Standard ARM missile development	14,500,000
Classified project	3,120,000
Classified project	500,000
Total Navy	66,878,270
Air Force:	
Southeast Asia related items	19,151,000
Combat aircraft records and data system (CARDS)	400,000
Total Air Force	19,551,000

Final summary of fiscal year 1967 emergency fund items approved—Continued

Advanced Research Projects Agency (ARPA): Southeast Asia related items	$2,630,000
Defense Communications Agency (DCA): Southeast Asia related items	2,190,000
Defense Atomic Support Agency (DASA): Nuclear weapons tests	5,000,000

TAB C

RESEARCH AND DEVELOPMENT FOR VIETNAM

IN BRIEF.—The author heads the office in the Pentagon whose specific purpose is to expedite those R&D activities which hold some promise of increasing the effectiveness of our forces in Southeast Asia. From that special position, he tells of the important role of R&D in the war. Currently, the Department of Defense is investing some $800 million per year in this effort. Given the long time required to bring ideas through the R&D process and convert them to hardware, is it reasonable to expect that today's ideas can be developed in time to have an effect on the battlefield? The Pentagon clearly believes so, citing the more than one hundred new types of equipment that are added to our operational inventory each year. Currently, more than one thousand specific R&D projects are going on in support of the war.—D.A.)

Some people wonder whether research and development have a place in a war while that war is going on. I believe strongly that there is a place for such endeavors—just as there was in previous wars. Indeed, my office exists under the Director of Defense Research and Engineering for the specific purpose of expediting those research and development activities which hold some promise of increasing the effectiveness of our military forces in Southeast Asia.

Most wars we fight will be different from the ones we are anticipating. Every war will have its own peculiarities and innovations. Every war will introduce new tactics, new equipment, and new objectives. So there will always be a problem of remaking our military forces, or reoptimizing them for the particular type of war that comes along.

We know now that the war in Vietnam is considerably different from any war we have ever fought before. We entered this war fully and beautifully equipped to fight either an all-out nuclear conflict or World War II over again. But then we found that Vietnam is a new war—for many reasons. As I describe these reasons, I believe you will see the importance of a strong R&D activity linked to our engagement in Southeast Asia.

MORE THAN ONE WAR

At the time we undertook to help the South Vietnamese, I do not think we fully realized how difficult it would be to fight an enemy so closely interwoven with our allies. It is a war without front lines, a war where you can seldom distinguish friend from foe—except by the actions of the foe. Thus, we have had to learn a great deal about how to find small bands of enemy guerrillas dispersed over the countryside. In addition to the insurgency, however, several other wars have been superimposed, each with its own characteristics. I will discuss each briefly.

The most advanced war, technologically, is the bombing of the North; it uses many of our latest tactical aircraft in a strategic role; we are up against enemy surface-to-air missiles for the first time; we are in combat against supersonic Soviet-designed aircraft, firing air-to-air missiles—and we are doing the same. The electronic warfare is quite sophisticated on both sides. Less sophisticated, but more important, we have had to learn how to survive intense antiaircraft fire.

One frustrating aspect of this war is the difficulty we find in really discouraging the enemy, or killing his interest in fighting, by bombing alone. We are also learning—or relearning—that when you run an air campaign without ground follow-up, you frequently cannot keep the targets destroyed. It is one thing to bomb a bridge to slow someone's retreat on the ground, or to bomb a convoy that is resupplying front line troops. But it is quite another thing to try to stop a country from going about its essential business—like driving trucks, burying supplies in the ground, or unloading ships—when one has an intention of following up on the ground. These are things which make it a very expensive kind of war—and in many respects, the results are difficult to quantify.

The second war is in trying to stop infiltration into South Vietnam. This is a relatively new problem; we had some experience along the Korean demilitarized zone, but not during a hot war.

Vietnam has about one thousand miles of land boundary, and another thousand miles of water boundary. We are trying to stop the North Vietnamese from crossing these 2,000 miles of boundary and resupplying the guerrillas in the South. Actually, relative to the length of the border, the supplies and reinforcements coming into the South are very small. So the "flow rate" across any unit length of the total boundary is low. But the boundaries are difficult to patrol; most of the natural assets are on the side of the guerrilla. For example, two-thirds of the land boundary is covered by heavy jungle. Across these boundaries, the North Vietnamese either walk, carrying supplies on their backs, or push bicycles. They do not *ride* the bicycles; they use them as oriental wheelbarrows, carrying up to 500 pounds of supplies in "saddlebags." Lately, they have begun using trucks to cross. They have found that we cannot destroy their roads as fast as they can build them. They have had a very active road-building campaign and are now building roads into South Vietnam.

Within South Vietnam, a third war involves the dissipation of the main enemy units—now mostly North Vietnamese manned. These are the "search and destroy" actions in which the U.S. forces have been mainly employed in South Vietnam. In these actions, we go out into the countryside to try to find the enemy mainforce battalions and regiments that move as units. We attempt to locate and destroy them before they can reach friendly targets. This is where our firepower has come into play, along with the extreme mobility to fly our forces anywhere in the country. Without that firepower and mobility, we would need many more troops to do the job from relatively static defensive positions.

The fourth war is one we have paid less attention to than we might have. This is the war to control the guerrilla. As a civilian, I am in no position to determine where military priority should be—and hence I shall not try to put myself in a role of military strategist. But the facts in the guerrilla war are these: If all the smoke were cleared away, if we stopped the bombing of the North, if the North Vietnamese stopped infiltrating into the South, if we stopped fighting main unit actions in the jungles, we would *still* have the problem of controlling the guerrilla.

ADJUSTING A THRESHOLD

Who is the guerrilla? He is simply the local dissident or the local zealot. He is willing to commit acts of violence in order to make himself heard and in order to change his lot and that of future generations. The threshold of his violence is a fine balance between the strength of his discontent and his view of the consequences of his violence. We should be able to change an insurgent's threshold of violence by adjusting both sides of the balance. We can lower his level of discontent by peaceful action, and we can raise the apparent deterrent by suitable military or police presence—and technology can probably help on both sides. By "we" I mean the U.S. as well as the South Vietnamese government.

It is mainly in this "fourth war" that social science research has been used to advantage. Before we can undertake to advise another country—much less help and train it—we must have a full understanding of the differences in its culture, background, aims, and motivations from those of our own society. We cannot realistically hope to assist in solving the problems of South Vietnam which have caused the dissatisfaction and lawlessness until we understand in considerable detail how and why those problems arose.

The fifth and newest war with which we have been confronted is the war of the cities—a form of "escalation" or modernization of the Maoist insurgency doctrine. The enemy knows that by rocketing and shelling from without and by sniping and arson from within, it is possible to cause considerable local and international consternation. Damage to property is extensive, the innocent population is caught in a cross fire they cannot easily avoid, and the credibility of the government is put to a severe test.

Although not solely a Vietnamese problem, there is much still to be learned in minimizing the trauma of "urban insurgency." The preparation of a city, its people, its government, its civic agencies, and its public utilities is not a simple matter. The conduct of the urban counterinsurgency, once engaged, demands special troops, special training, special weapons, special vehicles, and special tactics. And the reconstitution of the city in the aftermath also requires special planning and special techniques to minimize the duration and extent of the dislocation. All of these problems are on the front burner in South Vietnam today—and should be at least on the back burner in many other parts of the world.

WHAT VALUE R. & D.?

With this background we begin to see a dynamic range of things in this war for which our R. & D. activities are applicable. Indeed, the range is enormous compared to that of any war we have ever fought. It ranges all the way from police techniques to electronic warfare—and we are trying to modernize our forces throughout the whole spectrum.

There are many people both in Defense (including military and civilian) and in the U.S. at large (including Congress and private citizens) who believe that our efforts to make this a war of technology are wasted. There are others who would claim that we have already forced the escalation of this war to one that we could conveniently fight with our already highly sophisticated war machinery. I would dispute these points. Although I would agree that we will find no single device that will have the climactic importance that the tank had in World War I or the atom bomb had in World War II, there are many, many opportunities to develop better weapons and devices, skills and understanding by which to lower our losses, shorten the duration of the conflict, and enhance both our own and our allied military posture. In several discrete battles of this war, brand-new technology has had a very significant, if not decisive, effect on the outcome. In other instances, technology *could* have had a decisive effect if our experimental equipment had been available in production quantities, and if our military forces could have been trained *over*-night to em-

brace new equipment (and adjust their tactics accordingly).

Moreover, some of our more important contributions are only new reaching the theater in operational quantities. As individual "gadgets," they cannot win the war by themselves, but taken in the aggregate, the effort may become significant. We will "break even" financially if our total effort shortens the war by only one month—without assigning any value to the lives saved thereby. And if the sum total of these new capabilities can assist in *deterring* future conflicts of this type (by raising the threshold for violence elsewhere in the world) then I can only conclude that our efforts have been worthwhile.

In the main, the inventory of our general-purpose forces was outstanding when we went into Vietnam. The U.S. general-purpose forces are designed to fight any sort of limited nonnuclear war that might arise, anywhere in the world—whether on an ice cap, in a desert, in a jungle, in a marsh, anywhere. Because of the broad range of conflicts in which we might possibly become involved, a single general-purpose force cannot be really optimum for any specific war except possibly in Europe. Therefore, there is a very necessary tailoring job that must be done, having nothing to do with whether or not we spent enough money for defense during peacetime. We will always have to tailor our forces to a specific nonnuclear war once it comes along.

ORGANIZATION FOR OPTIMIZATION

One of the lessons I hope we will learn from the war in Vietnam is that we must always be prepared to optimize our forces *after* we get involved. This is why we have generated a special, highly responsive R&D team within the Department of Defense. How did we organize in the Department of Defense to do this? I should remind you that this war grew in an insidious fashion, from a very small war which had few people's attention, to a rather large war with ordnance delivery that matches Korea. The Pentagon chose to manage the various aspects of the war, as much as possible, within existing organizational management and budgeting procedures. R&D for the war is performed in accordance with this same principle: It is managed, essentially, by the same people who are also controlling the R&D that is done for other military devices which are *not* involved in this war. However, to add emphasis to the work that was specifically needed for Southeast Asia, Dr. John Foster, Jr., established my office about two and a half years ago as an expediting office within Defense Research and Engineering. It was charged only with creating and expediting R&D pertinent to the war; and it will disappear when the war is over.

Because we chose to manage the war through the normal organizations, the problems associated with streamlining our procedures have been really those of personal contact—of individuals within the organization getting together and agreeing to do things; we work either face to face or we hand-carry papers, rather than letting them go through the standard procedures. We have formed a series of ad hoc steering groups and committees; in essence, these groups tie together all the various agencies involved in the pursuit of the war.

We use one code name for this whole operation; PROVOST, for Priority Research Objectives Vietnam Operational Support.

It is at this level where you find the people who are full time on R&D for Vietnam. Here we have a regular Senior PROVOST Steering Group; this is the mechanism I use within the Pentagon to get practically everything done. It is comprised of a senior military man (a general or flag officer) who reports to his military chief for R&D in each of the Services.

We also have part-time representation in the group from other government agencies that have technical skills applicable to our specific problems. For instance, NASA has people who are available to us for solving problems for which they have unique talents. The Atomic Energy Commission is also represented—they have some of the finest engineers and "gadgeteers" in the business. Finally, of course, we work closely with the Advanced Research Projects Agency, a separate part of Dr. Foster's office.

We have over one thousand specific R&D projects going on now in support of the war; as a rough average, we send about 100 new types of equipment to the theater every year for operational tests and evaluation, to find out whether they will in fact contribute to our fighting capabilities. Another 100-150 are also added to our operational inventory. These run the gamut, from a basically new type of helicopter, a new variety of jet aircraft, or a contraband detector, all the way down to a new type of tropical combat boot which will make it easier for a soldier to walk around, a modern transportable hospital, or better medicines against the types of disease that are prevalent in Southeast Asia.

The actual research and development programs have been carried out in all the usual R&D centers of competence—the military laboratories, private industry, and university research centers. I am frequently asked whether the widely divergent views within the U.S. about the merits of war have had a deleterious effect on our efforts. Naturally, any member of the U.S. Government is disappointed when he asks for help from a laboratory, a company, or a university and is told that they do not feel it appropriate for them to participate, that they have other more pressing work to do, or that there is insufficient profit in it for them. I also find it personally embarrassing to find this nonconstructive attitude within the engineering and scientific community of which I consider myself a part. Nonetheless, for every temporary setback I receive, I can provide at least ten examples of service and dedication "beyond the call of duty": Laboratory scientists who work on their own, virtually without funding support, huge U.S. corporations who essentially "donate" the services of some of their best talent without hope of large profit return; tiny companies that work around the clock to prove that they can meet an almost impossible schedule; graduate students and professors who offer themselves without demanding recognition; people from all these groups who risk their lives in Vietnam to help. I do not believe that any important development has been delayed by the vocal nonparticipation of a few—though I personally believe that their method of self-expression is insulting and demoralizing to our men in Vietnam.

WEAPONS, MODIFIED AND NEW

Let me mention a few examples of the kinds of developments I have been talking about. We recently developed a new gunship-aircraft configuration that happens to be very good at killing trucks along the resupply routes and in providing close support to our ground troops. This plane was developed for the Air Force in a military laboratory at Wright Field within a period of about nine months. It involved new equipment in an existing airframe. Wherever possible, we borrowed and adapted existing components. The plane was tested in the U.S. and it worked adequately; then it was sent to Vietnam with its operational crew plus a number of test people who observed it over a period of time. The plane operated in combat and was judged to be sufficiently successful that the 7th Air Force submitted a formal request for a production quantity. Production is under way now.

The HUEY Cobra program is another example. Here the Army took the original Bell HU–1 helicopter and redid virtually the entire aircraft to make it a better weapon platform. It was introduced in the early part of this year and we believe it may make a significant difference in the war. It has proven particularly useful in the urban insurgency context.

We have introduced several weapons which are brand new. Some were already in development before we became engaged in this conflict, and hence it was simply a question each time of expediting or changing the weapon in some modest way to improve its effectiveness for this war. There are new artillery rounds, for instance, and new kinds of bombs, including new kinds of delay bombs of various sorts—some to go after the flak sites in the North, some to go after the truck traffic, some to go after enemy soldiers hidden under jungle canopy. Most of our proudest accomplishments, however, will remain classified until the war is over, although some of our night-vision equipment and motion detection radars have now been declassified, since they have either been lost to the enemy or have no reasonable countermeasure.

In addition to our test agencies in Vietnam and our organization here in the Pentagon, we have scientific advisors with the major field commanders.

Only the military men themselves can establish what we call a "firm requirement" for a piece of equipment. But our people in the field are free to tell us of needs. When we are informed of these, we ask the scientific community to work on possible solutions. When solutions appear practical we present them to the people in the field. Often they then turn around and give us a "firm requirement." This may seem a somewhat unwieldly operational chain, but we are primarily research and development people trying to provide equipment for a military organization; ultimately, the operators must make the decision as to whether or not the solution is realistic.

In additon, each of the Services has set up a quick reaction capability whereby the Service can respond rapidly to special demands for improved equipments. Each Service maintains its own laboratory people in the field. In many instances these experienced engineers have found relatively simple, inexpensive things that have made tremendous differences. A typical example: Down in the Mekong Delta region, where the fighting takes place on the rivers, and canals, we have been using small landing craft of World War II vintage as patrol boats. Because they have flat bottoms, they are well suited for the shallow waters of the river and canals. The Navy wanted to be able to land helicopters aboard these boats, which are only 40 or 50 feet long, either for medical evacuation, resupply of equipment, or various command and control functions. One of Navy's laboratory personnel who was in the theater at the time designed a suitable landing deck. Within a few weeks, a prototype was built in Vietnam according to his design—with some help from his people back in the U.S. Today, many of these "minicarriers" operate successfully in the Delta. This development has measurably increased the flexibility and effectiveness of those forces, and for a very small sum of money. The Army maintains their Limited War Laboratory which does many of the same kinds of things, small jobs that are badly needed in a hurry. These labs are allowed to bypass some of the normal chains of approvals, when the money is small and quick reaction is urgently needed.

[In millions]

	Total defense, R.D.T. & E.	Southeast Asia, R.D.T. & E.
1964	$7,635	$100
1965	6,997	200
1966	7,553	370
1967	7,954	680
1968	8,002	780
1969	8,000?	800

I cite these examples to show that the Services have the technological capabilities and procedures available to respond to the demands for R&D in this war. My office in ODDR&E has not taken over this role; the military Services do it themselves; our job is to help them, to encourage them, and to assist in finding the funds needed for these requirements.

GOOD GUYS AND BAD GUYS

The most difficult job in this war has been to find the enemy. This may sound platitudinous. After all, we have had to find the enemy in every war we've ever been in. But there are no front lines in this war. The enemy operates primarily in small units. You cannot tell the "good guys" from the "bad guys"—many aren't even wearing uniforms. The big problem is to find out where the enemy is at a particular time—and, in fact, to determine whether or not he *is* the enemy—and then to determine his intentions. He is very good at camouflaging himself, his installations, and his equipment; and he moves primarily at night. Over North Vietnam, the problem is of a similar kind: We try to knock out the bridges, vehicles, and supply dumps, but these too are hard to find, as are his radar installations and antiaircraft defenses. The North Vietnamese do not have a very advanced civilization, they don't have large target complexes, and they have learned that we have difficulty knocking out their targets if they keep them small enough, or if they hide them away during the day. For every visible bridge, there may be three or four alternate ways of crossing the same stream.

In guerrilla and urban warfare, we must find the man who is planting the mine along the road, find the Vietcong who may come into a village to cut the chief's throat during the night, and find the teenage sapper team bent on destroying a Saigon police station. In all these cases, our biggest inadequacy is being able to single out the target, or the individual that represents the enemy. Perhaps a fourth of our total RDT&E expenditures has been solely for the purpose of trying to detect indications of enemy presence.

We are using virtually every type of indication that a human or vehicular target provides in our attempts to develop better means to find the real targets. These detection systems must work in real time—it does no good to find that 100 men walked or drove down Trail *X* from Point *A* to Point *B* a week ago. So realtime, nighttime intelligence gathering has been one of our major problems. We are beginning to make significant inroads in this area. Starlight scopes, for instance, permit a soldier to see targets with nothing more than starlight as illumination. They are now widely used in the Southeast Asian conflict with very impressive results.

I might interject here that the enemy has shown extraordinary cleverness in countering some new things we have introduced. It is seldom more than a few months after we introduce something new before we capture some document that tells the enemy, in essence, how to counter the new device. This is one reason we have tried to be so very security conscious during this war.

Where is the enemy's brainpower? Clearly, some of it is in the field, and it is evident that the enemy's allies have a certain amount of scientific advisory talent working for them too. I suspect there is an office like my own somewhere in the enemy structure, and that my counterpart works with a smaller budget and different emphasis. It is not the American way to use a lot of manpower and just a few devices that add to their capability; to save lives, we tend to want to minimize the number of men we use and to replace their skills with more sophisticated technology.

EYE FOR EYE, TANK FOR MORTAR

There are those who have a deep concern that we may be compromising much of our latest technology for tactical warfare without benefiting from a similar disclosure of Soviet and Chicom capability. To a certain extent, this is true; the Communists have committed North Vietnamese lives rather than Soviet technology wherever possible. The real questions, of course, are whether it is serious to have exposed our own capabilities as a means of reducing our own dead and crippled, and whether it will be difficult to establish a new level of capability in those areas where surprise is advantageous. I have no doubts in either area; we have done the right thing. After all, new technology becomes available faster than we convert it into military hardware. And in many areas, we have had the priceless advantage of finding out just how well our newer equipment works. We are thus in a position to make the type of real-world improvements in our forces that can only be derived from practical experience. There is very little good that comes from any war—and we would be negligent, indeed, if we did not profit from the only real R&D "benefit" possible; a better understanding of our own capabilities and needs.

There is another thing that is coming out of this war loud and clear: There are dramatic asymmetries between what we do and what the enemy can do to counter us. In some wars, the participants reason: If the other fellow has a tank, we must have a tank with an extra inch of steel; if he has a Mach 2 airplane, we must have a Mach 2.1 airplane; if he has a 150-mm artillery piece, we must have a 175. But because occupation and seizure of territory are not elements of this war, such reasoning does not hold in Vietnam. The enemy can destroy a $6 million airplane with a $100 mortar shell. He can shoot down a half-million-dollar helicopter with a 25¢ bullet from a hand-held gun. He can stop a tank with a hand-held antitank weapon, because he just plain sneaks up to it, stays under a bush for two or three days, or submerges himself in a rice paddy and waits for the tank to come along.

Such asymmetries are hard to live with. Time and again, we are asked: Why do we need a $2 million, two-seat twin-engine, after-burning jet to destroy little bamboo bridges? You could argue that we might be able to get along with a somewhat cheaper airplane, but the enemy has an air defense system *above* that bamboo bridge, which employs MIG 21's. Thus, we must have a weapon that can take on both the bridge and the MIG 21. The whole war has an enormous "dynamic" range, from one extreme to the other. But if we give up—if we say we cannot stop such resupply movements, by which the local insurgents are supported and bolstered—then we are saying that we cannot stop this conflict. If we cannot do this, we cannot stop wars of national liberation. If this is true, the whole world may become "liberated" piece by piece.

The mortar problem in Vietnam is another example of asymmetry. We have never before been in a war where our cities, bases, and depots have been exposed to mortar and rocket fire—often from 360° around the perimeter. A mortar shell can be carried in a man's pocket; it can be hidden in a crate of lettuce. The enemy is willing to take two weeks, or two months, to set up a 50-round attack. On the average, 50 rounds can destroy $20 million worth of airplanes. A simple weapon such as a mortar or rocket can raise hell, and the counter system is quite complex.

The enemy's allies are doing a good job of providing the North Vietnamese and the South Vietnamese guerrillas with these weapons—and they are not simply old pieces of pipe with home-made explosives in them; they are all made somewhere in the Communist nations; they come in little canvas carrying bags; they break down into pieces that can easily be handled by a small man. This is not accidental. This weaponry is carefully tailored for their side of the job, just as we try to tailor ours to counter it. It is a fascinating game of technology against technology, but in one case with a minimum use of manpower, and, in the other, a rather extravagant use of manpower.

Between 1964 and today, much of the equipment used by our forces has changed at least once. This covers the gamut from uniforms to aircraft and the weapons they drop; for instance, the helicopters we use for pilot rescue: We used one helicopter when the war began, then another helicopter for the next two years, and now we have begun to replace the second helicopter with an even more capable machine.

STRATEGY FOR A "POROUS" WAR

In the field of detection, I think the changes are occurring even more rapidly. You have probably read about the chemical sniffers, that smell the presence of human beings. This sounds rather sophisticated, but is little more than normal laboratory instrumentation packaged in an olive drab box. We put these boxes into helicopters and fly them over the jungle. Four or five years ago, I doubt that anybody would have given us a plug nickel for this idea, and yet, they are now being used in substantial quantity by regular operational forces. Similarly, we are learning to detect footsteps many yards away—with another spin-off from laboratory instrumentation equipment.

These developments open up some very exciting horizons as to what we can do five or ten years from now: When one realizes that we can detect anything that perspires, moves, carries metal, makes a noise, or is hotter or colder than its surroundings, one begins to see the potential. This is the beginning of instrumentation of the entire battlefield. Eventually, we will be able to tell when anybody shoots, what he is shooting at, and where he was shooting from. You begin to get a "Year 2000" vision of an electronic map with little lights that flash for different kinds of activity. This is what we require for this "porous" war, where the friendly and the enemy are all mixed together.

Much of the new sensor technology has application at the other end of the battle spectrum, in the security business. For example, we must learn how to protect the road from Saigon to the Mekong Delta, for this is the economic lifeline for the country. Some 40% of the people live in the Delta; these people are 95% agrarian, and their products must get to Saigon. Keeping this road free from ambush is a very serious problem.

One other problem in the Delta is that most of the people are not for either side; they want both sides to go away so they can grow some rice and sell it to somebody for a reasonable price. They give their allegiance to no one. And this is the frustration: They will tell you a week later that the Viet Cong came in and took 20% of their rice. But they will not tell you at the time it happens. They know we cannot protect them adequately against others who may sneak into the village again next week. So our progress is inhibited by not being able to provide an adequate level of security. Consequently, a small group of Viet Cong can keep the population silent and uncooperative.

Indeed, throughout the country one of the

biggest problems stems from the fact that nobody has a telephone. There is often no way for a victimized community, or family, to call for help. We sorely need a simple, primitive substitute for our own phone system. I think it would help to raise the people's confidence if they could report to their officials in time for law enforcement to respond.

NEW CONCEPTS OF WAR

What are the lessons to be learned from this war? I believe the first is the fact that we *cannot* separate the insurgent from his background. Next, when we do find a target—be it a Viet Cong, a truck, or a bridge—*often* we cannot kill it, and *always* the enemy can replace it. All the important enemy targets are small, fleeting, hidden, moving, cheap, smart, and reproducible. He knows how to use his environment to advantage. The jungle, the rice paddies, the shallow streams and canals, the firm clay earth itself, the long-suffering people and their generations of discontent—these are the environmental factors we must contend with. And let me add one more: We must learn to fight extensively at night. We must work within this environment to find the enemy and to either catch him in the act of being an enemy or somehow to deter him from being an enemy again.

Over the past four years, the United States has spent over $2 billion in R&D on these other problems of the war. We are on the verge of some very important new military capabilities. We may not perfect them all in time for this war. Indeed, some may never even reach the field in test quantities. But these are the things that will keep this kind of war from breaking out again, and we *must* continue to develop them into weapons and equipment that can be readily adopted by the military, even after we reach a ceasefire in Vietnam.

From the work we have sponsored during this war, I can see three revolutionary concepts coming into focus—and our research and development programs have already begun to demonstrate that these concepts can be made practical:

One: We are getting closer to being able to provide complete realtime battlefield surveillance around the clock, through suitable instrumentation.

Two: Technology will soon permit the development of practical weapons that will discretely destroy the types of small, fleeting targets characteristic of this type of war.

Three: It now appears that we *may* reach the stage where there will be little difference between fighting at night or during the day. Clearly, this will be the toughest challenge; fighting at night will require a new systems approach, new training, new doctrine, and new ways of committing one's manpower.

In all three of these revolutionary concepts, we are hindered by two real-world problems. First, the technology is so new that it has not yet become an inherent part of our weapons system designs. Second, and equally important, the introduction of new concepts is extremely difficult during the conduct of the war. These are the problems that must be solved if we are to compress the learning and experience process so that the greatest benefits of new technology can be felt in South Vietnam.

Finally, we must learn to share this new technology with our allies. It is not enough to equip only the U.S. forces with new capabilities that make our men more effective. We must become more aggressive in training and organizing the South Vietnamese to take on the "residual war" themselves. It is my own opinion, after nine visits throughout South Vietnam, that the South Vietnamese can handle more sophisticated equipment—even if we have to maintain it for some time into the future. It is only by transferring our new capabilities to our allies that we can hope to turn the counterinsurgency problem back where it belongs, with a concurrent reduction in U.S. costs and losses. When that happens, then my office can probably go out of operation.

EMERGENCY FUND ALLOCATION TO SOUTHEAST ASIA, FISCAL YEAR 1964 THROUGH FISCAL YEAR 1970

[Dollar amounts in millions]

R.D.T. & E.	1965	1966	1967	1968	1969	1970
Emergency fund amount	125	125	125	100	50	[1] 100
Emergency fund to Southeast Asia	21	73	101	88	41	
Percent to Southeast Asia	16.5	58.1	80.1	88.0	81.7	
Total Southeast Asia, R.D.T. & E.	200	370	680	856	826	[2] 593

[1] Requested—not included in fiscal year 1970 Southeast Asia total.
[2] Southeast Asia content at apportionment.

TABLE

R.D.T. & E. EMERGENCY FUND SUMMARY FISCAL YEAR 1965-69

SOUTHEAST ASIA PROJECTS ONLY

[Dollar amounts in millions]

	1965		1966		1967		1968		1969	
	Requested	Approved	Requested	Approved	Requested	Approved	Requested	Approved	Requested	Approved
Army	$16.4	$8.3	$97.7	$16.7	$66.1	$28.1	$119.9	$52.2	$56.9	$38.6
Navy	13.6	9.9	99.9	22.7	93.1	49.0	46.3	13.3	6.6	.7
Air Force	1.3	1.3	95.8	31.4	92.2	19.2	44.1	17.6	43.2	.5
DCA (DCPG)	1.1	1.1			10.4	2.2	3.0	3.0		
ARPA			1.8	1.8	4.3	2.6	1.6	1.6	2.0	1.0
DASA										
DIA										
Total	32.4	20.6	295.2	72.6	265.1	101.1	214.9	88.0	108.7	40.8
Total emergency funds		125.0		125.0		125.0		100.0		50.0
SEA (percent)		16.5		58.1		80.1		88.0		81.7
ALL PROJECTS										
Army	$42.0	$33.3	$120.0	$29.7	$66.7	$28.7	$119.9	$52.0	$61.7	$39.6
Navy	84.8	38.8	121.0	30.0	117.3	66.9	67.8	19.1	22.8	5.9
Air Force	26.4	26.4	153.7	61.5	118.5	19.6	66.4	20.3	17.5	.5
DCA (DCPG)	4.1	4.1			10.4	2.2	3.0	3.0		
ARPA	6.3	1.8	7.5	3.8	4.3	2.6	3.6	3.6	5.0	4.0
DASA	9.0	9.0			10.0	5.0	4.0	2.0		
DIA							.2			
Total	172.6	113.9	402.1	125.0	327.2	125.0	264.9	100.0	107.0	50.0
Total emergency funds		125.0		125.0		125.0		100.0		50.0
NON-SOUTHEAST ASIA PROJECTS ONLY										
Army	$25.5	$25.5	$22.3	$12.9	$ .6	$ .6			$ 4.8	$1.0
Navy	71.2	28.9	21.1	7.3	24.6	17.9	21.5	6.0	16.2	5.2
Air Force	25.1	25.1	57.8	33.1	27.3	.4	22.3	2.0	17.0	
DCA (DCPG)	3.0	3.0								
ARPA	6.3	1.8	5.7	2.0			2.1	2.1	3.0	3.0
DASA	9.0	9.0			10.0	5.0	4.0	2.0		
DIA							.2	0		
Total	133.8	93.3	106.9	55.3	62.5	23.9	50.1	12.1	41.0	9.2
Total emergency funds		125.0		125.0		125.0		100.0		50.0

TAB G

SUMMARY OF TRANSFER AUTHORITY, FISCAL YEAR 1965-69

[Dollar amounts in millions]

Year	Service	Appropriated From	Appropriated To	Item	Amount	Date
Fiscal year 1965	Navy	R.D.T. & E. (A)	R.D.T. & E. (N)	Aircraft	$2.0	October 1964.
		R.D.T. & E. (AF)	R.D.T. & E. (N)	do	2.0	
		R.D.T. & E. (Def Aq)	R.D.T. & E. (N)	do	2.0	
	Air Force	Other procurement (AF)	R.D.T. & E. (AF)	do	20.0	December 1964.
		Missile procurement (AF)	R.D.T. & E. (AF)	do	14.8	Do.
Total					40.8	
Fiscal year 1966	Navy	PAM (N)	R.D.T. & E. (N)	Aircraft	52.0	December 1965.
	Air Force	Missile procurement (AF)	R.D.T. & E. (AF)	Missile	24.2	January 1966.
Total					76.2	
Fiscal year 1967	Air Force	Aircraft Procurement (AF).	R.D.T. & E. (AF)	Aircraft	4.0	December 1966.
	Navy	PAM (N)	R.D.T. & E. (N)	do	12.0	January 1967.
		PAM (N)	R.D.T. & E. (N)	do	46.0	January 1967.
	Air Force	Military personnel (AF)	R.D.T. & E. (AF)	Missile	18.6	June 1967.
Total					80.6	
Fiscal year 1968		Not used				
Fiscal year 1969	Air Force	Other Procurement (AF)	R.D.T. & E. (AF)	A/C System	28.0	October 1968.
		Other Procurement (AF)	R.D.T. & E. (AF)	Missile	41.6	
		Other Procurement (AF)	R.D.T. & E. (AF)	do	8.4	
Total					78.0	

EVALUATION OF SUCCESS OF EMERGENCY FUND EXPENDITURES

	Total funds	Successful[1] (percent)	Still in development[2] (percent)	Failures[3] (percent)
1965	20.6	91.5	8	0.5
1966	72.6	59.0	37	.4
1967	101.1	73.0	26	.1
1968	88.0	38.0	61	.1
1969	40.8	14.0	86	.0

[1] Accepted for production use or incorporated in already operational equipment or manuals.
[2] Still in development, or still undergoing tests with no decision yet on operational potential, or stopped by change in scope of war.
[3] Not acceptable as a result of unsuccessful development, test, or operational evaluation.

Mr. TYDINGS. But did the need to use $41 million of the emergency fund and $263 million in reprograming authority for PROVOST exhaust the flexibility of the Department of Defense's research and development program? Hardly.

In addition to reprograming authority, the Secretary of Defense has $150 million in transfer authority which allows funds to be transferred between Defense appropriations, provided that not more than 7 percent of any one appropriation is transferred. Last year, fiscal year 1969, only $78 million of that $150 million transfer authority was utilized, and none of it directly for PROVOST.

Finally, for use in "unforeseeable emergencies and extraordinary expenses of a confidential military nature," the Secretary of Defense has a $10 million contingency fund. That is over and above all of the other items I have just cited. Though there has never been occasion in the past to use it for an emergency in the area of research and development, it could be used for such a purpose. Last year, the Secretary expended less than $1.5 million of that $10 million fund.

In other words, PROVOST—the category of research and development in which 82 percent of the emergency fund was expended—was able to provide for all of its needs, expected and unanticipated, in fiscal year 1969 without exhausting all of the flexibility of the Department of Defense research and development program.

Mr. President, this leads us to a second question. Since the $50 million emergency fund was adequate according to Mr. Sullivan, the representative of the Department of Defense in 1969——

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

Mr. TYDINGS. I yield.

Mr. MURPHY. Mr. President, I understand that Mr. Sullivan was in charge of research and development for Southeast Asia. Am I correct?

Mr. TYDINGS. Mr. Sullivan is a Deputy Director of Southeast Asia Matters, Office of Department of Defense Research and Engineering.

Mr. MURPHY. In other words, his area of activity was, I would assume from his title, PROVOST.

Mr. TYDINGS. The Senator is correct. That is the department name and label for all research and development for Southeast Asia.

Mr. MURPHY. Southeast Asia.

Mr. TYDINGS. The Senator is correct. In addition, he heads up the emergency fund.

Mr. MURPHY. Mr. President, the use of the funds we are talking about, as I understand, is not to be limited to Southeast Asia or to the problems relating to Southeast Asia but are to be used for any new emergency or any use that in the consideration of the Secretary would warrant the use of the funds. Am I correct in my understanding?

Mr. TYDINGS. No. The Senator is incorrect in his understanding. The $100 million emergency fund is for research and development, testing, and evaluation for procurement or production related thereto. It is not carte blanche over the so-called waterfront. It is specially "for research and development, testing, evaluation, for procurement or production relating thereto."

And as a practical matter, in the fiscal year 1969, 82 percent of the emergency funds went to PROVOST. This is approximately the rate of emergency funds in recent years that come into PROVOST, research and development directly related to Southeast Asian matters.

Mr. MURPHY. But it is not restricted to that.

Mr. TYDINGS. No, it is not restricted to that, but it is restricted to research, development, testing, evaluation, and related production and procurement.

Mr. MURPHY. But it is not restricted to procurement relating to Southeast Asia.

Mr. TYDINGS. No.

Mr. MURPHY. Not restricted in procurement relating to Southeast Asia.

Mr. TYDINGS. No.

Mr. MURPHY. But refers to matters in Europe, NATO, SEATO, Okinawa, Kwajalein, or other of the other thousands of places that are unfortunately interested in this matter around the globe.

That was my point. I just wanted to establish Mr. Sullivan's area of operation, as I was a little confused for a moment.

Mr. TYDINGS. I thank the Senator.

Mr. STENNIS. Mr. President, will the Senator yield? Has the Senator finished his remarks?

Mr. TYDINGS. Not yet. If the Senator will bear with me for another 10 minutes, I will yield to him at that time.

Mr. STENNIS. Mr. President, I withhold that request.

Mr. CRANSTON. Mr. President, what were the main reasons advanced by the Department of Defense for doubling the emergency funds?

Mr. TYDINGS. Mr. President, I take this opportunity to respond to that question by reading a quotation from a statement of Mr. Leonard Sullivan, Jr., the Deputy Director of Research and Development, Southeast Asia Matters.

I will read it first and then I will summarize it. The Senator may then summarize it for himself in case I unfairly categorize his answer.

Let me give the answer of the Department of Defense from page 7 of the statement submitted to me and my staff on the Emergency Fund.

It reads:

Last year, the Congress authorized an Emergency Fund of only $50M. Although a few million remained until near the end of the year, the preponderance of it was spent, as usual, near the middle of the fiscal year. The $50M was clearly inadequate and was recognized to be so from the beginning of the year. To compensate for the Congressional action—

That is, the reduction to $50 million. I continue to read:

We therefore deferred an additional $90M (approx) of funds already assigned to the Services and "earmarked" it for augmentation of the Emergency Fund by reprogramming if and when necessary. Hence we knew from the beginning of the year that we had an "equivalent Emergency Fund" of about $140M (approx)—and used almost all of it.

Mr. President, I shall comment here and then will continue with the quotation.

This is exactly what they did in 1966, 1967, and 1968. It is what they can do in 1970. Because of the great flexibility within the Department of Defense, in other words, they can reprogram almost everything when necessary.

I continue to read from Mr. Sullivan's statement:

If the Congress insists on restricting the Emergency Fund for FY 70, we will again be forced to use some equivalent device to assume adequate funds to cover our unforeseen requirements. However, it would appear to be a needless, time-consming, and indirect approach to an otherwise straightforward management tool. Additionally, if as now appears possible, the overall RDT&E budget is cut by 12%—making it 5% lower than last year's—the problem in establishing the deferrals for reprogramming will be substantially more difficult, may run counter to the preferences of the Congress, and will cause additional sources of irritation and delay between the Services and OSD.

I shall comment here again. In other words, Mr. Sullivan would much rather have an additional $50 million or an additional $100 million or an additional $150 million than require the Secretary of Defense—the man who should know the most about it—to determine where the higher priorities are among the various services and have to reprogram because that might cause an additional source of irritation between the services and the Office of the Secretary of Defense.

I continue to read:

In *either* case—reprogramming or Emergency Funds dispersal—the Congress is notified of all appropriation transfers and reprogramming actions above the established $2M threshold, and is asked to give prior approval in instances of known Congressional interest. In fact, two of our important '69 Emergency Fund items have been delayed for four months this year by such Congressional concern. Hence Congressional control of our activities is essentially the same for reprogramming and Emergency Fund usage, but the reprogramming represents the less attractive alternative for internal Defense Management.

Let me emphasize the last sentence I read:

But the reprogramming represents the less attractive alternative for internal defense management.

Of course, I would much rather be able to give my wife an additional $100 a week than say, "You will have to make some choices from what you have."

Certainly it is less desirable, but the fact of the matter is, according to Mr. Sullivan, that not one single item needed for Vietnam or for provost research and development was delayed or cut because of lack of funds. They just reprogrammed it within the $7.6 billion plus for research and development program and got what they needed.

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

Mr. TYDINGS. I will yield in a moment.

Have I sufficiently responded to the question of the junior Senator from California?

Mr. CRANSTON. Yes. The response has covered my question thoroughly, and I am grateful to the Senator.

Mr. TYDINGS. I yield to the senior Senator from California.

Mr. MURPHY. I say to the Senator from Maryland that if I were to compare my wife to the Defense Department, I would be in trouble when I went home.

Mr. TYDINGS. Perhaps the Senator does not know where his Department of Defense is.

Mr. MURPHY. The distinguished Senator from Maryland used the words "least attractive," which I think is a nice——

Mr. TYDINGS. "Less attractive." If I said "least," I meant to say "less." I took that word for word from the language of Mr. Leonard Sullivan, Jr., on page 9 of his statement.

Mr. MURPHY. Then Mr. Sullivan used another term before that, when he said they would be forced. I do not know Mr. Sullivan. When he says they would be forced, I do not know whether this is what I would call a very bad disposition of circumstances or whether this would be forcing a manner of procedure that was unworkable or impractical.

Certainly, over the last years, there has been much in the Defense Department that I have considered impractical and much that I have considered unworkable.

I should like to make the point again that in the judgment of the committee, we thought that perhaps by cutting the request and trimming it back to what we thought was a proper figure, and realizing that there are times when specific extra funds are needed—and I have to assume that they use the research and development money properly and they cannot just automatically say, "Cut out that program"—if they can do that and the program is going to be cut in order to accommodate the funds for another program, it should not have been started in the first place. With the way I hope this committee will function in the future, we will not have as much of that as we have had in years past.

So I merely rise to make the point, first, that Mr. Sullivan is talking only about his responsibility, which is Vietnam, which is limited. Second, he is not happy with the condition. We can assume that he is an extravagant fellow who just says, "I would like to have some extra money." Or we can assume he is a knowledgeable, reputable fellow, and I assume that; otherwise, I know that the distinguished Senator would not be quoting him. That would involve using only funds that are needed; therefore, when he transfers funds from one program to another, he may be doing some damage to the program from which the funds are being taken.

Mr. TYDINGS. I thank the Senator.

Let me discuss the second question raised by the position of the Department of Defense.

Since the $50 million emergency fund was adequate in fiscal year 1969, is there any indication that research and development demands relative to research and development resources in fiscal year 1970 will increase sufficiently to warrant doubling the emergency fund to $100 million?

Since more than 80 percent of the emergency fund is to be devoted to PROVOST again in fiscal year 1970, and since PROVOST represents the highest priority research and development to support our combat activities in Vietnam, let us begin by looking at PROVOST for the coming year.

In fiscal year 1970, initial programing for PROVOST is $590 million, $68 million more than was initially programed in fiscal year 1969. At the same time, in testimony before the Senate Armed Services Committee in May, Doctor Foster projected total PROVOST costs by the end of fiscal year 1970 at only $15 million above his projected total PROVOST cost for fiscal year 1969. In other words, to cover an additional $15 million in projected total costs, the Defense Department is increasing initial programed funds for PROVOST in fiscal year 1970 by $68 million.

Furthermore, according to Mr. Sullivan:

We know we are "over the hump" in our RDT & E expenditures for this war. We have learned to predict our funding requirements somewhat better.

In addition, Mr. Sullivan stated that while we were not ideally equipped in the past few years to fight in a Vietnam-type war and thus encountered many unexpected problems, as a result of past PROVOST work "we are now much more current."

In short, due to past experience, there should be less unexpected research and development expenses in fiscal year 1970—less of the kind of expenses the emergency fund was designed to meet.

For the coming year, the Secretary of Defense will still possess his $150 million transfer authority as well as his reprogramming authority. It is true the total DOD research and development budget was cut in committee this year. However, the cut amounts to only a 5 percent reduction in research and development as compared with last year's appropriation. Furthermore, 80 percent of the reduction recommended by the Armed Services Committee applies to specific programs

unrelated to the Vietnam war. Thus, the overall reprograming ability within the research and development sector of the Department of Defense budget will not be significantly affected.

It is also important to note in considering Vietnam-related research and development in this year's budget that the end products of this research and development will not be available for use in Vietnam until 1971 or 1972. According to Mr. Sullivan, it takes between 18 to 36 months from the inception of a project until it is ready for use by our troops in the field.

I think none of us, including the President, expects the current level of U.S. involvement in Vietnam to continue for another 1½ to 3 years. As a matter of fact, the President on at least two occasions has indicated that he is going to reduce troops in Vietnam. On one occasion, he ordered a 25,000 troop reduction. So I do not see how we can expect the level of involvement to increase in Vietnam, in view of the statements of the President of the United States.

But, the question is asked, what if there is a large, unexpected increase in our research and development demands? In addition to the $50 million Emergency Fund, the Secretary's $150 million transfer authority, and his reprograming authority, there is still the Secretary's $10 million contingency fund and the possibility of a supplemental appropriation from the Congress.

In short, weighing the probable demands on our research and development program for the coming year against the resources available to meet these demands, I can find no sound justification for doubling the emergency fund to $100 million.

In concluding, I want to make clear that this debate does not involve our national security. According to Mr. Sullivan, whether he receives the additional $50 million for the emergency fund or not, his office will be able to meet all of the needs of our troops in Vietnam. What is at issue is whether he will be forced to haggle with the various Services for low priority or superfluous funds if PROVOST costs exceed his initial estimates. This is an exercise he has performed successfully for the past 4 years with no apparent injury to our national security.

What we are talking about is an economy measure. We are in the midst of a serious inflation. We have just saddled the American people with an extension of the 10-percent surtax. In return, we have promised to cut all Government spending that is not absolutely essential to the Nation's well-being.

Mr. President, I have devoted considerable study to the Defense Department's request for a doubling of the emergency fund.

I do not question the manner in which the past emergency funds have been used, nor do I doubt the sincere motivation behind the desire of the Department of Defense for an additional $50 million. If I were the Secretary of Defense I would probably be asking for that also. But I am not the Secretary of Defense. I am a Senator representing the people of Maryland. In my view, and the view of so many of my colleagues who are cosponsoring the amendment with me, we do not believe this additional money is warranted. In the name of economy, I ask that the Senate support the measure reducing the amount to the $50 million of last year's appropriation.

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

The PRESIDING OFFICER (Mr. DOLE in the chair. Does the Senator yield?

Mr. TYDINGS. I yield.

Mr. STENNIS. Mr. President, I appreciate the Senator's yielding to me. He has gone into this matter very thoroughly.

For the record, I have a statement which will show the amounts appropriated for this emergency fund in the past. In the past, Congress has always recognized the need for a limited emergency fund which would allow the Secretary of Defense to apply the necessary resources to exploit sudden technological breakthroughs or satisfy unanticipated research and development needs, and to do so without disrupting planned and ongoing programs.

In fiscal years 1962, 1963, and 1964, we appropriated $150 million for this purpose each year. In the fiscal years 1965, 1966, 1967 the approved fund was $125 million. In fiscal year 1968 it was reduced to $100 million. In 1969, although the Defense Department requested $125 million, the emergency fund was reduced by Congress to $50 million. In each of these years the fund was augmented by authority to transfer other appropriated funds in the amount of $150 million each year.

Mr. President, this matter is complicated, as are so many other matters, by the situation with reference to Vietnam. I know it has upset the budget, it has upset these accounts, it has upset the transfer, and it has upset everything. For 2 years we had to insist on money being put in for the expense of the war. There was nothing in the appropriation bill.

I wish to point out that this matter deals with the matter of transfer. Just what does that mean? That is a matter handled by the Committee on Appropriations. They have the language provisions in their bill governing transfers of funds. It really does not come within this bill, but it is related.

Mr. TYDINGS. It is very related.

Mr. STENNIS. Transfer means the transfer from one account to another, such as a transfer from the research and development account to the O. & M. account—the operations and maintenance account. I am just making this statement for the record. To reprogram means to bring one item in the same account over to another item in the same account; transferring some item of research and development over to another research and development within that general account.

I would rather have a definite and positive figure in here for the emergency use only in the breakthroughs that we are trying to reach, and require them to exhaust that money first before they could have any transfers from another account. As I have said, we do not control all of that. It is within the authority of the provisions in the appropriation bill.

The reasoning with respect to the $100 million was simply this. We have a reduction here, as Senators know, from the $8.222 billion requested in the budget of April 15. The committee made a reduction to $7.170 billion, using round numbers. That is well over $1 billion.

In making such a vast reduction, which is more than at any time recently, we were trying to cover the proposition of a real breakthrough and a possible emergency of some kind. Our thinking was merely commonsense; that it might prove that the knife was in too deep in some items; and there ought to be more than a nominal sum that could be used.

The Senator traced the history of all this matter. I have mentioned the transfer authority. I think, frankly, it is nothing to argue over a great deal. I do not think it is necessary to have a rollcall vote or anything of that nature.

If the Senator feels as if he can accept it for $75 million and let it go at that figure, we will put something in our report or in a letter to the Department of Defense, and particularly Dr. Foster, that we think this was allowed for that purpose; not to go into the transfer of funds until he has at least exhausted this money. If they are going to use a lot of transfer money first, we will take this out altogether next year.

I respond to the Senator in that way. If he would be willing to make it $75 million, I think we could accept such an amount.

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

Mr. TYDINGS. I yield.

Mr. COOK. Mr. President, I would like to substantiate the $75 million figure of the Senator from Mississippi on this basis. Referring to the report of the Committee on Armed Services, I might suggest that the committee was told that of the $50 million it had expended $47.002 million, which left $2.998 million.

Mr. TYDINGS. That was May 22, a month and a half before the end of the fiscal year.

Mr. COOK. The Senator is correct. But at the same time, Dr. Foster indicated there were $25 million in programs that were then pending; that they had to decide what should be done, but they only had $2.998 million and felt it should run until the end of the year.

The point I am trying to make to the Senator from Maryland is that if he would consider $75 million, I think we can get it by reason of the fact that they had expended almost the $50 million and had $25 million-plus of programs that were in existence for R. & D. for which funds were not available.

I agree with most of what the Senator from Maryland has said with respect to the transfer of funds, but I would suggest, as one who is economy minded, that for me to suggest raising the amount from $50 million to $75 million is only on the basis that the committee itself has already deleted from the budget more than $900 million of research and devel-

opment funds, and there is not the ability to transfer back and forth. Even the ability to transfer in the $150 million float account is of such a nature that it may not be as easy in the future for Mr. Sullivan or anyone else to be able to shift those funds one way or the other as he saw fit.

I think there is ample authority. As a matter of fact, if I may speak for a minute longer, the distinguished Senator from Maine (Mrs. SMITH) brought up this very subject with Dr. Foster in the testimony and asked him about the additional $25 million of programs waiting that could not be funded. She asked whether he did not feel, perhaps, that he should raise the $50 million figure. So I can only say that I think there is ample precedent for the Senator to consider an increase from $50 million to $75 million. I hope that he will give the proposal serious consideration.

Mr. TYDINGS. I thank the distinguished Senator from Kentucky for his contribution. He is also persuasive. I might point out that of the almost $1 billion reduction in research and development made by the Committee on Armed Services, only 20 percent of the $1 billion was not for specific items deleted by the committee itself. But I certainly think that the Senator is very persuasive.

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

Mr. TYDINGS. I yield.

Mr. PROXMIRE. I am wondering whether there should be an increase from $50 million to $75 million. Was that the suggestion?

Mr. TYDINGS. That is correct.

Mr. PROXMIRE. When the situation, as I understand, deals primarily with Vietnam and related projects.

Mr. TYDINGS. Last year, as I recall, 82 percent of the fund was applied to Vietnam and related items.

Mr. PROXMIRE. I think one of the most persuasive aspects of the Senator's excellent speech was his emphasis on the fact that everything we are told is that the war in Vietnam is being deescalated. The President has already announced his plan to withdraw 25,000 troops, and we accept that. Certainly it is irreversible, in the view of most of us.

As the Senator said, within a year and a half to 3 years, it should be possible to withdraw very largely from Vietnam—not entirely but largely—under these circumstances, the increase in the contingency fund for Vietnam for certain things in Vietnam does not seem to be logical. What is the answer?

Mr. TYDINGS. Let me say to the Senator from Wisconsin, that is a difficult question in light of the President's statements about reduction of American involvement, de-Americanization of the Vietnam war, and bringing home our troops. The increase in the Emergency Fund, say 80 percent of it, can be reasonably expected to be used in defense-related research and development for Southeast Asia which by the testimony of Mr. Sullivan will not be completed for 18 to 36 months.

Mr. PROXMIRE. What was the cost of that last year when the situation was far more complicated than every indication is it will be this year? Last year, when we had 550,000 American troops in Vietnam, we did not exhaust the fund last year; is that not right?

Mr. TYDINGS. That is correct. I think for the RECORD, just to make it absolutely clear, we should put the colloquy between the Senator from Maine (Mrs. SMITH), the ranking Republican minority member of the Armed Services Committee, and Dr. Foster, together with his response to her when she questioned him about the emergency fund, which appears on page 1854 of the authorization for military procurement research and development hearings before the Armed Services Committee, part 2 of two parts. We should include this colloquy just to complete the record in this matter.

Mr. DOMINICK. Mr. President, will the Senator from Maryland yield?

Mr. TYDINGS. I yield.

Mr. DOMINICK. I should like to make the record clear that this research contingency fund is not just for Vietnam but covers all research. Maybe it was 80 percent that was spent on it the last time. We may well spend another 80 percent of it for research and development on a Middle East situation the next time. We cannot tell where the need for these funds will arise. We cannot equate the withdrawal of troops from Vietnam with our need for this research contingency fund.

With all respect to the Senator from Wisconsin, I think he is clouding the record. It should be made crystal clear.

Mr. TYDINGS. I think it is clear. In fiscal 1965, 88 percent of the total went to Vietnam. In 1969, 81.7 percent went to Vietnam. I might say that if we were not in Vietnam I do not think this would even be an issue before the Senate today, for were there no war, I think it would be up to the Armed Services Committee to specify what research and development was going to take place. Unanticipated R. & D. costs would not constitute a serious consideration.

Mr. PROXMIRE. Furthermore, $40 million to $45 million has been for Vietnam. There will be less activity for Vietnam now. It is prudent, wise, economical, and logical for us not to increase the fund, which is all the modest amendment of the Senator from Maryland would do. So that I wonder, would not the distinguished Senator from Mississippi accept a compromise and go to $75 million from the $50 million. I wonder about the wisdom of that review of the whole history of this, in view of the expectations about Vietnam.

Furthermore, I should like to ask the Senator from Maryland, Is it not true that the original Defense Department's request was for only $52 million? That is what they wanted.

Mr. TYDINGS. In January of this year, Secretary of Defense Clifford requested $50 million in the original budget. Two months later, the request was increased to $100 million by Secretary of Defense Laird.

Mr. PROXMIRE. Is it not also true that not one single request of need by Southeast Asia forces for research and development was denied?

Mr. TYDINGS. The Senator is correct. The fact was that the considerable flexibility which exists within the Department of Defense made it possible to provide for every research development project which they felt was of high priority.

Mr. PROXMIRE. In the event that this is not enough, there is ample flexibility, $7 billion in research and development, that can be used at the discretion of the Secretary of Defense in this area if he wants to; is that not correct?

Mr. TYDINGS. That is correct; and there is an additional $150 million in transfer authority to transfer funds between one section of the appropriation bill and another.

Mr. PROXMIRE. I thank the Senator very much.

Mr. STENNIS. Mr. President, will the Senator from Maryland yield to me briefly again?

Mr. TYDINGS. I yield.

Mr. STENNIS. The Senator has given a fine list of figures here as to what has happened; but so far as the budget is concerned, as of now, we do not know what transfer authority, if any, the Appropriations Committee and Congress are going to put in the appropriation bill. A transfer has to be authorized in the bill. Then it is passed on by the committee. We do not know what language they will have, on what the Congress will approve with reference to reprograming. Certainly, until those things are known, if those gates should be closed or partly closed, we certainly should not reduce the emergency fund too low.

This is a discretionary matter for Dr. Foster anyway, and for Congress. So I had understood that the Senator from Maryland had weighed this thing considerably in that light.

Mr. TYDINGS. I have. If the Senator from Mississippi offers an amendment to my amendment which, in effect, would reduce the recommendations of the Armed Services Committee from $100 million to $75 million—my proposal reduces it to $50 million—I would accept that.

Mr. STENNIS. Would that be agreeable generally here to those of us who have worked on this matter? I refer to the Senator from Wisconsin (Mr. PROXMIRE) and the Senator from Kentucky (Mr. COOKE) who have already expressed themselves. The Senator from Kentucky has expressed himself as being in favor of such a figure, if I understood him correctly.

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

Mr. TYDINGS. I yield.

Mr. FULBRIGHT. As I understand it, this bill has not been passed by the House?

Mr. STENNIS. No.

Mr. FULBRIGHT. Therefore this goes in the House bill, and if it follows past custom, will it not, the House will make it considerably larger, I expect.

Mr. TYDINGS. No.

Mr. STENNIS. No.

Mr. TYDINGS. Last year the House Armed Services Committee struck out the emergency fund in its entirety. The Senate authorized $121 million.

In conference, the Senate receded, the House acceded, and the sum of $50 million was arrived at. But the House had struck it out in its entirety. So I would hope that for this year that the result would be that——

Mr. STENNIS. Mr. President, I think there is no reason in the world why we should not be able to settle this matter to and the final amount to the satisfaction of all parties concerned in the bill arrived at in the conference.

Mr. TYDINGS. Mr. President, I ask unanimous consent, then, that my amendment be modified on line 2 by striking out the figure "50,000,000", and inserting in lieu thereof the figure "$75,000,000."

The PRESIDING OFFICER. Without objection, the modification is made.

Mr. TYDINGS. Mr. President, I ask for the yeas and nays.

The PRESIDING OFFICER. Is there a sufficient second?

Mr. FULBRIGHT. Mr. President, we had better have a quorum call.

Mr. STENNIS. Mr. President, were the yeas and nays ordered?

Mr. FULBRIGHT. No. There was not a sufficient second.

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

The PRESIDING OFFICER. The clerk will call the roll.

The assistant legislative clerk proceeded to call the roll.

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

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

EXECUTIVE ORDER 11246 "EQUAL EMPLOYMENT OPPORTUNITY"

Mr. McCLELLAN. Mr. President, one of the most alarming and dangerous trends in Government in recent years is the increasing tendency of the executive and judiciary branches of the Federal Government to usurp the lawmaking functions of the Congress. And it is in the area of civil rights that this tendency has been most evident.

A recent and flagrant example of this tendency is the attempt of the executive branch to force racial quotas on Government contractors by executive order.

Title VII of the Civil Rights Act of 1964 dealt in detail with the subject of equal employment opportunity, but much of private industry, especially ir. the construction field, has been confronted with a far more extensive and burdensome system of regulation in this area under the color of Executive Order 11246 on Nondiscrimination. That order, together with its implementing rules, regulations, and requirements goes far beyond the legislation enacted by the Congress on this subject; indeed, the order is in direct conflict with the policy, purpose, and intent expressed in the 1964 Civil Rights Act.

The clear purpose and intent of that act was to make discrimination in employment on the basis of race, color, religion, sex, or national origin, an unlawful employment practice, whether engaged in by employers, labor organizations, or employment agencies. Congress made it equally clear, however, that merit and capability, as determined by the employer, should continue to be the determining factors in respect to job qualification and employment.

It was the further intent of Congress that the law was not to be interpreted as requiring the introduction of quotas or other representatives or preferential systems into the employment process. Section 703(j) of title VII, expressly disallowed the granting of preferential treatment to any individual or group in order to correct any imbalance that might exist with respect to the total number or percentage of persons of any race, color, religion, sex, or national origin, employed as compared with the total number of such persons in any community, State, or other area, or in the available work force in any community, State, or other area.

Nothing in title VII imposed—or authorized the imposition upon—private industry of any duty or obligation to institute or finance any training, apprenticeship, recruitment, advertising, or other affirmative programs designed to enhance the employment opportunities or job qualifications of any employee, applicant for employment, or other person. Nor did Congress intend to outlaw or interfere with bona fide seniority or merit systems. See section 703(h). And it is highly significant that Congress, when it enacted title VI of the Civil Rights Act of 1964, entitled "Nondiscrimination in Federally Assisted Programs," expressly provided that it shall not "be construed to authorize action under this title by any department or agency with respect to any employment practice by any employer, employment agency, or labor organization, except where a primary objective of the Federal financial assistance is to provide employment."—Section 604.

Despite this express declaration of congressional intent, however, preaward procedures, including elaborate requirements for "affirmative action" programs designed to impose quota and minority representation systems, have been incorporated in regulations by the executive branch.

Recently the Department of Labor issued an order known as the Revised Philadelphia Plan for Compliance with Equal Opportunity Requirements of Executive Order 11246, regarding Federal construction contracts.

This plan was directed to all Government agencies, and while limited initially to the Philadelphia area, it was to be applied nationally at some later date, to be determined by the Department of Labor.

The plan purported to set up a program of equal employment opportunity for Federal contractors. Pursuant to its terms bidders on Federal construction contracts would be required to submit goals of manpower utilization. Racial employment quotas are plainly required by the language of the plan.

Mr. President, I have received many complaints about the obligations imposed upon Government contractors by Executive Order 11246 and the requirements imposed thereunder by the Office of Contract Compliance of the Department of Labor and various other executive departments of our Government. Those complaints stem from the wide variance and apparent conflict between the policy and burdens imposed by this Executive order and the congressional policy and intent as manifested in titles VI and VII of the Civil Rights Act of 1964.

Because the obvious conflicts between those two programs give rise to serious questions of statutory and constitutional law, I wrote to the Comptroller General of the United States on May 19, 1969, requesting his opinion regarding the validity of Executive Order 11246 and the regulations, rules, procedures, and requirements issued pursuant thereto and being applied by the Office of Contract Compliance and other Federal agencies in the awarding of Federal and Federal-aid contracts. On August 5, I received a reply from the Comptroller General with which he enclosed a copy of his decision—B–16306—addressed to the Secretary of Labor relative to the revised Philadelphia plan.

The Comptroller General's decision confirms my concern in this matter. The so-called Philadelphia plan violates the Civil Rights Act of 1964 and it cannot be supported on the tenuous grounds of any implied, inherent, or derivative authority. And it most assuredly cannot be maintained simply because some Federal social innovator desires it to be so. The Comptroller's analysis of the Philadelphia plan, and its requirements, clearly shows its conflict with and contravention of titles VI and VII of the Civil Rights Act of 1964.

Mr. President, this is the second time that the Federal bureaucracy has tried to initiate a "Philadelphia plan," to impose racial quota systems on Government contractors. The Federal procurement procedures are complex and costly enough without adding this complicating and harassing burden. The Congress has acted in this area; its action is clear, and it is high time that the executive branch takes heed of the laws of this Nation.

It is a well-established principle of constitutional law that the President's power to issue an Executive order must stem either from an act of Congress or from the Constitution itself—*Youngstown Sheet & Tube Co., et al.* v. *Sawyer*, 343 U.S. 579, 585.

It is an equally well-established principle of constitutional law that although the President's general direction power is constitutional in its source, it is by no means absolute. On the contrary, its exercise is subject to important limitations. Foremost among these is the well-settled rule that an Executive order or any other Executive action, whether by formal order or by regulation, cannot contravene an act of Congress which is constitutional. Thus, when an Executive order collides with a statute enacted pursuant to the constitutional authority of the Congress, the statute will prevail—*Kendall* v. *U.S.*, 12 Peters 524. Neither the President nor a department head at the President's direction or with his approval,

has authority to act at variance with valid statutory provisions—*United States* v. *Symonds*, 120 U.S. 46.

As Justice Frankfurter said in the Youngstown Sheet and Tube case, "Where Congress has acted the President is bound by the enactment." And as Justice Holmes declared in *Myers* v. *United States*, 272 U.S. 52, 177—

The duty of the President to see that the laws be faithfully executed is a duty that does not go beyond the laws or require him to do more than Congress sees fit to leave within his power.

Mr. President, I ask unanimous consent that a copy of Executive Order 11246, together, with my letter to the Comptroller General, dated May 19, 1969, and his reply together with his decision relative to the Philadelphia plan, be printed in the RECORD immediately following the conclusion of my remarks.

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

(See exhibit 1.)

Mr. McCLELLAN. In this connection it is pertinent to quote the following excerpts from the Comptroller's decision:

Whether the provisions of the Plan requiring a bidder to commit himself to hire—or make every good faith effort to hire—at least the minimum number of minority group employees specified in the ranges established for the designated trades is in fact, a "quota" system (and therefore admittedly contrary to the Civil Rights Act) or is a "goal" system, is in our view largely a matter of semantics, and tends to divert attention from the end result of the Plan—that contractors commit themselves to making race or national origin a factor for consideration in obtaining their employees.

We view the imposition of such a requirement on employers engaged in Federal or federally assisted construction to be in conflict with the intent as well as the letter of the above provisions of the act which make it an unlawful employment practice to use race or national origin as a basis for employment. Further, we believe that requiring an employer to abandon his customary practice of hiring through local union because of a racial or national origin imbalance in the local unions and, under the threat of sanctions, to make "every good faith effort" to employ the number of minority group tradesmen specified in his bid from sources outside the union if the workers referred by the union do not include a sufficient number of minority group personnel, are in conflict with section 703(j) of the act.

And finally:

We recognize that both your Department (Labor) and the Department of Justice have found the Plan to be legal and we have given most serious consideration to their positions. However, until the authority for any agency to impose or require conditions in invitations for bids on Federal or federally assisted construction which obligate bidders, contractors, or subcontractors, to consider the race or national origin of their employees or prospective employees for such construction, is clearly and firmly established by the weight of judicial precedent, or by additional statutes, we must conclude that conditions of the type proposed by the revised Philadelphia Plan are in conflict with the Civil Rights Act of 1964, and we will necessarily have to so construe and apply the act in passing upon the legality of matters involving expenditures of appropriated funds for Federal or federally assisted construction projects.

Mr. President, I am not quarreling with the objective of equal employment opportunities for all persons based on merit and capability to do the work, without regard to race, color, religion, or national origin. But I do not believe that discrimination, where it exists, can be remedied by imposing solutions which are inherently and equally discriminatory. The quota and other requirements imposed by the Philadelphia revised plan seek to remove inequities of one kind by imposing others in their stead, a situation underscored in the following excerpt from the Comptroller's decision:

The recital in section 6b.2 of the order (and in the prescribed form of notice to be included in the invitation) that the contractor's commitment "is not intended and shall not be used to discriminate against any qualified applicant or employee" is in our opinion the statement of a practical impossibility. If, for example, a contractor requires 20 plumbers and is committed to a goal of employment of at least five from minority groups, every nonminority applicant for employment in excess of 15 would, solely by reason of his race or national origin, be prejudiced in his opportunity for employment, because the contractor is committed to make every effort to employ five applicants from minority groups.

Mr. President, I trust that the Labor Department, and all other agencies of the Federal Government will take due notice and appropriate action as a result of the Comptroller General's opinion of August 5, 1969, and begin implementing the laws as enacted and not as some individuals or officials may desire.

EXHIBIT 1

EXECUTIVE ORDER 11246—EQUAL EMPLOYMENT OPPORTUNITY

Under and by virtue of the authority vested in me as President of the United States by the Constitution and statutes of the United States, it is ordered as follows:

PART I—NONDISCRIMINATION IN GOVERNMENT EMPLOYMENT

SECTION 101. It is the policy of the Government of the United States to provide equal opportunity in Federal employment for all qualified persons, to prohibit discrimination in employment because of race, creed, color, or national origin, and to promote the full realization of equal employment opportunity through a positive, continuing program in each executive department and agency. The policy of equal opportunity applies to every aspect of Federal employment policy and practice.

SEC. 102. The head of each executive department and agency shall establish and maintain a positive program of equal employment opportunity for all civilian employees and applicants for employment within his jurisdiction in accordance with the policy set forth in Section 101.

SEC. 103. The Civil Service Commission shall supervise and provide leadership and guidance in the conduct of equal employment opportunity programs for the civilian employees of and applications for employment within the executive departments and agencies and shall review agency program accomplishments periodically. In order to facilitate the achievement of a model program for equal employment in the Federal service, the Commission may consult from time to time with such individuals, groups, or organizations as may be of assistance in improving the Federal program and realizing the objectives of this Part.

SEC. 104. The Civil Service Commission shall provide for the prompt, fair, and impartial consideration of all complaints of discrimination in Federal employment on the basis of race, creed, color, or national origin. Procedures for the consideration of complaints shall include at least one impartial review within the executive department or agency and shall provide for appeal to the Civil Service Commission.

SEC. 105. The Civil Service Commission shall issue such regulations, orders, and instructions as it deems necessary and appropriate to carry out its responsibilities under this Part, and the head of each executive department and agency shall comply with the regulations, orders, and instructions issued by the Commission under this Part.

PART II—NONDISCRIMINATION IN EMPLOYMENT BY GOVERNMENT CONTRACTORS AND SUBCONTRACTORS

Subpart A—Duties of the Secretary of Labor

SEC. 201. The Secretary of Labor shall be responsible for the administration of Parts II and III of this Order and shall adopt such rules and regulations and issue such orders as he deems necessary and appropriate to achieve the purposes thereof.

Subpart B—Contractors' Agreements

SEC. 202. Except in contracts exempted in accordance with Section 204 of this Order, all Government contracting agencies shall include in every Government contract hereafter entered into the following provisions:

"During the performance of this contract, the contractor agrees as follows:

"(1) The contractor will not discriminate against any employee or applicant for employment because of race, creed, color, or national origin. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, creed, color, or national origin. Such action shall include, but not be limited to the following: Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the contracting officer setting forth the provisions of this nondiscrimination clause.

"(2) The contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to race, creed, color, or national origin.

"(3) The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided by the agency contracting officer, advising the labor union or workers' representative of the contractor's commitments under Section 202 of Executive Order No. 11246 of September 24, 1965, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

"(4) The contractor will comply with all provisions of Executive Order No. 11246 of Sept. 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.

"(5) The contractor will furnish all information and reports required by Executive Order No. 11246 of September 24, 1965, and by the rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the contracting agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

"(6) In the event of the contractor's noncompliance with the nondiscrimination clauses of this contract or with any of such rules, regulations, or orders, this contract may be cancelled, terminated or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts in accordance with procedures authorized in Executive Order No. 11246 of Sep. 24, 1965, and such other sanctions may be imposed and remedies involved as provided in Executive Order No. 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

"(7) The contractor will include the provisions of Paragraph (1) through (7) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to Section 204 of Executive Order No. 11246 of Sept. 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase order as the contracting agency may direct as a means of enforcing such provisions including sanctions for noncompliance: *Provided, however,* That in the event the contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the contracting agency, the contractor may request the United States to enter into such litigation to protect the interests of the United States."

SEC. 203. (a) Each contractor having a contract containing the provisions prescribed in Section 202 shall file, and shall cause each of his subcontractors to file, Compliance Reports with the contracting agency or the Secretary of Labor as may be directed. Compliance Reports shall be filed within such times and shall contain such information as to the practices, policies, programs, and employment policies, programs, and employment statistics of the contractor and each subcontractor, and shall be in such form, as the Secretary of Labor may prescribe.

(b) Bidders or prospective contractors or subcontractors may be required to state whether they have participated in any previous contract subject to the provisions of this Order, or any preceding similar Executive order, and in that event to submit, on behalf of themselves and their proposed subcontractors, Compliance Reports prior to or as an initial part of their bid or negotiation of a contract.

(c) Whenever the contractor or subcontractor has a collective bargaining agreement or other contract or understanding with a labor union or an agency referring workers or providing or supervising apprenticeship or training for such workers, the Compliance Report shall include such information as to such labor union's or agency's practices and policies affecting compliance as the Secretary of Labor may prescribe: *Provided,* That to the extent such information is within the exclusive possession of a labor union or an agency referring workers or providing or supervising apprenticeship or training and such labor union or agency shall refuse to furnish information to the contractor, the contractor shall so certify to the contracting agency as part of its Compliance Report and shall set forth what efforts he has made to obtain such information.

(d) The contracting agency or the Secretary of Labor may direct that any bidder or prospective contractor or subcontractor shall submit, as part of his Compliance Report, a statement in writing, signed by an authorized officer or agent on behalf of any labor union or any agency referring workers or providing or supervising apprenticeship or other training, with which the bidder or prospective contractor deals, with supporting information, to the effect that the signer's practices and policies do not discriminate on the grounds of race, color, creed, or national origin, and that the signer either will affirmatively cooperate in the implementation of the policy and provisions of this Order or that it consents and agrees that recruitment, employment, and the terms and conditions of employment under the proposed contract shall be in accordance with the purposes and provisions of the Order. In the event that the union, or the agency shall refuse to execute such a statement, the Compliance Report shall so certify and set forth what efforts have been made to secure such a statement and such additional factual material as the contracting agency or the Secretary of Labor may require.

SEC. 204. The Secretary of Labor may, when he deems that special circumstances in the national interest so require, exempt a contracting agency from the requirement of including any or all of the provisions of Section 202 of this Order in any specific contract, subcontract, or purchase order. The Secretary of Labor may, by rule or regulation, also exempt certain classes of contracts, subcontracts, or purchase orders (1) whenever work is to be or has been performed outside the United States and no recruitment of workers within the limits of the United States is involved; (2) for standard commercial supplies or raw materials; (3) involving less than specified amounts of money or specified numbers of workers; or (4) to the extent that they involve subcontracts below a specified tier. The Secretary of Labor may also provide, by rule, regulation, or order, for the exemption of facilities of a contractor related to the performance of the contract: *Provided,* That such an exemption will not interfere with or impede the effectuation of the purposes of this Order: *And provided further,* That in the absence of such an exemption all facilities shall be covered by the provisions of this Order.

Subpart C—Powers and duties of the Secretary of Labor and the contracting agencies

SEC. 205. Each contracting agency shall be primarily responsible for obtaining compliance with the rules, regulations, and orders of the Secretary of Labor with respect to contracts entered into by such agency or its contractors. All contracting agencies shall comply with the rules of the Secretary of Labor in discharging their primary responsibility for securing compliance with the provisions of contracts and otherwise with the terms of this Order and of the rules, regulations, and orders of the Secretary of Labor issued pursuant to this Order. They are directed to cooperate with the Secretary of Labor and to furnish the Secretary of Labor such information and assistance as he may require in the performance of his functions under this Order. They are further directed to appoint or designate, from among the agency's personnel, compliance officers. It shall be the duty of such officers to seek compliance with the objectives of this Order by conference, conciliation, mediation, or persuasion.

SEC. 206. (a) The Secretary of Labor may investigate the employment practices of any Government contractor or subcontractor, or initiate such investigation by the appropriate contracting agency, to determine whether or not the contractual provisions specified in Section 202 of this Order have been violated. Such investigation shall be conducted in accordance with the procedures established by the Secretary of Labor and the investigating agency shall report to the Secretary of Labor any action taken or recommended.

(b) The Secretary of labor may receive and investigate or cause to be investigated complaints by employees or prospective employees of a Government contractor or subcontractor which allege discrimination contrary to the contractual provisions specified in Section 202 of this Order. If this investigation is conducted for the Secretary of Labor by a contracting agency, that agency shall report to the Secretary what action has been taken or is recommended with regard to such complaints.

SEC. 207. The Secretary of Labor shall use his best efforts, directly and through contracting agencies, other interested Federal, State, and local agencies, contractors, and all other available instrumentalities to cause any labor union engaged in work under Government contracts or any agency referring workers or providing or supervising apprenticeship or training for or in the course of such work to cooperate in the implementation of the purposes of this Order. The Secretary of Labor shall, in appropriate cases, notify the Equal Employment Opportunity Commission, the Department of Justice, or other appropriate Federal agencies whenever it has reason to believe that the practices of any such labor organization or agency violate Title VI or Title VII of the Civil Rights Act of 1964 or other provision of Federal law.

SEC. 208. (a) The Secretary of Labor, or any agency, officer, or employee in the executive branch of the Government designated by rule, regulation, or order of the Secretary, may hold such hearings, public or private, as the Secretary may deem advisable for compliance, enforcement, or educational purposes.

(b) The Secretary of Labor may hold, or cause to be held, hearings in accordance with Subsection (a) of this Section prior to imposing, ordering, or recommending the imposition of penalties and sanctions under this Order. No order for department of any contractor from further Government contracts under Section 209(a)(6) shall be made without affording the contractor an opportunity for a hearing.

Subpart D—Sanctions and penalties

SEC. 209. (a) In accordance with such rules, regulations, or orders as the Secretary of Labor may issue or adopt, the Secretary or the appropriate contracting agency may:

(1) Publish, or cause to be published, the names of contractors or unions which it has concluded have complied or have failed to comply with the provisions of this Order or of the rules, regulations, and orders of the Secretary of Labor.

(2) Recommend to the Department of Justice that, in cases in which there is substantial or material violation or the threat of substantial or material violation of the contractual provisions set forth in Section 202 of this Order, appropriate proceedings be brought to enforce those provisions, including the enjoining, within the limitations of applicable law, or organizations, individuals, or groups who prevent directly or indirectly, or seek to prevent directly or indirectly, compliance with the provisions of this Order.

(3) Recommend to the Equal Employment Opportunity Commission or the Department of Justice that appropriate proceedings be instituted under Title VII of the Civil Rights Acts of 1964.

(4) Recommend to the Department of Justice that criminal proceedings be brought for the furnishing of false information to any contracting agency or to the Secretary of Labor as the case may be.

(5) Cancel, terminate, suspend, or cause to be cancelled, terminated, or suspended, any contract, or any portion or portions thereof, for failure of the contractor or subcontractor to comply with the nondiscrimination provisions of the contract. Contracts may be cancelled, terminated, or suspended absolutely or continuance of contracts may be conditioned upon a program for future compliance approved by the contracting agency.

(6) Provide that any contracting agency shall refrain from entering into further con-

tracts, or extensions or other modifications of existing contracts, with any noncomplying contractor, until such contractor has satisfied the Secretary of Labor that such contractor has established and will carry out personnel and employment policies in compliance with the provisions of this Order.

(b) Under rules and regulations prescribed by the Secretary of Labor, each contracting agency shall make reasonable efforts within a reasonable time limitation to secure compliance with the contract provisions of this Order by methods of conference, conciliation, mediation, and persuasion before proceedings shall be instituted under Subsection (a)(2) of this Section, or before a contract shall be cancelled or terminated in whole or in part under Subsection (a)(5) of this Section for failure of a contractor or subcontractor to comply with the contract provisions of this Order.

SEC. 210. Any contracting agency taking any action authorized by this Subpart, whether on its own motion, or as directed by the Secretary of Labor, or under the rules and regulations of the Secretary, shall promptly notify the Secretary of such action. Whenever the Secretary of Labor makes a determination under this Section, he shall promptly notify the appropriate contracting agency of the action recommended. The agency shall take such action and shall report the results thereof to the Secretary of Labor within such time as the Secretary shall specify.

SEC. 211. If the Secretary shall so direct, contracting agencies shall not enter into contracts with any bidder or prospective contractor unless the bidder or prospective contractor has satisfactorily complied with the provisions of this Order or submits a program for compliance acceptable to the Secretary of Labor or, if the Secretary so authorizes, to the contracting agency.

SEC. 212 Whenever a contracting agency cancels or terminates a contract, or whenever a contractor has been debarred from further Government contracts, under Section 209(a)(6) because of noncompliance with the contract provisions with regard to nondiscrimination, the Secretary of Labor, or the contracting agency involved, shall promptly notify the Comptroller General of the United States. Any such debarment may be rescinded by the Secretary of Labor or by the contracting agency which imposed the sanction.

Subpart E—Certificates of merit

SEC. 213. The Secretary of Labor may provide for issuance of a United States Government Certificate of Merit to employers of labor unions, or other agencies which are or may hereafter be engaged in work under Government contracts, if the Secretary is satisfied that the personnel and employment practices of the employer, or that the personnel, training, apprenticeship, membership, grievance and representation, upgrading, and other practices and policies of the labor union or other agency conform to the purposes and provisions of this Order.

SEC. 214. Any Certificate of Merit may at any time be suspended or revoked by the Secretary of Labor if the holder thereof, in the judgment of the Secretary, has failed to comply with the provisions of this Order.

SEC. 215. The Secretary of Labor may provide for the exemption of any employer, labor union, or other agency from any reporting requirements imposed under or pursuant to this Order if such employer, labor union, or other agency has been awarded a Certificate of Merit which has not been suspended or revoked.

PART III—NONDISCRIMINATION PROVISIONS IN FEDERALLY ASSISTED CONSTRUCTION CONTRACTS

SEC. 301. Each executive department and agency which administers a program involving Federal financial assistance shall require as a condition for the approval of any grant, contract, loan, insurance, or guarantee thereunder, which may involve a construction contract, that the applicant for Federal assistance undertake and agree to incorporate, or cause to be incorporated, into all construction contracts paid for in whole or in part with funds obtained from the Federal Government or borrowed on the credit of the Federal Government pursuant to such grant, contract, loan, insurance, or guarantee, or undertaken pursuant to any Federal program involving such grant, contract, loan, insurance, or guarantee, the provisions prescribed for Government contracts by Section 203 of this Order or such modification thereof, preserving in substance the contractor's obligations thereunder, as may be approved by the Secretary of Labor, together with such additional provisions as the Secretary deems appropriate to establish and protect the interest of the United States in the enforcement of those obligations. Each such applicant shall also undertake and agree (1) to assist and cooperate actively with the administering department or agency and the Secretary of Labor in obtaining the compliance of contractors and subcontractors with those contract provisions and with the rules, regulations, and relevant orders of the Secretary, (2) to obtain and to furnish to the administering department or agency and to the Secretary of Labor such information as they may require for the supervision of such compliance, (3) to carry out sanctions and penalties for violation of such obligations imposed upon contractors and subcontractors by the Secretary of Labor or the administering department or agency pursuant to Part II, Subpart D, of this Order, and (4) to refrain from entering into any contract subject to this Order, or extension or other modification of such a contract with a contractor debarred from Government contracts under Part II, Subpart D, of this Order.

SEC. 302. (a) "Construction contract" as used in this Order means any contract for the construction, rehabilitation, alteration, conversion, extension, or repair of buildings, highways, or other improvements to real property.

(b) The provisions of Part II of this Order shall apply to such construction contracts, and for purposes of such application the administering department or agency shall be considered the contracting agency referred to therein.

(c) The term "applicant" as used in this Order means an applicant for Federal assistance or, as determined by agency regulation, other program participant, with respect to whom an application for any grant, contract, loan, insurance, or guarantee is not finally acted upon prior to the effective date of this Part, and it includes such an applicant after he becomes a recipient of such Federal assistance.

SEC. 303. (a) Each administering department and agency shall be responsible for obtaining the compliance of such applicants with their undertakings under this Order. Each administering department and agency is directed to cooperate with the Secretary of Labor, and to funish the Secretary such information and assistance as he may require in the performance of his functions under this Order.

(b) In the event an applicant fails and refuses to comply with his undertakings, the administering department or agency may take any or all of the following actions: (1) cancel, terminate, or suspend in whole or in part the agreement, contract, or other arrangement with such applicant with respect to which the failure and refusal occurred; (2) refrain from extending any further assistance to the applicant under the program with respect to which the failure or refusal occurred until satisfactory assurance of future compliance has been received from such applicant; and (3) refer the case to the Department of Justice for appropriate legal proceedings.

(c) Any action with respect to an applicant pursuant to Subsection (b) shall be taken in conformity with Section 602 of the Civil Rights Act of 1964 (and the regulations of the administering department or agency issued thereunder), to the extent applicable. In no case shall action be taken with respect to an applicant pursuant to Clause (1) or (2) of Subsection (b) without notice and opportunity for hearing before the administering department or agency.

SEC. 304. Any executive department or agency which imposes by rule, regulation, or order requirements of nondiscrimination in employment, other than requirements imposed pursuant to this Order, may delegate to the Secretary of Labor by agreement such responsibilities with respect to compliance standards, reports, and procedures as would tend to bring the administration of such requirements into conformity with the administration of requirements imposed under this Order: *Provided*, That actions to effect compliance by recipients of Federal financial assistance with requirements imposed pursuant to Title VI of the Civil Rights Act of 1964 shall be taken in conformity with the procedures and limitations prescribed in Section 602 thereof and the regulations of the administering department or agency issued thereunder.

PART IV—MISCELLANEOUS

SEC. 401. The Secretary of Labor may delegate to any officer, agency, or employee in the Executive branch of the Government, any function or duty of the Secretary under Parts II and III of this Order, except authority to promulgate rules and regulations of a general nature.

SEC. 402. The Secretary of Labor shall provide administrative support for the execution of the program known as the "Plans for Progress."

SEC. 403. (a) Executive Orders Nos. 10590 (January 19, 1955), 10722 (August 5, 1957), 10925 (March 6, 1961), 11114 (June 22, 1963), and 11162 (July 28, 1964), are hereby superseded and the President's Committee on Equal Employment Opportunity established by Executive Order No. 10925 is hereby abolished. All records and property in the custody of the Committee shall be transferred to the Civil Service Commission and the Secretary of Labor, as appropriate.

(b) Nothing in this Order shall be deemed to relieve any person of any obligation assumed or imposed under or pursuant to any Executive Order superseded by this Order. All rules, regulations, orders, instructions, designations, and other directives issued by the President's Committee on Equal Employment Opportunity and those issued by the heads of various departments or agencies under or pursuant to any of the Executive orders superseded by this Order, shall, to the extent that they are not inconsistent with this Order, remain in full force and effect unless and until revoked or superseded by appropriate authority. References in such directives to provisions of the superseded orders shall be deemed to be references to the comparable provisions of this Order.

SEC. 404. The General Services Administration shall take appropriate action to revise the standard Government contract forms to accord with the provisions of this Order and of the rules and regulations of the Secretary of Labor.

SEC. 405. This Order shall become effective thirty days after the date of this Order.

LYNDON B. JOHNSON.

THE WHITE HOUSE, *September 24, 1965.*

U.S. SENATE,
COMMITTEE ON
GOVERNMENT OPERATIONS,
Washington, D.C., May 19, 1969.

Hon. ELMER B. STAATS,
Comptroller General of the United States, Washington, D.C.

DEAR MR. STAATS: Complaints have been received by this office concerning the obliga-

tions imposed upon government contractors by Executive Order 11246 and the regulations, rules, and requirements issued pursuant thereto and in implementation thereof by the Office of Federal Contract Compliance of the United States Department of Labor and various government agencies including, but not limited to, the Departments of Defense, Transportation, Health, Education, and Welfare, Housing and Urban Development and General Services Administration. Enclosed herewith are copies of Executive Order 11246, Office of Federal Contract Compliance Regulations, Federal Register Vol. 33, No. 104—May 28, 1968, Department of Defense Regulations Circular 67, issued January 1, 1969, incorporating OFCC Regulations, and Department of Transportation Regulations which also incorporate OFCC Regulations, notwithstanding the fact that Congress enacted specific equal employment opportunity provisions in the Highway Act of 1968. I do not have copies of the regulations of the other Federal agencies that award contracts or provide grants-in-aid, but I assume they are readily available to you.

The aforesaid complaints stem from the disparity and apparent conflict between the policy, provisions, and requirements set forth in Executive Order 11246 and in the regulations promulgated pursuant thereto and the policy and requirements enunciated by Congress in title VII of the Civil Rights Act of 1964, P.L. 88-352. Complainants have also voiced their concern regarding the apparent failure of the Office of Federal Contract Compliance and various other government agencies to conform their regulations, rules, and procedures to the directives contained in the opinions which have issued from your office regarding the proper and lawful manner of awarding public contracts.

Information which has come to my attention indicates that the regulations and requirements relating to affirmative action programs and pre-award examinations still in effect pursuant to Executive Order 11246, have added extra costs and have caused lengthy delays in the award of contracts involving various Federal and Federal-aid construction projects, particularly in the St. Louis, San Francisco, Cleveland and Philadelphia areas. Among specific examples are those which involved the Guepel Construction Company and the Peter Kiewet Company and with which I believe you are familiar. I also understand that pre-award examinations were continued by HEW on construction projects in the Philadelphia area after your office had questioned the legality of the procedure and that the matter is now pending in your office. And recently, as you know, hearings by the Senate Public Works Committee were precipitated by complaints regarding pre-qualification requirements and other regulations and procedures being applied throughout the country to bidders on federal-aid highway contracts by the Department of Transportation.

The aforementioned complaints concerning Executive Order 11246 and the government contracting program promulgated pursuant thereto, give rise to serious questions of statutory and constiutional law. Accordingly, I would appreciate receiving your opinion at the earliest possible date, regarding the validity of Executive Order 11246, and the regulations, rules, procedures and requirements issued pursuant thereto and being applied by the Office of Federal Contract Compliance and other Federal agencies in the awarding of Federal and Federal-aid contracts.

It is my own view that Congress in its enactment of title VII of the Civil Rights Act of 1964, made clear its intent that the law was not to be interpreted as requiring the introduction of quotas or other representative or preferential systems into the employment process. Section 703(j) of title VII, expressly disallowed the granting of preferential treatment to any individual or group in order to correct any imbalance that might exist with respect to the total number or percentage of persons of any race, color, religion, sex, or national origin employed as compared with the total number of such persons in any community, State, or other area, or in the available work force in any community, State or other area.

Nothing in title VII imposed or authorized the imposition upon private industry of any duty or obligation to institute or finance any training, apprenticeship, recruitment, advertising, or other affirmative programs designed to enhance the employment opportunities or job qualifications of any employee, applicant for employment, or other person. Furthermore, Congress made it clear in Section 703(h) that it was not its intent to outlaw or interfere with bona fide seniority or merit systems. It is also important to note that when it enacted title VI of the Civil Rights Act of 1964, entitled "Nondiscrimination in Federally Assisted Programs", Congress expressly provided that "Nothing contained in this title shall be construed to authorize action under this title by any department or agency with respect to any employment practice by any employer, employment agency, or labor organization, except where a primary objective of the Federal financial assistance is to provide employment." (Sec. 604).

Despite the Congressional intent so clearly expressed in the legislation cited above, preaward procedures, including elaborate requirements for "affirmative action" programs and what appear to be quota and minority representation systems, all of which are clearly inconsistent with and would appear to contravene such Congressional intent, have been incorporated in the regulations issued pursuant to Executive Order 11246. See Circular 67 issued by the Department of Defense for example.

I participated in the Senate debate on the Civil Rights Act of 1964, and I am quite familiar with the fact that the Senate abandoned much of the House bill when it adopted the Dirksen-Mansfield substitute with twelve amendments which ultimately became the Civil Rights Act of 1964. One will note on page 13835 of the Congressional Record for June 18, 1964, that the changes effected in the House bill are clearly indicative of a Congressional intent to rule out quotas, reverse discrimination, and similar procedures. Furthermore, the fact that a provision contained in the House Committee bill H.R. 7152, which "directed the President to take such action as may be appropriate to prevent the committing or continuing of unlawful employment practices by persons in connection with the performance of contracts with Federal agencies", was dropped when the bill finally emerged from the House on February 10, 1964, clearly indicated a Congressional intent to withhold such authority from the President and the Executive Departments, as that which has been and is still being exercised pursuant to Executive Order 11246.

The wide variance between the policy and program effected by and pursuant to Executive Order 11246 and Congressional intent as manifested in title VII of the Civil Rights Act of 1964, is pointed up in a recent report entitled "Jobs and Civil Rights" (Publication No. 16, April, 1969), prepared by Brookings Institution for the United States Commission on Civil Rights. And it is that variance and apparent conflict which immediately gives rise to the fundamental constitutional question of whether Executive Order 11246 constitutes proper implementation of title VII of the Civil Rights Act of 1964, or is, instead, a legislative enactment by the President in excess of his authority under the Constitution.

It is a well-established principle of constitutional law that the President's power to issue an executive order must stem either from an act of Congress or from the Constitution itself. (*Youngstown Sheet and Tube Co., et al. v. Sawyer*, 343 U.S. 579, 585).

It is an equally well-established principle of constitutional law that although the President's general direction power is constitutional in its source, it is by no means absolute. On the contrary, its exercise is subject to important limitations. Foremost among these is the well-settled rule that an Executive order or any other Executive action, whether by formal order or by regulation, cannot contravene an act of Congress which is constitutional. Thus when an Executive order collides with a statute enacted pursuant to the constitutional authority of the Congress, the statute will prevail. *Kendall v. U.S.*, 12 Peters 524. Neither the President nor a department head at the President's direction or with his approval, has authority to act at variance with valid statutory provisions. *U.S. v. Symonds*, 120 U.S. 46; *Little v. Barreme*, et al., 2 Cranch 170; *Panama Refining Co. v. Ryan*, 293 U.S. 388; *Youngstown Sheet and Tube, supra.*

As Justice Frankfurter said in the *Youngstown Sheet and Tube* case, *supra*, "Where Congress has acted the President is bound by the enactment." And as Justice Holmes declared in *Myers v. United States*, 272 U.S. 52, 177, "The duty of the President to see that the laws be faithfully executed is a duty that does not go beyond the laws or require him to do more than Congress sees fit to leave within his power."

In the *Youngstown Sheet and Tube case, supra*, President Truman's Executive Order providing for seizure of this country's principal steel mills, was challenged on the ground that the Executive Order amounted to law making by the President. What Justice Black, speaking for the Supreme Court, said in that case is, I believe, equally applicable to Executive Order 11246. Justice Black said:

"The President's *order does not* direct that a congressional policy be executed in a manner prescribed by Congress—it directs that a presidential policy be executed in a manner prescribed by the President. The preamble of the order itself, like that of many statutes, sets out reasons why the President believes certain policies should be adopted, proclaims these policies as rules of conduct to be followed, and again, like a statute, authorizes a a government official to promulgate additional rules and regulations consistent with the policy proclaimed and needed to carry that policy into execution."

Justice Black then went on to declare on behalf of the Court that—

"The power of Congress to adopt such public policies as those proclaimed by the order is beyond question. It can authorize taking private property for public use. It can make laws regulating the relationships between employers and employees, prescribing rules designed to settle labor disputes and fixing wages and working conditions in certain fields of our economy. The Constitution does not subject this lawmaking power of Congress to Presidential or military supervision or control."

The Courts have repeatedly held that in the framework of our Constitution the President's power to see that the laws are faithfully executed refutes the idea that he is to be a lawmaker. The Constitution limits his functions in the lawmaking process to the recommending of laws he thinks wise and the vetoing of laws he thinks bad. *Youngstown Sheet and Tube, supra*, page 587. Congress alone is invested by our Constitution with the power to legislate and Congress cannot delegate that power to the President. *Panama Refining Company, supra; A.L.A. Schecter Poultry Corp, et al v. United States*, 295 U.S. U.S. 495.

Your cooperation in providing me with your opinion in this matter will be greatly appreciated

With kind regards, I am

Sincerely

JOHN L. MCCLELLAN,
Chairman.

COMPTROLLER GENERAL
OF THE UNITED STATES,
Washington, D.C., August 5, 1969.

Hon. JOHN L. MCCLELLAN,
Chairman, Government Operations Committee, U.S. Senate.

DEAR MR. CHAIRMAN: With reference to your letter of May 19, 1969, concerning complaints received by your committee as to the obligations imposed upon firms contracting with the Government by Executive Order 11246 and the regulations, rules and requirements issued pursuant thereto by the Office of Federal Contract Compliance of the Department of Labor, and other Federal agencies, there is enclosed a copy of our decision of today, B–163026, to the Secretary of Labor regarding an order of that department on a Revised Philadephia Plan.

In the event the attached letter is not considered dispositive of your interest in the matter, we will be pleased to prepare a detailed response to your letter at a later date.

Sincerely yours,

ELMER B. STAATS.

COMPTROLLER GENERAL
OF THE UNITED STATES,
Washington, D.C., August 5, 1969.

The Honorable the SECRETARY OF LABOR.

DEAR MR. SECRETARY: We refer to an order issued June 27, 1969, to the heads of all agencies by the Assistant Secretary for Wage and Labor Standards, Department of Labor. The order announced a revised Philadelphia Plan (effective July 18, 1969) to implement the provisions of Executive Order 11246 and the rules and regulations issued pursuant thereto which require a program of equal employment opportunity by contractors and subcontractors on both Federal and federally assisted construction projects.

Questions have been submitted to our Office by members of Congress, both as to the propriety of the revised Philadelphia Plan and the legal validity of Executive Order 11246 and of various implementing regulations issued thereunder both by your Department and by other agencies. In view of possible conflicts between the requirements of the Plan and the provisions of Titles VI and VII of the Civil Rights Act of 1964, Pub. L. 88–352, discussions have been held between representatives of our Office, your Department, and the Department of Justice, and your Solicitor has furnished to us a legal memorandum in support of the authority for issuance of the Executive Order as well as the revised Philadelphia Plan promulgated thereunder.

The memorandum presents the following points in support of the legal propriety of the Plan:

I. The Executive has the authority and the duty to require employers who do business with the Government to provide equal employment opportunity.

II. The passage of the Civil Rights Act of 1964 did not deprive the President of the authority to regulate, pursuant to Executive Orders, the employment practices of Government contractors.

III. The revised Philadelphia Plan is lawful under the Federal Government's procurement policies, is authorized under Executive Order 11246 and the implementing regulations, and is lawful under Title VII of the Civil Rights Act of 1964.

Without conceding the validity of all of the arguments advanced under points I and II, we accept the authority of the President to issue Executive Order 11246, and the contention that the Congress in enacting the Civil Rights Act did not intend to deprive the President of all authority to regulate employment practices of Government contractors.

The essential questions presented to this Office by the revised Philadelphia Plan, however, are (1) whether the Plan is compatible with fundamentals of the competitive bidding process as it applies to the awarding of Federal and federally assisted construction contracts, and (2) whether imposition of the specific requirements set out therein can be regarded as a legally proper implementation of the public policy to prevent discrimination in employment, which is declared in the Civil Rights Act and is inherent in the Constitution, or whether those requirements so far transcend the policy of nondiscrimination, by making race or national origin a determinative factor in employment, as to conflict with the limitations expressly imposed by the act or with the basic constitutional concept of equality.

Our interest and authority in the matter exists by virtue of the duty imposed upon our Office by the Congress to audit all expenditures of appropriated funds, which necessarily involves the determination of the legality of such expenditures, including the legality of contracts obligating the Government to payment of such funds. Authority has been specifically conferred on this Office to render decisions to the heads of departments and agencies of the Government, prior to the incurring of any obligations, with respect to the legality of any action contemplated by them involving expenditures of appropriated funds, and this authority has been exercised continuously by our Office since its creation whenever any question as to the legality of a proposed action has been raised, whether by submission by an agency head, or by complaint of an interested party, or by information coming to our attention in the course of our other operations.

The incorporation into the terms of solicitations for Government contracts of conditions or requirements concerning wages and other employment conditions or practices has been a frequent subject of decisions by this Office, many of which will be found enumerated in our decision at 42 Comp. Gen. 1. The rule invariably applied in such cases has been that any contract conditions or stipulations which tend to restrict the full and free competition required by the procurement laws and regulations are unauthorized, unless they are reasonably requisite to the accomplishment of the legislative purposes of the appropriation involved or other law. Furthermore, where the Congress in enacting a statute covering the subject matter of such conditions has specifically prohibited certain actions, no administrative authority can lawfully impose any requirements the effect of which would be to contravene such prohibitions. It is within the framework of these principles that we consider the order promulgating the revised Philadelphia Plan.

The Assistant Secretary's order states the policy of the Office of Federal Contract Compliance (OFCC) that no contracts or subcontracts shall be awarded for Federal and federally assisted construction in the Philadelphia, Pennsylvania, area (including the counties of Bucks, Chester, Delaware, Montgomery, and Philadelphia) on projects whose cost exceeds $500,000 unless the bidder submits an acceptable affirmative action program which shall include specific goals of minority manpower utilization, meeting the standards included in the invitation or other solicitations for bids, in trades utilizing the seven classifications of employees specified therein.

The order further relates that enforcement of the nondiscrimination and affirmative action requirements of Executive Order 11246 has posed special problems in the construction trades; that contractors and subcontractors must hire a new employee complement for each construction job and out of necessity or convenience they rely on the construction craft unions as their prime or sole source of their labor; that collective bargaining agreements and/or established custom between construction contractors and subcontractors and unions frequently provide for, or result in, execlusive hiring halls; that even where the collective bargaining agreement contains no such hiring hall provisions or the custom is not rigid, as a practical matter, most people working the specified classifications are referred to the jobs by the unions; and that because of these hiring arrangements, referral by a union is a virtual necessity for obtaining employment in union construction projects, which constitute the bulk of commercial construction.

It is also stated that because of the exclusionary practices of labor organizations, there traditionally have been only a small number of Negroes employed in the seven trades, and that unions in these trades in the Philadelphia area still have only about 1.6 percent minority group membership and they continue to engage in practices, including the granting of referral priorities to union members and to persons who have work experience under union contracts, which result in few Negroes being referred for employment. The OFCC found, therefore, that special measures requiring bidders to commit themselves to specific goals of minority manpower utilization were needed to provide equal employment opportunity in the seven trades.

Section 7 of the Assistant Secretary's order of June 27 indicates that the revised Plan is to be implemented by including in the solicitation for bids a notice substantially similar to one labeled "Appendix" which is attached to the order. Such notice would state the ranges of minority manpower utilization (as determined by the OFCC Area Coordinator in cooperation with the Federal contracting or administering agencies in the Philadelphia area) which would constitute an acceptable affirmative action program, and would require the bidder to submit his specific goals in the following form.

Identification of Trade	Est. Total Employment for the Trade on the Contract	Number of Minority Group employees

Participation in a multi-employer program approved by OFCC would be acceptable in lieu of a goal for the trade involved in such program.

The notice also provides that the contractor will obtain similar goals from his subcontractors who will perform work in the involved trades, and that "Failure of the subcontractor to achieve his goal will be treated in the same manner as such failure by the prime contractor prescribed in Section 6 of the Order * * *." Since Section 6 of the order contains nothing relative to "failure," we assume the intended reference is to Section 8, which reads as follows:

"Post-Award Compliance

"a. Each agency shall review contractors' and subcontractors' employment practices during the performance of the contract. If the goals set forth in the affirmative action program are being met, the contractor or subcontractor will be presumed to be in compliance with the requirements of Executive Order 11246, as amended, unless it comes to the agency's attention that such contractor or subcontractor is not providing equal employment opportunity. In the event of failure to meet the goals, the contractor shall be given an opportunity to demonstrate that he made every good faith effort to meet his commitment. In any proceeding in which such good faith performance is in issue, the contractor's entire compliance posture shall be reviewed and evaluated in the process of considering the imposition of

sanctions. Where the agency finds that the contractor or subcontractor has failed to comply with the requirements of Executive Order 11246, the implementing regulations and its obligations under its affirmative action program, the agency shall take such action and impose such sanctions as may be appropriate under the Executive Order and the regulations. Such noncompliance by the contractor or subcontractor shall be taken into consideration by Federal agencies in determining whether such contractor or subcontractor can comply with the requirements of Executive Order 11246 and is therefore a 'responsible prospective contractor' within the meaning of the Federal procurement regulations.

"b. It is no excuse that the union with which the contractor has a collective bargaining agreement failed to refer minority employees. Discrimination in referral for employment, even if pursuant to provisions of a collective bargaining agreement, is prohibited by the National Labor Relations Act and Title VII of the Civil Rights Act of 1964. It is the longstanding uniform policy of OFCC that contractors and subcontractors have a responsibility to provide equal employment opportunity if they want to participate in Federally-involved contracts. To the extent they have delegated the responsibility for some of their employment practices to some other organization or agency which prevents them from meeting their obligations pursuant to Executive Order 11246, as amended, such contractors cannot be considered to be in compliance with Executive Order 11246, as amended, or the implementing rules, regulations and orders."

It is our opinion that the submission of goals by the successful bidder would operate to make the requirement for "every good faith effort" to attain such goals a part of his contractual obligation upon award of a contract. The provisions of Section 8 of the order would therefore become a part of the contract specifications against which the contractor's performance would be judged in the event he fails to attain his stated goals, just as much as his stated goals become a part of the contract specifications against which his performance will be judged in the event he does attain his stated goals.

As indicated at page 4 of the order, the original Philadelphia Plan was suspended because it contravened the principles of competitive bidding. Such contravention resulted from the imposition of requirements on bidders, after bid opening, which were not specifically set out in the solicitation. The present statement of a specific numerical range into which a bidder's affirmative action goals must fall is apparently designed to meet, and reasonably satisfies, the requirement for specificity.

However, we have serious doubts covering the main objective of the Plan, which is to require bidders to commit themselves to make every good faith effort to employ specified numbers of minority group tradesmen in the performance of Federal and federally assisted contracts and subcontracts.

The pertinent public policy with respect to employment practices of an employer which may be regarded as constituting unlawful discrimination is set out in Titles VI and VII of the Civil Rights Act, Title VI, concerning federally assisted programs, provides in section 601 (42 U.S.C. 2000d) that no person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under, any program or activity receiving Federal financial assistance.

Section 703(a) (42 U.S.C. 2000e–2(a)) of Title VII states that public policy concerning employer employment practices by declaring it to be an unlawful employment practice for an employer (1) to fail or refuse to hire or to discharge any individual, or otherwise to discriminate against any individual with respect to his compensation, terms, conditions, or privileges of employment, because of such individual's race, color, religion, sex, or national origin; or (2) to limit, segregate, or classify his employees in any way which would deprive or tend to deprive any individual of employment opportunities or otherwise adversely affect his status as an employee, because of such individual's race, color, religion, sex or national origin. Section 705(a) (42 U.S.C. 2000e–4(a)) creates the Equal Employment Opportunity Commission, and section 713(a), Rules and Regulations (42 U.S.C. 2000e–12 (a)), provides that the Commission shall have authority from time to time to issue, amend, or rescind suitable procedural regulations to carry out the provisions of that title.

The public policy regarding labor organization practices is delineated in section 703(c) (42 U.S.C. 2000e–2(c)) wherein it is stated that it shall be an unlawful employment practice for a labor organization (1) to exclude or to expel from its membership, or otherwise to discriminate against, any individual because of his race, color, religion, sex, or national origin; (2) to limit, segregate, or classify its membership, or to classify or fail or refuse to refer for employment any individual, in any way which would deprive or tend to deprive any individual of employment opportunities, or would limit such employment opportunities or otherwise adversely affect his status as an employee or as an applicant for employment, because of such individual's race, color, religion, sex, or national origin; or (3) to cause or attempt to cause an employer to discriminate against an individual in violation of that section.

Whether the provisions of the Plan requiring a bidder to commit himself to hire—or make every good faith effort to hire—at least the minimum number of minority group employees specified in the ranges established for the designated trades is in fact, a "quota" system (and therefore admittedly contrary to the Civil Rights Act) or is a "goal" system, is in our view largely a matter of semantics, and tends to divert attention from the end result of the Plan—that contractors commit themselves to making race or national origin a factor for consideration in obtaining their employees.

We view the imposition of such a requirement on employers engaged in Federal or federally assisted construction to be in conflict with the intent as well as the letter of the above provisions of the act which make it an unlawful employment practice to use race or national origin as a basis for employment. Further, we believe that requiring an employer to abandon his customary practice of hiring through a local union because of a racial or national origin imbalance in the local unions and, under the threat of sanctions, to make "every good faith effort" to employ the number of minority group tradesmen specified in his bid from sources outside the union if the workers referred by the union do not include a sufficient number of minority group personnel, are in conflict with section 703(j) of the act (42 U.S.C. 2000e–2(j)) which provides as follows:

"Nothing contained in this subchapter shall be interpreted to require any employer, employment agency, labor organization, or joint labor-management committee subject to this subchapter to grant preferential treatment to any individual or to any group because of the race, color, religion, sex, or national origin of such individual or group *on account of an imbalance which may exist with respect to the total number of percentage of persons* of any race, color, religion, sex, or national origin employed by any employer, *referred or classified for employment by any employment agency or labor organization,* admitted to membership or classified by any labor organization, or admitted to, or employed in, any apprenticeship or other training program, in comparison with the total number of percentage of persons of such race, color, religion, sex, or national origin in any community, State, section, or other area, or in the available work force in any community, State, section, or other area." (Italic added.)

While the legislative history of the Civil Rights Act is replete with statements by sponsors of the legislation that title VII prohibits the use of race or national origin as a basis for hiring, we believe a reference to a few of such clarifying explanations will suffice to further show the specific intent of Congress in such respect when enacting that title. At page 6549, Volume 110, Part 5, of the Congressional Record, the following explanation by Senator Humphrey is set out:

"As a longstanding friend of the American worker, I would not support this fair and reasonable equal employment opportunity provision if it would have any harmful effect on unions. The truth is that this title forbids discriminating against anyone on account of race. This is the simple and complete truth about title VII.

"The able Senators in charge of title VII (Mr. Clark and Mr. Case) will comment at greater length on this matter.

"Contrary to the allegations of some opponents of this title, there is nothing in it that will give any power to the Commission or to any court to require hiring, firing, or promotion of employees in order to meet a racial 'quota' or *to achieve a certain racial balance.*

"That bugaboo has been brought up a dozen times; but it is nonexistent. In fact, the very opposite is true. Title VII prohibits discrimination. In effect, it says that race, religion, and national orgin are not to be used as the basis for hiring and firing. Title VII is designed to encourage hiring on the basis of ability and qualifications, not race or religion." (Italic added.)

In an interpretive memorandum of Title VII submitted jointly by Senator Clark and Senator Case, floor managers of that legislation in the Senate, it is stated in the Congressional Record, volume 110, part 6, page 7213:

"With the exception noted above, therefore, section 704 prohibits discrimination in employment because of race, color, religion, sex, or national origin. It has been suggested that the concept of discrimination is vague. In fact it is clear and simple and has no hidden meanings. To discriminate is to make a distinction, to make a difference in treatment or favor, and those distinctions or differences in treatment or favor which are prohibited by section 704 are those which are based on any five of the forbidden criteria: race, color, religion, sex, and national origin. Any other criterion or qualification for employment is not affected by this title.

"There is no requirement in title VII that an employer maintain a racial balance in his work force. On the contrary, any deliberate attempt to maintain a racial balance, *whatever such a balance may be,* would involve a violation of title VII because maintaining such a balance would require an employer to hire or to refuse to hire on the basis of race. It must be emphasized that discrimination is prohibited as to any individual. While the presence or absence of other members of the same minority group in the work force may be a relevant factor in determining whether in a given case a decision to hire or to refuse to hire was based on race, color, etc., it is only one factor, and the question in each case would be whether that individual was discriminated against.

"There is no requirement in title VII that employers abandon bona fide qualification tests where, because of differences in back-

ground and education, members of some groups are able to perform better on these tests than members of other groups. An employer may set his qualifications as high as he likes, he may test to determine which applicants have these qualifications, and he may hire, assign, and promote on the basis of test performance.

"Title VII would have no effect on established seniority rights. Its effect is prospective and not retrospective. Thus, for example, if a business has been discriminating in the past and as a result has an all-white working force, when the title comes into effect the employer's obligation would be simply to fill future vacancies on a nondiscriminatory basis. He would not be obliged—or indeed, permitted—to fire whites in order to hire Negroes, or to prefer Negroes for future vacancies, or, once Negroes are hired, to give them special seniority rights at the expense of the white workers hired earlier. (However, where waiting lists for employment or training are, prior to the effective date of the title maintained on a discriminatory basis, the use of such lists after the title takes effect may be held an unlawful subterfuge to accomplish discrimination)" (Italic added.)

In the Congressional Record, volume 110, part 6, page 7218, the following objections, which had been raised during debate to the provisions of Title VII, and answers thereto by Senator Clark are printed:

"Objection: Under the bill, employers will no longer be able to hire or promote on the basis of merit and performance.

"Answer: Nothing in the bill will interfere with merit hiring or merit promotion. The bill simply eliminates consideration of color from the decision to hire or promote.

* * * * *

"Objection: The bill would require employers to establish quotas for nonwhites in proportion to the percentage of nonwhites in the labor market area.

"Answer: Quotas are themselves discriminatory."

While, as indicated above, we believe that the provisions of the Plan affecting employers who hire through unions conflict with section 703(j) of Title VII, and that the above statement by Senator Humphrey further indicates that the act was not intended to affect valid collective bargaining agreements, we further believe that the appropriate direction of any administrative action to be taken where it is the policy of a union to refer only white workers to employers on Federal or federally assisted construction is indicated in the following question and answer set forth in the interpretative memorandum by Senator Clark and Senator Case (Congressional Record, vol. 110, pt. 6, p. 7217):

"Question. If an employer obtains his employees from a union hiring hall through operation of his labor contract is he in fact the true employer from the standpoint of discrimination because of race, color, religion, or national origin when he exercises no choice in their selection? If the hiring hall sends only white males is the employer guilty of discrimination within the meaning of this title? If he is not, then further safeguards must be provided to protect him from endless prosecution under the authority of this title.

"Answer. An employer who obtains his employees from a union hiring hall through operation of a labor contract is still an employer. If the hiring hall discriminates against Negroes, and sends him only whites, he is not guilty of discrimination—but the union hiring hall would be."

We believe it is especially pertinent to note that the "Findings" stated in section 4 of the order of June 27 as the basis for issuance thereof, consist almost entirely of a recital of practices of *unions*, rather than of contractors or employers. Thus, in attempting to place upon the contractors the burden of overcoming the effects of union practices, the order appears to evince a policy in conflict with the interpretation of the legislation as stated by its sponsors.

In this connection your Solicitor's memorandum contends that the principle of imposing affirmative action programs on contractors for employment of administratively determined numbers of minority group tradesmen, when such programs are for the purpose of correcting the effects of discrimination by unions prior to the Civil Rights Act of 1964, is supported by the decisions of *Quarles* v. *Philip Morris*, 279 F. Supp. 505; *U.S. Local 189, U.P.P. and Crown Zellerbach Corp.*, 282 F. Supp. 39; and *Local 53 of Heat and Frost Insulators* v. *Vogler*, 407 F. 2d 1047. We find, however, that decisions of the courts have differed materially in such respect; see *Griggs* v. *Duke Power*, 292 F. Supp. 243; *Dobbins* v. *Local 212*, 292 F. Supp. 413; and *U.S.* v. *Porter*, 296 F. Supp. 40.

Additionally, your Solicitor's memorandum cites cases involving affirmative desegregation of school faculties (*U.S.* v. *Jefferson County*, 372 F. 2d 836 (1966), and *U.S.* v. *Montgomery County*, 289 F. Supp. 647, affirmed 37 LW 4461 (1969) in particular). However, there is a clear distinction between the factual and legal situations involved in those cases and the matter at hand. The cited school decisions required reallocation of portions of existing school faculties in implementation of the requirement for desegregation of dual public school systems, which had been established on the basis of race, as such requirement was set out in the 1954 and 1955 decisions of the Supreme Court in the *Brown* v. *Board of Education* cases (347 U.S. 483 and 349 U.S. 294). In the *Brown* cases desegregation of faculties was regarded as one of the keys to desegregation of the schools, and in the *Jefferson County* case the court read Title VI of the Civil Rights Act as a congressional mandate for a change in pace and method of enforcing the desegregation of racially segregated school systems, as required by the *Brown* decisions.

The requirements of the revised Philadelphia Plan do not involve a comparable situation. Even if the present composition of an employer's work force or the membership of a union is the result of past discrimination, there is no requirement imposed by the Constitution, by a mandate of the Supreme Court, or by the Civil Rights Act for an employer or a union to affirmatively desegregate its personnel or membership. The distinction becomes more apparent when it is recognized that the order of June 27 pertains to *hiring* practices of an employer. Hiring was not at issue in the school cases, and those cases do not purport to hold that a school district must, or even may, correct a racial imbalance in its faculty by affirmatively requiring that a stated proportion of its teachers shall be hired on the basis of race. To the contrary, the court recognized in its decision in the *Jefferson County* case (page 884) that the "mandate of Brown * * * forbids the discriminatory consideration of race in faculty selection," and such consideration is expressly prohibited by section VIII of the court's decree in Appendix A of that case.

The recital in section 6b.2 of the order (and in the prescribed form of notice to be included in the invitation) that the contractor's commitment "is not intended and shall not be used to discriminate against any qualified applicant or employee" is in our opinion the statement of a practical impossibility. If, for example, a contractor requires 20 plumbers and is committed to a goal of employment of at least five from minority groups, every nonminority applicant for employment in excess of 15 would, solely by reason of his race or national origin, be prejudiced in his opportunity for employment, because the contractor is committed to make every effort to employ five applicants from minority groups.

In your Solicitor's memorandum it is argued that the "straw man" sometimes used in opposition to the Plan is that it "would require a contractor to discriminate against a better qualified white craftsman in favor of a less qualified black." We believe this obscures the point involved, since it introduces the element of skill or competence, whereas the essential question is whether the Plan would require the contractor to select a black craftsman over an *equally* qualified white one. We see no room for doubt that the contractor in the situation posed above would believe he would be expected to employ the black applicant, at least until he had reached his goal of five nonminority group employees, and that if he failed to achieve that goal his employment of a white craftsman when an equally qualified black one was available could be considered a failure to use "every good faith effort." In our view such preferential status or treatment would constitute discrimination against the white worker solely on the basis of color, and therefore would be contrary to the express prohibition both of the Civil Rights Act and of the Executive order.

It is also contended in your Solicitor's memorandum that substantial judicial support for administrative affirmative action programs requiring commitments for contractors for employment of specified numbers of minority group tradesmen is contained in the decision of the Ohio Supreme Court in *Weiner* v. *Cuyahoga Community College District*, 19 Ohio St. 2d — July 2, 1969). That decision upheld the award of a federally assisted construction contract to the second low bidder, as a proper action in implementation of the policies of the Civil Rights Act of 1964, after approval of award to the low bidder was withheld by the Federal agency involved for failure of the low bidder to submit an affirmative action program (including manning tables for minority group tradesmen) which was acceptable to that agency pursuant to an OFCC plan established for Cleveland, Ohio.

While the decision in *Weiner* case (which was a majority opinion by five of the justices with dissenting opinions by two) has some bearing on the issues here involved, since the decision appears to be based in substantial part on the conflicting opinions of Federal courts cited earlier we do not believe the decision can be considered as controlling precedent for the validity of the revised Philadelphia Plan.

In support of the required procedure, which is admitted at page 33 of the Solicitor's memorandum to require contractors to take actions which are based on race, the memorandum relies upon the acceptance by the courts, in school, housing and voting cases, of the use of race as a valid consideration in fashioning relief to overcome the effects of past discrimination. Aside from other distinctions, we believe there is a material difference between the situation in those cases, where enforcement of the rights of the minority individuals to vote or to have unsegregated educational or housing facilities does not deprive any member of a majority group of his rights, and the situation in the employment field, where the hiring of a minority worker, as one of a group whose number is limited by the employer's needs, in preference to one of the majority group precludes the employment of the latter. In other words, in those cases there is present no element of reverse discrimination, but only the correction of the illegal denial of minority rights, leaving the majority in the full exercise and enjoyment of their corresponding rights.

In addition it may be pointed out that in those cases the judicial relief ordered is directed squarely at the parties responsible for the denial of rights, and we therefore do

not consider them as supporting requirements to be complied with by the contractors who, under the findings of the Plan, are themselves more the victims than the instigators of the past discriminatory practices of the labor unions. Moreover, in the court cases the remedies are applied after judicial determination that effective discrimination is in fact being practiced or fostered by the defendants, whereas the Plan is a blanket administrative mandate for remedial action to be taken by all contractors in an attempt to cure the evils resulting from union actions, without specific reference to any past or existing actions or practices by the contractors.

While it may be true, as stated in the Plan, "that special measures are required to provide equal employment opportunity in these seven trades," it is our opinion that imposition of a responsibility upon Government contractors to incur additional expenses in affirmative action programs which are directed to overcoming the present effects of past discrimination by labor unions, would require the expenditure of appropriated funds in a manner not contemplated by the Congress. If, as stated in the Plan, discrimination in referral is prohibited by the National Labor Relations Act and Title VII of the Civil Rights Act of 1964, it is our opinion that the remedies provided by the Congress in those acts should be followed. See also in this connection section 207 of Executive Order 11246.

While, as indicated in the foregoing opinions and in your Solicitor's memorandum, the President is sworn to "preserve, protect and defend the Constitution of the United States," we question whether the executive departments are required, in the absence of a definitive and controlling opinion by the Supreme Court of the United States, to assess the relative merits of conflicting opinions of the lower courts, and embark upon a course of affirmative action, based upon the results of such assessment, which appears to be in conflict with the expressed intent of the Congress in duly enacted legislation on the same subject.

In this connection, it should be noted that, while the phrase "affirmative action" was included in the Executive order (10925) which was in effect at the time Congress was debating the bills which were subsequently enacted as the Civil Rights Act of 1964, no specific affirmative action requirements of the kind here involved had been imposed upon contractors under authority of that Executive order at that time, and we therefore do not think it can be successfully contended that Congress, in recognizing the existence of the Executive order and in failing to specifically legislate against it, was approving or ratifying the type or methods of affirmative action which your Department now proposes to impose upon contractors.

We recognize that both your Department and the Department of Justice have found the Plan to be legal and we have given most serious consideration to their positions. However, until the authority for any agency to impose or require conditions in invitations for bids on Federal or federally assisted construction which obligate bidders, contractors, or subcontractors, to consider the race or national origin of their employees or prospective employees for such construction, is clearly and firmly established by the weight of judicial precedent, or by additional statutes, we must conclude that conditions of the type proposed by the revised Philadelphia Plan are in conflict with the Civil Rights Act of 1964, and we will necessarily have to so construe and apply the act in passing upon the legality of matters involving expenditures of appropriated funds for Federal or federally assisted construction projects.

In this connection it is observed that by section 705(d) of the act, Congress charges the Equal Employment Opportunity Commission with the specific responsibility of making reports to the Congress and to the President on the cause of and means of eliminating discrimination and making such *recommendations for further legislation* as may appear desirable. That provision, we believe, not only prescribes the procedure for correcting any deficiencies in the Civil Rights Act, but also shows the intent of Congress to reserve for its own judgment the establishment of any additional unlawful employment practice categories or nondiscrimination requirements, or the imposition upon employers of any additional requirements for assuring equal employment opportunities.

We realize that our conclusions as set out above may disrupt the programs and objectives of your Department, and may cause concern among members of minority groups who may believe that racial balance or equal representation on Federal and federally assisted construction projects is required under the 1964 act, the Executive order, or the Constitution. Desirable as these objectives may be, we cannot agree to their attainment by the imposition of requirements on contractors, in their performance of Federal or federally-assisted contracts, which the Congress has specifically indicated would be improper or prohibited in carrying out the objectives and purposes of the 1964 act.

Sincerely yours,

ELMER B. STAATS.

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 to authorize the 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.

Mr. TYDINGS. Mr. President, what is the pending business?

The PRESIDING OFFICER. The pending business is the amendment of the Senator from Maryland.

Mr. TYDINGS. Mr. President, I ask for the yeas and nays on my amendment.

The yeas and nays were ordered.

Mr. BROOKE. Mr. President, I have long made clear that I am committed to firm oversight of our defense expenditures. At the same time, however, I feel an obligation to speak out when it appears that proposed economies may be false ones. With this in mind, I feel I should offer some comment on the proposal by the Senator from Maryland to reduce the Department of Defense's emergency funds by one-half. I am well aware that in recommending an emergency fund of $100 million, the committee exceeded the previous amount authorized for this purposes. But I also believe that a 50-percent reduction in this amount is too great a cut.

My reasons for holding this position may be stated quite simply. The Subcommittee on Research and Development, on which I was honored to serve, recommended, and the full committee has endorsed, major reductions in the proposed Department of Defense budget for research and development. Those reductions amount to over $1 billion, the most substantial cut in any sector of the budget and one which will affect many programs which the Department of Defense considered vital. Having exercised such a stringent review of this element of the budget already, it is my belief that the Department should have somewhat greater latitude in regard to the emergency fund. These funds will permit the Department to manage more sensibly the effective reduction of effort which this legislation will provide.

I consider a reasonable degree of flexibility very desirable, and in view of the magnitude of the cuts already contemplated, I believe the emergency fund is a prudent device for improved management of the Department of research and development programs in a period of substantial reorientation.

For example the committee report indicates the considerable uncertainties which afflict the whole question of air defense. Both with respect to the defense of the continental United States and with respect to forward defense of our men in the field, should they be engaged against an enemy with significant tactical air capability, there are quite fundamental questions about the size and nature of air defenses which should be provided.

The committee directed a deferral of work on the airborne warning and control system—AWACS—largely because of the doubts about the likely bomber threat to the United States.

Similarly, in the relatively brief time we had to consider the matter in the subcommittee and in the full body, the necessity for the promising SAM–D system remained unclear. So far as defense of the field army and the continental United States is concerned, it seems clear that this system would provide both more potent and less costly defense than the present capabilities, namely, the Nike-Hercules and Hawk missile forces. The present weapons are extremely expensive to maintain. If we are going to provide extensive air defense in the future, we may later wish to proceed with the SAM–D technology.

Thus, the deletion of funds for SAM–D was accomplished with some trepidation on the part of many of us in the committee and was written in primarily because of the compulsion we felt to reduce the overall budget.

At the same time, however, the committee has directed the Secretary of Defense to review the bomber defense requirement in detail and to submit findings and recommendations in connection with the fiscal 1971 budget. Since the Department has argued that SAM–D is one of the most critical programs bearing on future air defense efforts, it may well choose to use a portion of the flexible funding authority under section 202 to sustain a minimum level of effort on SAM–D pending this full reexamination of the need for a more advanced air defense capability.

This is but one example of how such authority might be put to constructive use. There are many occasions in a large and fast-moving technological effort, of which the Department's total R. & D. program is the principal example, when the capacity to feed money into a critical area can prove invaluable. Particularly since the Department's R.D.T. & E. budget has a large and pressing backlog of projects competing for funds, I do not consider this emergency authority excessive.

Indeed my view is similar to that voiced in the Senate the other day by the distinguished junior Senator from Maryland (Mr. MATHIAS). I tend to believe that our defense effort should emphasize the technological advantages we have accrued, and that we should seek to control our total defense expenditure principally by strict limits on premature commitments to procurement of expensive systems and by reducing our conventional forces with their costly manpower levels to the extent feasible.

The other side of the coin is that, if we are to stress technological advantages in maintaining a strong national security posture, we cannot skimp on our R. & D. effort. Considering the 12.7-percent cut already imposed on the total R.D.T. & E. authorization, I believe that ample emergency funding is both important and desirable. Accordingly, while I could not support the $50 million recommended in the original amendment, I believe the compromise which has been worked out does allow for a sufficient degree of flexibility in the program. The revised amendment will therefore have my support.

The PRESIDING OFFICER. The question is on agreeing to the amendment of the Senator from Maryland. On this question, the yeas and nays have been ordered, and the clerk will call the roll.

The assistant legislative clerk proceeded to call the roll.

Mr. KENNEDY. I announce that the Senator from Tennessee (Mr. GORE) is absent on official business.

I also announce that the Senator from Indiana (Mr. BAYH), the Senator from Nevada (Mr. BIBLE), the Senator from Connecticut (Mr. DODD), and the Senator from Texas (Mr. YARBOROUGH) are necessarily absent.

I further announce that, if present and voting, the Senator from Tennessee (Mr. GORE), the Senator from Indiana (Mr. BAYH), the Senator from Connecticut (Mr. DODD), and the Senator from Texas (Mr. YARBOROUGH) would each vote "yea."

Mr. SCOTT. I announce that the Senator from Ohio (Mr. SAXBE) is necessarily absent and, if present and voting, would vote "yea."

The result was announced—yeas 94, nays 0, as follows:

[No. 75 Leg.]

YEAS—94

Aiken	Boggs	Church
Allen	Brooke	Cook
Allott	Burdick	Cooper
Anderson	Byrd, Va.	Cotton
Baker	Byrd, W. Va.	Cranston
Bellmon	Cannon	Curtis
Bennett	Case	Dirksen
Dole	Javits	Pell
Dominick	Jordan, N.C.	Percy
Eagleton	Jordan, Idaho	Prouty
Eastland	Kennedy	Proxmire
Ellender	Long	Randolph
Ervin	Magnuson	Ribicoff
Fannin	Mansfield	Russell
Fong	Mathias	Schweiker
Fulbright	McCarthy	Scott
Goldwater	McClellan	Smith
Goodell	McGee	Sparkman
Gravel	McGovern	Spong
Griffin	McIntyre	Stennis
Gurney	Metcalf	Stevens
Hansen	Miller	Symington
Harris	Mondale	Talmadge
Hart	Montoya	Thurmond
Hartke	Moss	Tower
Hatfield	Mundt	Tydings
Holland	Murphy	Williams, N.J.
Hollings	Muskie	Williams, Del.
Hruska	Nelson	Young, N. Dak.
Hughes	Packwood	Young, Ohio
Inouye	Pastore	
Jackson	Pearson	

NAYS—0

NOT VOTING—6

Bayh	Dodd	Saxbe
Bible	Gore	Yarborough

So Mr. TYDINGS' amendment, as modified, was agreed to.

Mr. FULBRIGHT. Mr. President, I move to reconsider the vote by which the amendment was agreed to.

Mr. BYRD of West Virginia. I move to lay that motion on the table.

The motion to lay on the table was agreed to.

Mr. FULBRIGHT obtained the floor.

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

Mr. FULBRIGHT. I yield to the Senator from Illinois, with the understanding that I will not lose my right to the floor.

NOMINATION OF ASSOCIATE JUSTICE OF THE SUPREME COURT

Mr. DIRKSEN. Mr. President, I ask unanimous consent that the name of the new Associate Justice of the Supreme Court may be filed during the adjournment or recess of the Senate. I ask this because it cannot be filed until Thursday, and until it is filed, the chairman of the Committee on the Judiciary cannot set the time for a hearing.

Mr. FULBRIGHT. Mr. President, reserving the right to object, I did not hear his name.

Mr. DIRKSEN. I did not give his name. [Laughter.]

Mr. President, I also request that the name be referred to the Committee on the Judiciary.

The PRESIDING OFFICER. Is there objection? The Chair hears none, and it is so ordered.

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.

AMENDMENT NO. 110

Mr. FULBRIGHT. Mr. President, I call up my amendment No. 110.

The PRESIDING OFFICER. The amendment will be stated.

The legislative clerk proceeded to read the amendment.

Mr. FULBRIGHT. Mr. President, I ask unanimous consent that further reading of the amendment be dispensed with.

The PRESIDING OFFICER. Without objection, it is so ordered; and, without objection, the amendment will be printed in the RECORD.

The amendment is as follows:

On page 2, line 26, strike out "$1,638,600,000" and insert in lieu thereof "$1,626,707,000".

On page 3, line 2, strike out "$1,921,500,000" and insert in lieu thereof "$1,911,343,000".

On page 3, line 3, strike out "$3,051,200,000" and insert in lieu thereof "$3,041,211,000".

On page 3, line 4, strike out "$468,200,000" and insert in lieu thereof "$454,625,000".

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

Mr. FULBRIGHT. I yield to the majority leader.

AUTHORIZATION FOR THE COMMITTEE ON FINANCE TO MEET ON SEPTEMBER 4 OR 5

Mr. MANSFIELD. Mr. President, I ask unanimous consent that, on September 4 or 5, the Committee on Finance may be allowed to meet during the session of the Senate for the purpose of beginning hearings and listening to witnesses on tax reform legislation.

The PRESIDING OFFICER. Is there objection? The Chair hears none, and it is so ordered.

Mr. MANSFIELD. It is hoped that, after that, we will be able to get authorization for the Committee on Finance to meet during the session of the Senate on a week-by-week basis. But we will cross that bridge when we come to it.

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 Re-

serve of each Reserve component of the Armed Forces, and for other purposes.

Mr. STENNIS. Mr. President, will the Senator yield for a question?

Mr. FULBRIGHT. I yield for a question.

Mr. STENNIS. I know that the Senator has an amendment of some importance and that he wishes to discuss it. I am wondering if there could be an agreement for controlled time at this point.

Mr. FULBRIGHT. I say to the Senator that I have agreed to yield to the Senator from Illinois (Mr. PERCY). He has a statement on a nongermane matter. My speech will take a little time, and I had agreed to accommodate him, to yield to him. I am unable to determine how long my speech will take, due to the interruptions. The Senator knows how it goes. Sometimes it goes quickly and sometimes not quickly. I would hesitate to make an agreement at this time. Later on I might do so, after I am through with my speech. Perhaps the Senator will renew his request after I have completed my remarks.

Mr. STENNIS. If we made it an hour and a half to a side now, would that cover the situation?

Mr. FULBRIGHT. I am not sure. Unfortunately, I have another little speech on a nongermane matter—similar to that of my colleague a moment ago—which I have to make because of time running out. I would hope the Senator would not ask for such an agreement at this time. I shall be glad to entertain it a little later.

Mr. STENNIS. I thank the Senator. We will confer and renew it later.

Mr. FULBRIGHT. Mr. President, I ask unanimous consent to yield to the Senator from Illinois 5 minutes, without losing my right to the floor.

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

UP WITH PEOPLE, INC.

Mr. PERCY. Mr. President, young people today, as never before, are questioning the way things are. But, some do more than question and wonder—some are actually trying to bring about a new peace, understanding, and common brotherhood among men. "Up With People" is attempting to do just this. These young people are asking for new experiences through new experiments. Their new experiences go beyond the formal realm of education and campus surroundings to a total submersion in world life. In partnership with a number of universities across the United States, the 600 students of "Up With People" are traveling to many countries giving people an optimistic insight into American youth and communicating to them a new hope for the future. Fortune's editor recently stated:

> The U.S. does not owe the world leadership in the sense of telling other countries what to do. But the U.S. does owe it a less distorted view of the American experience than the one the world has been getting. . . .

On a recent 3-month tour of Europe, "Up With People" reached more than 90 million people in six countries and 53 cities, displaying a new vision of the American scene. Sargent Shriver, Ambassador in Paris, as host of the special performance at the Cité Universitaire, indicated that "Up With People" is making an "outstanding contribution to international relations."

Jacques Chaben-Delmas, Premier of France, said,

> Today everybody is asking about the future. In "Up With People" you have seen the best of it.

Now back in the United States, "Up With People" will be touring six States at the invitations of the governors of Iowa, Vermont, Maryland, Washington, Wisconsin, and Delaware. There is also an invitation to Mexico and a return invitation for France.

There are special supplements on this outstanding group on the desk of each Senator. I hope that my colleagues will take a few moments do review it and note that it was 148 Members of Congress, including 46 Members of the Senate, who launched this program in 1966. It has been through the efforts of many others that the organization is now a completely independent, nonprofit corporation. A new office has recently been opened here in Washington at 2011 Eye Street Northwest.

I extend to this group of young people our sincere congratulations on a goodwill mission well done and our best wishes for their continued success.

In talking recently with a group of these young students, led by Linda McLean, who came to the Senate to discuss their program with me, I asked a number of questions about how the program was conducted in Europe and what the reaction of Europeans was to the program.

It is very interesting how these people approached the problem of reaching the people of Europe. They did so through the elected municipal officials in the cities of Europe. They would call on the mayor in his office. They would explain the program to him. They would demonstrate by song what they do, right in his office. And then they would submit to him suggestions. These were not however, in the form of demands to him. They were just suggestions as to the best way to approach this program in his city.

Their experience has been that it is best for the city itself to furnish the municipal hall at no cost. They suggested that the students would enjoy living with families, and they asked that arrangements be made for families all over the city to take in one student who would be billeted then with that particular family during the performance and their stay in that city. The cost is therefore kept at a minimum. And the cost to the U.S. Government of this program of ambassadors of good will is not one, single cent.

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

Mr. PERCY. I am happy to yield to the distinguished Senator from Arizona.

Mr. GOLDWATER. Mr. President, I wish to join in the comments of the Senator from Illinois. I have, on many, many occasions had the pleasure of hearing these young people. We have several enthusiastic groups in my State. I can say without any hesitation at all that I think they are doing more for America than anything we have going today.

Mr. PERCY. I thank the distinguished Senator from Arizona.

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

Mr. FULBRIGHT. I yield.

Mr. MILLER. Mr. President, I appreciate very much the fine comments of the Senator from Illinois.

I am very proud of the fact that I was a Senator who enlisted the 46 Senators to sponsor, with honor, the show "Up With People" at the time the Senator from Illinois referred to, which was their first Washington performance.

Since that time it has gladdened my heart to see the magnificent reception these young people have received not only all over the United States but also all over Europe and the Far East. If more people would have the opportunity to listen to the program and to think about it, I think that we would have a better society.

These young people are dedicated to doing good. Of course, singing is one way to encourage people to do good. Some of the themes of the songs are the best to demonstrate American patriotism. For example, a line from one of the songs is, "If more people liked more people." "Freedom is not free" is one of the most stirring I have ever heard.

I think it commendable for the Senator from Illinois to bring this matter to the attention of the Senate and I applaud him for doing so.

Mr. MURPHY. Mr. President, it is a real pleasure to be able to join Senators today in recognition of a group of young people that I have long admired and given my full support. Up With People is a group of some of the finest young people in this country.

These are American kids in the fullest sense of the word. They traveled all over Europe in a recent 3-month period earning the highest acclaim from all leaders, and have also been all over the United States. In these extensive tours, they have taken to the rest of the world a true picture of American life, and at the same time, they have brought joy and laughter to millions of people. They have shown that there are common bonds of unity and brotherhood that unite all men. That is what "Up With People" is all about.

Mr. President, the "Up With People" cast believes that this good and brotherhood can be found in all men, and they are determined to bring it out. These youths believe that they can change the world for the better, and they very well may. And these young people know that "freedom isn't free" as one of their songs so aptly states. Let us be thankful that we live in a free society in which youth is allowed and encouraged to make efforts to this end.

Mr. President, I support "Up With People's" ideals and look forward, as I know all of my colleagues do, to the day when all men realize that they are brothers and will allow their fellowmen to live in peace and freedom.

I salute "Up With People" and feel we should all thank them for all the good will they have spread in behalf of our country wherever they have traveled.

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

Mr. FULBRIGHT. I yield.

Mr. PROXMIRE. Mr. President, I wish to commend the distinguished Senator from Illinois. I agree wholeheartedly with the Senator's remarks. This is a remarkable program. Some of the young people who participated in "Up with People" stayed at our home when they came to Washington.

I was extremely impressed by their attitude, openness, and candor; but what impressed me above all is that this is a completely voluntary program, as I understand it. It is really costly to them because they are spending so much of their time, week after week and month after month when they could be doing nothing or enjoying the easy life. This kind of program should be encouraged. I commend the Senator from Illinois for bringing "Up with People" to our attention.

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

Mr. FULBRIGHT. I yield.

Mr. STEVENS. Mr. President, I would like to add my endorsement of "Up With People" to that of my colleague from Illinois (Mr. PERCY). I was greatly impressed by this group because of their obvious enthusiasm for day-to-day living. There is no better example of our American youth than "Up With People." In just a few short years these young people have delighted millions of people both here and abroad. They have performed in a number of European countries and in all the States but my home State of Alaska, an oversight we hope to soon correct. Mr. President, it would be my hope that everyone, everywhere, will have an opportunity to see "Up With People" in action. It is an experience that answers the critics of the youth of our country.

The enthusiasm of these young people is infectious. They are ambassadors of freedom—and definitely deserve the praise they have received here today.

Mr. FULBRIGHT. Mr. President, I wish to associate myself with the remarks made by the Senator from Illinois.

The "Up With People" group has received a very favorable reaction everywhere they have appeared. As the Senator from Illinois stated, they have recently completed a very successful tour of Europe, where they were complimented and commended by a number of Government leaders and our own Embassy officials, and were seen and heard by thousands of people.

Earlier this year "Up With People" presented a series of programs in Arkansas where they were very well received. A number of my constituents wrote to me praising this group. Mr. President, I ask unanimous consent to have one of these letters, from Dr. Stanley Applegate of Springdale, Ark., printed in the RECORD.

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

SPRINGDALE CLINIC,
Springdale, Ark., March 24, 1969.

Senator WILLIAM J. FULBRIGHT,
Senate Office Building,
Washington, D.C.

DEAR SENATOR FULBRIGHT: I can't tell you how much I have been impressed by this young group.

There were 160 in this International Group that came here from every State and 37 foreign countries. They stayed for four nights in different peoples' homes and the reports I get from their Hosts have all been glowing.

These young people will be the best Ambassadors of good will that the United States could sponsor.

I hope that after you read these clippings that you can help them in some way for their show is tremendous, well done and carries a fresh new image to today's Youth.

Yours truly,

STANLEY APPLEGATE, M.D.

Mr. PERCY. Mr. President, will the Senator yield to me for 30 seconds?

Mr. FULBRIGHT. I yield.

Mr. PERCY. Mr. President, I believe that because 46 Members of this body were sponsors of this group, on behalf of the Presidential Prayer Breakfast Committee I have been authorized to extend an invitation to them to be the choir choral group in January or February 1970, at the annual breakfast. On behalf of all Senators I extend congratulations to these ambassadors of good will who have done so much for their country and themselves in strengthening their resolve and understanding of this country and the people abroad in finding ways we can bring people together.

Mr. President, I ask unanimous consent that additional information concerning "Up With People" be printed in the RECORD.

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

Up With People Incorporated is an independent, educational non-profit organization that involves: 4 international traveling casts, 456 regional programs in the United States, 105,000 youth are directly involved.

An estimated 90 million people in the U.S. have viewed four national Up With People television specials.

Over 5 million people have seen the Up With People shows in live performances in 49 states of the U.S. including special performances at Carnegie Hall, Hollywood Bowl, Los Angeles Music Center and Constitution Hall in Washington, D.C.

In addition the Up With People shows have traveled to 25 nations at the invitation of government and national leaders:

Japan	Mexico
Korea	Canada
Germany	Belgium
Spain	France
Austria	Norway
Panama	Sweden
Brazil	Denmark
Peru	Finland
Venezuela	The Democratic Republic of the Congo
Argentina	Monaco
Jamaica	Switzerland
Uruguay	Italy
Puerto Rico	

Casts have performed on national television in Germany, Norway, Italy, the Republic of the Congo, Japan, Venezuela, Brazil, Argentina and Peru.

Up With People's educational program involves high school and university courses, faculty and students from every corner of the globe, from every race and culture. Students study modern languages by the audio-visual St. Cloud method.

"Everyone is specialized. No one is coordinating the whole. Up With People is attempting to do that. What they're doing is in the spirit of the times, a symptom of society, an unusual manifestation." R. Buckminster Fuller, Comprehensive Design Scientist.

Three international casts of Up With People were in Europe this spring for a comprehensive 11-week tour that included: 53 cities of Europe, 200 live performances in six countries, 90 million people reached, 13 national TV shows, 131 articles in 104 newspapers, hospitality in 6,000 homes.

SUSPENSION OF DUTY ON ISTLE

The following report of a committee was submitted:

By Mr. LONG, from the Committee on Finance, with amendments:

H.R. 10107. An act to continue for a temporary period the existing suspension of duty on certain istle (Rept. No. 91–373).

Mr. LONG. Mr. President, I ask unanimous consent that the pending business be temporarily laid aside and that the Senate proceed to the consideration of H.R. 10107, which is now at the desk. It has been cleared on both sides.

The PRESIDING OFFICER. The bill will be stated by title.

The LEGISLATIVE CLERK. A bill (H.R. 10107) to continue for a temporary period the existing suspension of duty on certain istle.

The PRESIDING OFFICER. Is there objection to the present consideration of the bill?

There being no objection, the Senate proceeded to consider the bill.

Mr. LONG. Mr. President, this bill was reported unanimously by the Committee on Finance with a single committee amendment which related to a separate matter. The committee amendment extends the Interest Equalization Tax Act for a 1-month period, until September 30, 1969.

H.R. 10107 as passed by the House and as approved by the Committee on Finance would continue until September 5, 1972, the existing suspension of duties on processed istle.

If the existing suspension of duty is permitted to expire on September 5, 1969, imports of processed istle will be subject to a 20-percent tax.

So far as we can determine, during the period of time since 1957, during which time the tariff has been suspended, there has been no complaint regarding the duty-free treatment of this product.

The committee amendment is a mere 30-day extension of the interest-equalization tax.

We are proposing that this tax be extended for 30 days because the interest equalization tax would expire during the recess of the Congress, and the 19-month extension proposed by the House requires perhaps more consideration and more debate at this time than a simple 30-day extension.

The PRESIDING OFFICER. The committee amendment will be stated.

The assistant legislative clerk read as follows:

After line 9, insert a new section as follows:

"SEC. 2. Effective with respect to acquisitions made after August 31, 1969, section 4911(d) of the Internal Revenue Code of 1954 (relating to termination of interest equalization tax) is amended by striking out 'August 31, 1969' and inserting in lieu thereof 'September 30, 1969'.

Mr. LONG. Mr. President, the bill is not a controversial bill. This is merely a 30-day extension of the interest equalization tax to give the committee of the Senate the opportunity to act on this

measure and to obtain whatever information the Senate may want when this matter comes before the Senate after the August recess.

This measure is necessary because the interest equalization tax will expire during the recess.

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

Mr. LONG. I yield.

Mr. JAVITS. Mr. President, I wish to precede my remarks, so it is not taken out of context, with the statement that I intend to fully cooperate with the Senator from Louisiana in passing the 30-day extension. The Senator knows I have been opposed to it and I still have grave reservations about it.

I would like to ask the Senator if the amendment which was read at the desk does not actually make a change in the law which would provide the President with the authority to have a lower tax rate on outstanding issues from those which pertain to new borrowing?

Mr. LONG. No, that authority is in the House-passed bill, which is still in the committee. What we have here is a simple 30-day extension.

Mr. JAVITS. That will be dealt with when the committee has its hearing?

Mr. LONG. The Senator is correct.

Mr. JAVITS. The committee will have hearings?

Mr. LONG. The Senator is correct.

Mr. JAVITS. May I be heard?

Mr. LONG. Yes.

Mr. JAVITS. This is important to me. I have always fought against the interest equalization tax on the ground it represents a protectionist device. However, we have a balance-of-payments problem which is now congealed around the interest equalization tax.

I understand the difficulties of the administration in going along with people such as me.

Now, a certain background has been built up in utilization of the tax, based on the fact I think it was unwise taxation and unwise for our country to take in view of the fact that this is the leading money capital of the world.

I wrote a letter to the Secretary of the Treasury on Saturday. He responded, not in terms of the 30-day extension, which is understandable, but the bill as it came from the House. He made the situation clear.

Mr. President, I ask unanimous consent that the exchange of correspondence I had with the Secretary of the Treasury may be printed in the RECORD.

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

AUGUST 9, 1969.

Re Interest Equalization Tax
Hon. DAVID M. KENNEDY,
Secretary,
U.S. Treasury Department
Washington, D.C.

DEAR MR. SECRETARY: The Interest Equalization Tax extension has been slated for floor consideration this coming week, and as you know, I have been following with some concern the reaction which this issue has had in the country. In April of this year, the Joint Economic Committee, on which I serve as senior Minority member, recommended that the IET be phased out as soon as practicable. The Majority noted that suspension of the IET would do little or no injury to the U.S. balance of payments, and that suspension is an appropriate way to begin the elimination of capital export restrictions which "are a direct contradiction of the most fundamental international economic policy objectives pursued by the United States since the end of World War II." The Minority noted the strong and valid arguments which exist for reconsidering the continuation of the IET, and pointed out that significant changes in the structure of capital markets in the United States and abroad have reduced the danger of the greatly increased outflows which the IET was designed to prevent.

These views accord with my prior opposition to the IET. In 1964 when the tax was being introduced, I proposed a "capital issues committee" for regulating foreign borrowings in the United States on a voluntary basis, which would have kept our capital outflows within manageable levels and preserved the traditional U.S. commitment to the freedom of private transactions. I have since expressed opposition to extension of the tax, and voted in favor of amendments which would have restricted its effect. I continue to have considerable doubts whether extension of the IET would be in the best interests of our country, in the absence of a concrete pledge to begin dismantling this web of capital restrictions at the earliest possible time.

I would therefore like to be apprised of:

(1) your intentions to use the powers which will be given the President to vary the tax rates, so that these rates—for both new and outstanding issues—will be as low as possible consistent with monetary stability;

(2) your actions and intentions which, in your continuing review of the nation's balance of payments program, may result in the gradual relaxation of the restrictions imposed by the Office of Foreign Direct Investment.

Please be assured that I have pledged my efforts to maintaining the strength of the dollar both at home and abroad, and am willing to support any measure which will effect this end and for which no reasonable alternative exists.

With best wishes, believe me,
Sincerely,

JACOB K. JAVITS.

THE SECRETARY OF THE TREASURY,
Washington, August 9, 1969.

Hon. JACOB K. JAVITS,
U.S. Senate,
Washington, D.C.

DEAR SENATOR JAVITS: In your letter to me today on the Interest Equalization Tax, you have emphasized the desirability of dismantling our direct balance of payments controls as soon as possible.

On April 4, 1969, President Nixon purposefully began just exactly this type of process consistent with our balance of payments position. At that time he announced a relaxation of the capital restrictions on foreign direct investment and lending abroad by bank and non-bank financial institutions. In addition, he pledged that "we shall find our solutions (to our economic problems) in the framework of freer trade and payments".

The President also pointed out that "The distortions created by more than three years of inflation cannot be corrected overnight. Nor can the dislocations resulting from a decade of balance-of-payments deficits be corrected in a short time." It was against the background of these actions, this pledge and an appreciation of the time it takes to restore balance to the economy that the President announced his intention to seek an extension of the Interest Equalization Tax. The extension legislation now before the Senate has a new provision which would provide to the President the authority to have a lower tax rate on outstanding issues from that which would pertain to new borrowings. The purpose of this provision is to provide that degree of flexibility which could be useful in reducing the reliance upon this tax as a selective restraint in our overall balance-of-payments program. For example, if this authority is employed, a low or no tax on new issues could permit greater access to our markets for new projects without according this benefit to outstanding issues.

The willingness of this Administration to vary the IET tax rate so that it will be as low as possible consistent with monetary stability was demonstrated first on April 4 when President Nixon reduced the IET rate from approximately one-and-one-quarter percent p.a. to three-quarters percent p.a. on debt securities. It is my intention to recommend to the President further use of this authority as circumstances permit, and in this regard I will be specially mindful of the opportunity to employ the additional flexibility we are now seeking from Congress which hopefully will advance the time when our reliance upon this tax can disappear.

It is also my intention to recommend as soon as possible in the light of balance-of-payments developments, additional steps in the gradual relaxation of the capital restrictions imposed under the foreign direct investment program.

I would emphasize the fundamental fact that our efforts to further reduce reliance upon selective restraints will be greatly facilitated by the evident effectiveness of our program of general restraints in reducing inflation, restoring better balance to our economy, and creating the conditions that make it possible to rebuild our trade position. As inflation is so much the cause of our international payments problem, it is vital that we pursue the fiscal-monetary restraint which will foster our balance growth.

Sincerely,

DAVID M. KENNEDY.

Mr. JAVITS. Mr. President, he made it clear there were certain undertakings which the Treasury was making with respect to the extension of this case.

In his letter he stated that it would provide the President the authority to have a lower tax rate on outstanding issues from that which would pertain to new borrowings. He stated:

> If this authority is employed, a low or no tax on new issues could permit greater access to our markets for new projects without according this benefit to outstanding issues.

I would like to point out that the outstanding issue question is complicated because of the reaching out by American banks and others to borrow, and that Americans would flock to get those issues if we took the interest equalization tax off.

I sympathize with the Secretary and what he is doing. I hope the committee considers the matter to make a different rate for new issues as contrasted with other issues.

The letter also stated:

> It is my intention to recommend to the President further use of this authority as circumstances permit, and in this regard I will be specially mindful of the opportunity to employ the additional flexibility we are now seeking from Congress which hopefully will advance the time when our reliance upon this tax can disappear.
>
> It is also my intention to recommend as soon as possible in the light of balance-of-payments developments, additional steps in the gradual relaxation of the capital restrictions imposed under the foreign direct investment program.

Mr. President, I have inserted this matter in the RECORD to call it to the atten-

tion of Senators so that it may be helpful as they get to the stage of discussion and to prepare for my testifying, which the Senator has consented to.

Otherwise, I have no objection.

Mr. LONG. I thank the Senator for his cooperation. This is a matter which will require the attention of the committee. It will require some study.

We feel there may be considerable outflow of capital and there may be serious problems if the interest equalization tax expires prior to the time we give the matter the consideration it deserves.

I thank the Senator.

The PRESIDING OFFICER. The question is on agreeing to the committee amendment.

The committee amendment was agreed to.

The PRESIDING OFFICER. The bill is open to further amendment.

If there be no further amendment to be proposed, the question is on the engrossment of the amendment and the third reading of the bill.

The amendment was ordered to be engrossed and the bill to be read a third time.

The bill was read the third time and passed.

The title was amended, so as to read: "An act to continue for a temporary period the existing suspension of duty on certain istle and the existing interest equalization tax."

Mr. LONG. Mr. President, I move that the vote by which the bill, as amended, was passed be reconsidered.

Mr. JAVITS. Mr. President, I move that the motion to reconsider be laid on the table.

The motion to lay on the table was agreed to.

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.

Mr. FULBRIGHT. Mr. President, a parliamentary inquiry.

The PRESIDING OFFICER. The Senator will state it.

Mr. FULBRIGHT. Mr. President, was the amendment which I offered printed in the RECORD?

The PRESIDING OFFICER. It was.

Mr. FULBRIGHT. The purpose of the amendment I have offered is very simple. It would reduce the authorization for research development, test, and evaluation, by a total of $45,614,000. This represents a 7-percent reduction in funds for the "military sciences" research category for each of the three Services and the Department of Defense, plus a 20-percent reduction in the authorization for the Defense Department's overseas research program, Project Agile, which is funded under a category labeled, "Other Equipment." The proposed reductions, by Service, are: Army $11,893,000; Navy $10,157,000; Air Force $9,989,000; and the Department of Defense $13,575,000. The purpose is to make a modest cutback in the Department's funding of Federal contract research centers—the so-called think tanks—other social and behavioral science research, foreign research, the Department's aid-to-education program, project Themis, and research on counterinsurgency matters. The intent is to have the $45 million reduction applied roughly as follows:

First, reduce the funding of the Federal Contract Research Centers by 10 percent, or $27 million;

Second, reduce research in foreign institutions—colleges and universities, primarily—by $2 million, or approximately one-third the program proposed;

Third, reduce counterinsurgency research, Project Agile, by 20 percent, or $5 million;

Fourth, cut other social science research, performed by organizations such as the Hudson Institute by the remaining $3 million; and

Fifth, hold the line on new starts under Project Themis by reducing the request by $8 million—a 25-percent reduction.

Let me discuss each of these items briefly.

Last year the Committee on Foreign Relations began an inquiry into research activities of the Department of Defense that relate to foreign policy matters. That study, and followup inquiries, have convinced me that there is a great waste of the taxpayers' money in this field, that the Federal contract research centers are not under effective control by the Congress, that the Department of Defense is financing activities which are not properly its responsibility, and that the thinking permeating much of this research is likely to lead to a larger and larger military establishment and more Vietnams.

The basic problem was put very well by Adm. Hyman G. Rickover in testimony before my committee last year. He said:

> There seems to me to be no effective check within the DOD on selection of research projects. I would suggest that only Congress can exert such a check on the DOD.
>
> The DOD has been able to involve itself in research having only the remotest relevance to the problems encountered by the armed services—matters at no previous time, nor anywhere else in the world deemed to lie within the province of the defense function—just because it has the money; it has more money than any other public agency. It gets more money because the word "defense" has in itself an element of urgency. Whatever is asked in its name somehow acquires the connotation of a life and death matter for the Nation.

I believe that Congress should exert the "check on the DOD" Admiral Rickover suggested, by putting the brakes on this research.

There are 16 Federal contract research centers, or "think tanks," which, in fiscal year 1969, received $263 million from the Department of Defense—a 4-percent increase over the previous year. According to information furnished our committee by the Department of Defense, these organizations, as a group, received 94 percent of their revenues from the Department of Defense last year; nine received 100 percent of their support from the Department of Defense. Only 1 percent of their revenues came from private sources. They are truly creatures of the Government, existing at the taxpayers' sufferance.

The committee's hearing record reveals little about the activities of these establishments and the Senate is, in effect, being asked to provide $277 million on faith for their operations—a 5-percent increase over last year. There is, in fact, no listing in the hearings of the amounts to be allocated to each.

Upon completion earlier this year of an investigation of certain aspects of research work by nonprofit institutions, the General Accounting Office was sufficiently disturbed by what it found to recommend a Presidential study of the entire subject. The lack of real control over the "think tanks" is evident from this exchange between the Senator from Missouri and Mr. Charles Poor, Acting Assistant Secretary of the Army, during the hearings on this bill:

> Senator SYMINGTON. That simply means you give a company so much money.
>
> Mr. POOR. That is correct.
>
> Senator SYMINGTON. But, of research, they don't know what they are going to find out. You give them so much money, and they do as much for that money as they say they can; is that right?
>
> Mr. POOR. That is essentially correct.
>
> (p. 525, Armed Services Committee hearings)

Under such an arrangement, we now have a situation typified by a cartoon in a recent issue of New Yorker magazine; Two strange looking natives are sitting on the ledge of a mountain peak and a bright-eyed American type, with briefcase and coat in hand, is eagerly climbing up to their perch. One native is saying to the other, "Don't look now, but here comes that pest from the Rand Corp. again."

Let us look at some of the projects being carried out by these Defense research organizations:

Here are a few planned by the Rand Corp., which last year received 93 percent of its total revenues from the Government, and in fiscal 1970 is slated to receive $24 million from the Defense Department:

1. "Military Representation in U.S. Missions": $40,000.

Official Description: Examine better methods of military representation in handling military aid in foreign countries, specifically India, Indonesia, Brazil, and Iran.

2. "Capabilities and Interests Study:" $150,000.

Official Description: An examination of U.S. interests, commitments, and capabilities required to meet future contingencies that threaten those interests.

Of course, one can easily see from these official statements that they are utterly meaningless, as that one is. One must get into these descriptions a little further.

Here is another:

3. "Project Management, Project Formulation, and Special Requests": $165,000.

Official Description: RAND management of ISA-sponsored research formulation, and exploration of research relevant to ISA interests, and special studies that may be required on short notice.

Let us look at the Center for Research in Social Systems—the originator of the infamous Project Camelot. Last year 100 percent of its revenue came from the Defense Department and it is to receive $2,100,000 next year for a payroll of 150 employees to carry out projects like these:

1. "Cultural Information and Analysis Center (CINFAC)": $750,000.

Official Description: An information storage retrieval, analysis facility providing information services concerning foreign areas and cultures to qualified requestors.

2. "Internal Security": $80,000.

Official Description: "Research on civil, paramilitary and military police operations related to overseas internal defense and development."

3. "U.S. Army Psychological Operations Requirements Worldwide": $25,000.

Official Description: "Estimation of worldwide requirements for U.S. Army PSYOPS in time frame 1970–1977."

I might point out that CRESS, of American University, and the Human Resources Research Office, of George Washington University, either have severed, or are in the process of severing, their university affiliations, as a result of student protests over their activities. Here are examples of the research proposed for the Human Resources Research Office, which is slated to receive $4,300,000 from the Army in fiscal 1970:

1. "Development and Evaluation of a Southeast Asian Cultural Assimulator": $23,000.

Official Description: "Compile assimulator and evaluate advantages and disadvantages of using this as a principal teaching vehicle."

2. "Program for the Development of Cultural Self-Awareness (COPE)": $115,000.

Official Description: Design, production, and evaluation of program of audio-visual instruction for development of cultural self-awareness.

That sounds very good and it may be a fine project for the Department of Health, Education, and Welfare, or someone else, but I submit this type of activity is scarcely relevant to the mission, or function, as it is called, of the Military Establishment or the military forces of this country.

Mr. PROXMIRE. Mr. President, will the Senator yield on that point?

Mr. FULBRIGHT. Yes; I yield.

Mr. PROXMIRE. The Senator is referring to the design, production, and evaluation of a program of audiovisual instruction for the development of cultural self-awareness, for which $113,000 has already been initiated and $115,000 is planned for the coming fiscal year. Is that correct?

Mr. FULBRIGHT. That is right.

Mr. PROXMIRE. I did not hear the remarks of the Senator from Arkansas, but I wonder if this is a program which should be carried on by the Defense Department; and if so, why? How can the Defense Department use this for defending this country?

Mr. FULBRIGHT. The remarks I made are exactly to that effect. Perhaps the Senator did not hear them. I said that while the project may be justified for some other agency of the Government, I cannot, for the life of me, see its relevance to what I believe the mission of the Defense Department to be.

I have a further comment on that project, if the Senator would like to hear it. This is the Defense Department explanation. It is dated July 31, 1969:

The objective of this Human Resources Research Office research effort is to design, produce, and evaluate a program of audiovisual instruction for the development of cultural self-awareness, (i.e., awareness of how a person's own thought processes and actions are influenced by his cultural background). COPE—

COPE is the code name for this project—

attempts to make Army personnel understand the influence of the American way of life on their own attitudes and actions in order to gain deeper insight into those of their foreign counterparts, thereby increasing the effectiveness of officers serving in U.S. military missions.

That may be a good project for some purpose, but it does seem to me to go very far afield from the objectives of a Military Establishment, which I thought was created to provide for the defenses of this country. This seems to me to be a form of rather sophisticated psychological instruction that would be worthy of Harvard or some other university.

Personally, I have great interest in the psychology of all of us. I am only questioning, with respect to most of these projects, whether it is a proper activity for the Department of Defense. I think it is an improper activity.

Mr. PROXMIRE. As I understand it, this program would not provide funds for assisting military officers in securing a greater cultural understanding, but would be a study as to how this would best be done. Is that correct?

Mr. FULBRIGHT. I think that is correct.

Mr. PROXMIRE. Would it be an attempt to study American culture, as to how one can best inculcate values into the hearts and minds of American officers?

Mr. FULBRIGHT. It would seem so; how they can be influenced. Then there would be other activities to attempt to apply what had been learned in research projects. The military, as the Senator knows, conducts very large operations in the exchange of officers with foreign countries, for example. That program is far larger than the civilian exchange program. It involves, I think, some $70-odd million. The last time I looked at it, it was more than twice the size of the civilian exchange program under the Department of State.

In that military program, I would assume they would attempt to apply whatever they had learned of the psychological aspects of the effect of one's environment upon one's attitude. That may help influence their attitude.

I simply question very seriously that this is the kind of activity our Military Establishment ought to be engaged in.

Mr. PROXMIRE. I am wondering just how and when this information could be used. Could it be used in officers' candidate school? Is it to be used in officers' refresher courses? In what way would that information be used in inculcate a better cultural understanding on the part of our military officers?

Mr. FULBRIGHT. We have educational programs of that kind, of course. The Army War College is a quite sophisticated and highly developed educational institution. It brings every type of officer there. If anything were learned, I can imagine the War College might utilize this information, but it does not strike me as quite within the realm of the Department of Defense to engage in this type of research.

If this is proper research, on that theory, I can think of hardly anything that is not within the scope of their activity. There are a number of educational projects which I do not say are not in themselves justifiable, under proper sponsorship; but I think the amount of money that is spent on this kind of research by the Defense Department is way out of proportion, and is not relevant to their mission.

Mr. PROXMIRE. I agree with the distinguished Senator. As he says, there are endless things they can do; and any amount of money could be justified if there were no limit to our resources and our funds.

But it would seem to me that to proceed on this kind of program, and some of the others that the Senator has listed and that are listed in the hearings, would be extremely hard to justify, in view of the limitation on funds with which we are all familiar. If we had to justify this in any other budget, the Senator can see how difficult or impossible to justify they would be.

Mr. FULBRIGHT. The Senator took the words out of my mouth. If these projects had been presented in some other agency's budget, they would have been gone over with a fine toothed comb; but because they are in the Defense Department and the word "defense" has a certain aura of urgency as well as an implication that our survival depends on it, anything goes.

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

Mr. FULBRIGHT. Or practically anything goes, in this research area. Yes; I yield to the distinguished chairman.

Mr. STENNIS. Mr. President, there is no record of any request that the Senator's commitee ever made to take over these matters. If the Senator will look at the bottom of page 47——

Mr. FULBRIGHT. Of the hearings?

Mr. STENNIS. Of the report. The Senate was forewarned. The report reads as follows:

The Committee believes measures should be taken to transfer a number of these efforts to other agencies for future fiscal years and that during the coming fiscal year the management of certain projects of interest to the Department of State, Arms Control and Disarmament Agency, the National Science Foundation, and other agencies should be taken over by those agencies particularly the Department of State.

If the Senator has an application list he wants to prepare, we would be glad to have him take any and all of them that he might wish. Then they would be scrutinized, and we would have the benefit of his opinion about them.

Mr. FULBRIGHT. As the Senator from Wisconsin pointed out, the trouble about that is getting the money. The only place you can get the money for these projects is in the Defense budget.

Mr. STENNIS. That would be up to the Senator.

Mr. FULBRIGHT. What I am trying to accomplish by this amendment—the Senator says it is up to me, and I hope he will support it—is that, if we can cut this money out of this bill, the money will not be spent under Defense Department auspices, but would then be available for other justifiable activities. My guess is that much of this work is probably duplicated by other research in private institutions, but I have not looked into that question.

Mr. STENNIS. We cannot settle it on guesses. We have something definite here to recommend; if the Senate does not want it, that is all right.

Mr. FULBRIGHT. All right.

Mr. STENNIS. But after the hearing and the proof, we decided it would not be well just to throw it all out, so that is why it is here, and we hope next year it will be elsewhere.

Mr. FULBRIGHT. As I said to the Senator, we are not proposing to throw it all out, either, but I believe the Senator's committee is proposing increases, on some of these matters, increases over the amount budgeted.

Mr. STENNIS. Well, the Senator from New Hampshire will speak on that.

Mr. FULBRIGHT. Basically, I object to the Defense Department going beyond its proper activities simply because it has such appeal and such effective representation in both Houses of Congress that its officials can get all the money they want for whatever they propose. That has been true up to now. I admire the Senator from Mississippi for his effectiveness, as well as his predecessor, the Senator from Georgia, and the Representative from South Carolina (Mr. RIVERS). They have been able to get the money for these projects. That is as great a compliment as I can pay the Senator in this particular area. I know of no other committee that has been so successful.

All we are trying to do is to review these projects and programs in a way similar to the way we look at others, and bring them into balance, using the words the Senator from Mississippi used earlier. But the effort should be to balance our national program, rather than just to reach a balance within the Pentagon, as if that were the only program we had in our Government.

The Military Establishment, as I said this morning—is able to get a lot of money because we have been in one war after another, and we have had crisis after crisis. It is easy to create the impression that we are about to be overwhelmed by either the Chinese, the Russians, or perhaps the Biafrans, or Nigerians, or perhaps the Biafrans or Nigerians.

I do not think that is a good enough reason, but that is the only reason. I think the fact that the committee itself recommends some activities be transferred is good; but they do not recommend that we take the money along with it.

However, even if they do transfer them I still think there is a grave question whether, in times like the present, we ought to be engaging in a proliferation of research activities that have no immediate usefulness. Research is fine, and pure research is fine in certain circumstances, but we are in such difficult and straitened financial circumstances at the moment that I think we ought to cut back on some of these things.

I yield to the Senator from New Jersey.

Mr. CASE. Mr. President, the point of limited resources is a very important point. I think of equal importance, if the facts justify it, is the criticism of this practice based upon its tendency to give the Defense Department and the Defense Department planners a monopoly on intellectual opinion in the country, or at least an important segment of it—for example, the behavioral sciences, just as one, a field in which there are not enormous numbers of people, and in which it might be very possible to set a trend in research, in opinion, and then in opinion forming.

I am not suggesting a conscious effort to mold American opinion in this fashion, but the effect, it seems to me, is very likely to be the lessening of independent scrutiny by independent academicians, because there are not any more, or at least not sufficient numbers, because so many of them are tied in with the research sponsored by the Defense Department into many things which are probably in themselves very useful, but have very little bearing on the direct needs of the Department, properly conceived, and which have this insidious long-term effect.

Is that a possibility?

Mr. FULBRIGHT. I agree with the Senator. He has expressed very well, I think, one of the major considerations. We do not wish to turn this country into a militaristic state. We still believe it should be primarily a civilian state, with the Military Establishment supporting it. Continuing year after year with this sort of project will, I believe, have the tendency the Senator has mentioned.

I may say, in addition, that there has been considerable protest about this tendency during the past year. A delegation of students and professors from the Massachusetts Institute of Technology called upon me for advice about what their proper attitude should be with relation to the military activities in their university. This is a complicated matter. They were very proud of their university. They did not wish to have it known simply as a military agency, as a military department. That does not mean that they do not appreciate the work of the military or that they do not respect the uniform or are in some way critical of the military as such. That is quite wrong. That is not so.

As has often been pointed out, the Director of Research of the Defense Department and the men who are in that group and who really developed these projects, are not military men. Mr. John Foster is not a military man. He is a scientist. He is an energetic man, a physicist, whose training was in the laboratory. He has unlimited imagination, and he thinks of these things.

But the secret of proliferation is the availability of money. What we can do is to help to restrain that aspect.

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

Mr. FULBRIGHT. I yield.

Mr. CASE. The Senator has put his finger on the key point. I agree that this is our responsibility. If we do not assume it, as in all the other major policy matters brought up by the bill, nobody else will.

Mr. FULBRIGHT. Nobody.

Mr. CASE. This is not a criticism of the standing committees of the Senate, specifically not of the Committee on Armed Services. The Committee on Armed Services cannot do this kind of job. No single committee of Congress can. This is the kind of thing that happens once every 6, 8, or 10 years. It happens more or less spontaneously because we sense the need to do it. The whole Senate is involved and the Senator from Arkansas is performing a most useful function in his talk on this particular subject.

Coming back to his specific amendment, it is a most undesirable situation in which anyone man in the military—and this in no way reflects on Dr. Foster who, I am sure, is an excellent man—should be the person to whom one goes if he needs money for research. This in itself—the hope of this kind of thing, as well as its actual culmination or realization—has an inhibiting effect upon the academic community of the country, it seems to me.

Mr. FULBRIGHT. That is correct.

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

Mr. FULBRIGHT. Yes, I yield to the distinguished Senator from New Hampshire.

Mr. McINTYRE. When the Senator first digressed to talk about the project he had in mind, I did not quite understand him. Is it the audiovisual project that he is belaboring?

Mr. FULBRIGHT. Mr. President, I am not belaboring it. I am discussing it. It is called the Program for the Development of Cultural Self-Awareness.

Mr. McINTYRE. Mr. President, I will be very brief. When the Armed Services Committee got into the projects concerning three very important areas—human performance, manpower selection and training, and the human factors involved—we found a great deal of sense in the projects and the plans. And, strange as it may seem, in many instances the decisions that were reached on these projects and the applications of the lessons learned were great money savers.

When we consider that we have 3.5

million Americans in uniform, when we conceive of the fact that there is a turnover of some 29 percent, when we consider the complexity of modern weapons, and when we think of what we can achieve when we are trying to come up with 100 or 1,000 radar operators, by giving the people who are applying for the positions a moderate test we can make certain that the ones undergoing the training would be more likely to be successful than if there were a hit-and-miss program.

I point out that we do have some areas that have been cut. However, when we came to the area of human performance and the areas of training and manpower selection, we found these programs to make a lot of sense.

We will be able to go along with some of the others that the committee has already agreed to tone down. However, in this area it was agreed that it was good work and should be continued. That is funded at the level, I believe, of $35 million.

Mr. FULBRIGHT. Mr. President, I can understand that if it is the only opportunity that a country has. Maybe eventually, if we consider the present policy, the only opportunity for a decent education will be in the armed services. But I had always assumed, and still hope, that in our country, which professes to be a democratic, constitutional, republican system, the best training of people is to be obtained in public or private schools.

Most of the 3.5 million men that the Senator mentioned are not professional soldiers. Most of them are nonprofessional soldiers, and I did not assume it was the function of the Army and the military to take these raw recruits and give them all kinds of education. They are assumed to have obtained a basic education in civilian life.

If we are going to go all the way to a military state, the Senator is correct. They ought to have the best possible educational opportunities, audio, visual, and every kind of education, and the military should take over the schools.

My point, and I think the point of the Senator from New Jersey, is that we think the Army and military affairs have a rather limited function—to defend the country with the manpower available, plus the professionals who are trained in West Point.

We are not saying that it may not be proper to have a program of psychological indoctrination at West Point or Annapolis for the officers. However, this is a research project. It is one that I would call pure research. It does not seem to be an example of what the Military Establishment should be doing unless we have a Military Establishment as the dominant influence within the country.

Mr. McINTYRE. Mr. President, I think the Senator from Arkansas has made it very plain already in his remarks that there should be a reduction of spending by the military in general. I think that across the board the Senators share this feeling. The committee is going to come in with a reduction of very nearly $2 billion.

Mr. President, I agree with the Senator. We do not want America to become a military state. I do not think it ever will become a military state. However, I would not want overlooked the fact that one of the greatest services the armed services perform is giving occupational training to high school dropouts who have come into the service and sending them back after 3 years into his community. This does not apply just to the present time, in the Vietnamese situation. The armed services send the men back into their communities able to win gainful occupation.

I agree that we do not want the military to take over the education field. However, the military has done a fine job in training and educating many of our youngsters today.

Mr. FULBRIGHT. Mr. President, I have heard that said. If they cannot get the education in any other way, I suppose that is a good way to get it.

I am not sure—and only time will tell—whether that training is associated with other training which will, in effect, mean that our country will continue to follow policies of which I disapprove—policies of intervention around the world and the policy with which I often associate the former Secretary of State: that it is our duty to intervene and keep the peace around the world all by ourselves.

In my view, that is contrary to what I thought our policy was. We get into very deep foreign policy matters there.

I know that one of the fallouts of much of the military training will be a sense of discipline and, as the Senator said, the education of some of the dropouts. However, the great mass of the soldiers are not dropouts.

I would assume that the great mass of them, by far the majority of them, are the normal, best young men of our country who have gone to the best schools we have. And they have had what we will call a normal and successful education in their schools. They go to serve in the armed services for a limited period of time.

Nobody is complaining about that now. My complaint has never been leveled at the Army or the military as such. My complaint has always gone to the policies of the civilian policymakers of our Government in creating a situation like Vietnam.

However, that is all we hear. I think we are trying, as the Senator said, to bring some restraint into the military budgetary matters.

This is a relative matter. No one wants to cut out our armed services. We spend a lot more money now on the military than does any other country in the world, including Russia. And we spend a very high percentage of our national budget, perhaps 40 or 50 percent.

It goes up so fast that I cannot follow it. However, $80 billion is what is proposed to be spent. This amounts to about 60 percent of the total budget when social security and all the other trust funds are not included.

Mr. McINTYRE. I thank the Senator from Arkansas for yielding to me.

Mr. FULBRIGHT. Another research center is the Research and Analysis Corporation, budgeted to receive $10,800,000 to support 587 employees. Here is a sample of its projects to be paid for under this authorization bill:

1. "Strategic Analysis of Europe-1969": $128,000.

Official Description: Includes studies of French foreign policy, European trade prospects, development of Siberia, and Soviet-Japanese trade.

2. "Strategic Analyses of Subsaharan Africa-1969": $74,000.

Official Description: Includes studies of U.S. strategic interests, environmental trends, and U.S. policies and programs.

A study of French foreign policy, European trade prospects, development of Siberia, and Soviet-Japanese trade—it would strike me that if this is justified at all, or if we need it, this certainly would be for the Department of State and/or the Department of Commerce. Why is this in the Department of Defense?

Studies of French foreign policy—well, perhaps it can be argued that the officers in the Department of Defense should have knowledge of French foreign policy. But studies or analyses of French foreign policy would necessarily, I would think, take place in the Department of State—unless the Department of State has gone so far that it is nothing but a small bureau within the Department of Defense.

I confess that the revelation to me just recently that the agreement signed by the prime minister of Thailand was not in the custody of the Department of State but in the Department of Defense did shock me a bit, as to the relative significance of the Department of State and the Department of Defense.

But I submit that this kind of study is not appropriate for the Department of Defense.

The list could go on indefinitely. Congress should make a start toward bringing the operations of these organizations under more effective control. The Committee on Armed Services is to be commended for putting a limit of $45,000 on salaries for research center officers. It is a step in the right direction, but much more needs to be done. And a reduction in funds, I propose, is the best way to go about it. The salary of the head of one of these research centers was $90,000 last year, when we discussed this matter on the floor of the Senate.

All Defense-financed foreign affairs research is not done by the "think tanks," by any means. The "think tanks" I mentioned are the research centers, of which I believe there are 16. Much of it is carried out by universities, other private research organizations, and even by military hardware manufacturers. The Hudson Institute, for example, received some 80 percent of its funds from the Defense Department in the last 2 years, according to testimony before the Foreign Relations Committee by a former institute president, Dr. Donald G. Brennan. Yet, it is not classified as a Federal contract research center. This is the organization which the General Accounting Office last year found had charged the Defense Department $45,000 to $52,000 per man-year for three research projects which turned out to be virtually worthless. Recent news reports

indicate that the institute's latest contribution to the debate over Vietnam strategy is a plan which involves building a moat around Saigon. I ask unanimous consent that an article on this plan, published in the June 27 issue of the New York Times be printed in the RECORD at the end of my remarks.

That reminds me, I think they also had a plan not long ago to create a great lake in the middle of South America in order to provide communication between all the countries of South America. They were going to dam up the Amazon and have a lake that, I presume, would cover a large part of Latin America. I understand that it did not appeal to the Latin Americans.

Not long ago, Douglas Aircraft Corp. was paid $89,500 to do a study for the Army, called "Pax Americana," which concluded, among other things, that

> While the United States is not an imperialistic nation she exhibits many of the characteristics of past imperiums and in fact has acquired imperial responsibilities.

After trying, without success, to get the Defense Department to declassify the study, it developed that Douglas has printed the same study in unclassified form, for its own promotional purposes. It has gone on to do other research of this nature and recently completed a study for the Air Force, laying out scenarios for several possible conflict situations in which the United States might become involved, and spelling out the Air Force role in the peacekeeping eras that would follow these wars.

The principal Defense Department program of overseas research is project Agile, a series of highly classified projects relating to Vietnam and potential Vietnams. Over $25 millon is being requested for this program in 1970. I do not question the projects relating to Vietnam, no matter how farfetched they may appear. If they help save one American life, well and good. But I do question the millions to be spent on projects involving other countries where the research is more likely to lead to American involvement in disputes which are none of our business. Unfortunately, the Senate cannot debate these projects on their merits since all information concerning this program is classified.

All too many of the studies listed in the justification data for project Agile and similar research indicate that the Pentagon planners have not learned any lessons from Vietnam, but that they are busily engaged in blueprinting strategies where our military will play the key role in trying to maintain order in a disorderly world. Lt. Gen. Betts, Chief of Army Research and Development, when asked about the Army's research involving foreign areas said:

> We have a continuing need to build up a library of information that can be available to our military planners for any country in the world into which we might have to go.

That, I submit, is very reminiscent of statements which we used to hear from the Department of State.

So far, the Army has paid $541,000 for 27 of these guides to countries where it "might have to go." Some of those countries are Afghanistan, Brazil, Colombia, Congo, Ghana, Iraq, Lebanon, Pakistan, Syria, and Venezuela; a varied list of possible involvements.

I may say that in the hearing the other day on foreign aid, I requested a representative of the Defense Department to supply the committee with any of these secret agreements which might involve our having to go into any of these countries or any other country. So far, I have not received any; but they have been put on notice that we are interested in them.

In May, I asked the Department of Defense for a number of a research reports, selected from the list of projects submitted to the Committee on Armed Services as justification for the 1970 budget request. I want to assure my colleagues that the titles listed on pages 2209 to 2219 of the committee hearings, although often intriguing, do not give the full flavor of this research program. Only a reading of the actual reports filed reveals the type of information the Defense Department is getting for its money. For example, a project entitled simply "Ideology and Behavior," had this official description:

> To provide empirically derived conclusions about ideological movements which support insurgency.

But the report filed on this project—furnished to me by the Defense Department—bear the following titles:

First. "The Attaturk Revolution in Turkey."

Second. "Gandhi, Non-Violence, and the Struggle for Indian Independence."

Third. "The Sinhalese Buddhist Revolution of Ceylon."

Fourth. "The Egyptian Revolution, Nasserism, and Islam."

Fifth. "Militant Hindu Nationalism: The Early Phase."

I must submit, Mr. President, it is incredible that we would spend money at this late date in the military department in studying the revolution in Turkey, which took place a long time ago. Mr. Attaturk was a very great patriot for his country. However, members of the Armed Services do not have to have benefits——

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

Mr. FULBRIGHT. I yield.

Mr. McINTYRE. I heard the Senator enumerate a number of studies. Is the Senator contending those are studies that are going to be performed with money authorized for fiscal year 1970, or is the Senator going back 4 or 5 years to dig up horrible examples? Is this for the fiscal year 1970 authorization?

Mr. FULBRIGHT. No. One cannot find out about 1970. We can only deal with reports that have been completed. This is a recent one. The study is not that old.

Mr. McINTYRE. It is not in fiscal year 1970?

Mr. FULBRIGHT. That is correct. They have us over a barrel, to begin with. So much is classified, such as the PAX Americana report. It was declassified by the Douglas Co.

I am talking now about activities in recent years, but not necessarily projects for 1970.

Mr. McINTYRE. The Senator spoke on the subject of military research in foreign institutions, colleges, and universities. Is that correct? Is that the area the Senator was talking about?

Mr. FULBRIGHT. Yes. In part.

Mr. McINTYRE. That is a part of the Senator's amendment?

Mr. FULBRIGHT. Yes. This is only a part of the purpose of my amendment.

Mr. McINTYRE. This is what?

Mr. FULBRIGHT. I have been talking primarily about the 16 research centers until now. The work I just listed is done in universities. The one I mentioned a moment ago, "Militant Hindu Nationalism," is an example of this research. The project started in 1966. It is supposed to run until the year ending 1971.

I started this particular passage by referring to universities and private institutions. We have already covered the think tanks.

Mr. PROXMIRE. Mr. President, will the Senator from Arkansas yield?

Mr. FULBRIGHT. I yield.

Mr. PROXMIRE. I should like to support the distinguished Senator from Arkansas and call the attention of the Senate to the difference between the amounts provided for many years to the National Science Foundation on the one hand for this kind of research, and the amounts provided for the Department of Defense.

I hold in my hand a table which shows Federal obligations for research, total Defense Department and National Science Foundation, fiscal years 1956 through 1959, which shows, for example, in the latest year, 1969, that the Department of Defense had $1,658,000,000 for research in these areas and the National Science Foundation had only $280 million.

Mr. FULBRIGHT. Will the Senator say that again, please?

Mr. PROXMIRE. The Department of Defense had, in 1969, $1,658,000,000 as compared to only $280 million for the National Science Foundation.

Mr. FULBRIGHT. For what purpose?

Mr. PROXMIRE. For obligations for basic applied research. I think that this makes the case clear. The problem is that whereas we have established a Science Foundation for the purpose of making the inquiries and making this research on a scientific basis, in the interest of science, on behalf of all agencies of Government, we provide the Defense Department with six to seven times as much as we provide for the National Science Foundation.

Mr. McINTYRE. Mr. President, will the Senator from Arkansas yield without losing his right to the floor, so that I may ask a question of the Senator from Wisconsin?

Mr. FULBRIGHT. I yield, with that understanding.

Mr. McINTYRE. The figures the Senator from Wisconsin has just stated, I assume correctly, were about $1.4 billion, in fiscal year 1969, was it?

Mr. PROXMIRE. $1.658 billion.

Mr. McINTYRE. The Senator says this was for research and applied, what?

Mr. PROXMIRE. Basic and applied research.

Mr. McINTYRE. I want to point out that in the Department of Defense when research is done, it covers testing and evaluation development as well as exploratory development, engineering development, and advance development. It all comes under the broad category of testing and evaluation.

Mr. PROXMIRE. Testing and evaluation development is not included in this figure. This is information which was procured from the Department of Defense itself, with the clear understanding, expressly on their part, that testing and evaluation would not be included.

Mr. McINTYRE. I hasten to say that something must be wrong with the Senator's figures because fiscal year 1970 shows a figure for research, so far as the Department of Defense is concerned, of $600 million. It seems hardly likely that in the last year, fiscal 1969, Department of Defense research, applied or otherwise, as the Senator says, went to a figure of $1,658 million.

I think the comparison should be research.

Mr. PROXMIRE. I have three other tables—the second category of Federal obligations and for basic research alone—total Defense and National Science Foundation. For Defense, $320 million; for National Science Foundation, $274 million. Again Defense had more, not so disproportionate but substantially more for basic requirements than the National Science Foundation had.

The third table shows Federal obligations for research by agency and performer. Total Defense and National Science Foundation. This includes universities and colleges. It includes FFRDS, administration by universities and colleges that are administered by nonprofit foundations. It shows in every category that the Department of Defense had substantially more than the National Science Foundation.

Mr. MURPHY. Mr. President, will the Senator from Arkansas yield to me, so that I may be permitted to ask a question of the Senator from Wisconsin?

Mr. FULBRIGHT. I yield.

Mr. MURPHY. It is my understanding that the National Science Foundation reaches out into all areas of science where research and development is being carried on, keeps current on all of these matters and brings them together. It makes studies but is not involved to the same degree as is the Department of Defense in research and development on particular, or exact systems, let us say, that they believe they need.

Mr. PROXMIRE. May I say to the distinguished Senator from California that what I am talking about here is the fact that the National Science Foundation would not itself engage in this research, but would commission universities and nonprofit institutions to do it. The Senator knows that in California, Wisconsin, and most States the National Science Foundation has such programs.

Mr. MURPHY. I was merely attempting to point out that the need and conditions under which the Department of Defense operates I do not think would be similar to those under which the National Science Foundation operates, which might very well be a proper reflection of the difference in the amounts of money needed or provided. It is a case of comparing apples and oranges again.

Mr. PROXMIRE. With regard to nonprofit institutions, the National Science Foundation was funded only $244,000 last year, as compared with $26,886,000 for the Department of Defense. So here is a discrepancy of more than 100 to 1—$26,886,000 for the Department of Defense as compared with $244,000 for the National Science Foundation.

Mr. MURPHY. Here again an entirely different game is going on. I expect tomorrow to make extended remarks on some of the nonprofit foundations, the reasons for their existence, their objectives, the way they operate. We have a couple of them in my State, and over the years I have had the good fortune to go to them and watch their operations and learn what they are doing. I think there is a reason for that great difference.

I thank the Senator for yielding.

Mr. PROXMIRE. I thank the distinguished Senator from California.

Mr. President, I conclude by saying that tables 4, 5, and 6 bear out in detail and document the point the Senator made.

I ask unanimous consent that, at the end of the remarks of the distinguished Senator from Arkansas, the tables may be inserted in the RECORD.

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

(See exhibit 1.)

Mr. PASTORE. Mr. President, will the Senator yield to me?

Mr. FULBRIGHT. I yield.

Mr. PASTORE. We have just concluded hearings on the National Science Foundation for this year. The Foundation is asking for $500 million. The House cut that amount considerably. The Foundation is asking for a restoration of the amount cut. I would hope in the development tomorrow the fact as to whether there is any duplication here could be brought out. Is the Senator from Wisconsin intimating that possibly the Department of Defense is duplicating what the National Science Foundation is doing?

Mr. PROXMIRE. No. I appreciate the statement of the Senator from Rhode Island. I am trying to point out the disproportion between the amount that the Federal Government provides the National Science Foundation and the much greater amount it provides the Department of Defense for research. I do not contend there is any duplication.

Mr. FULBRIGHT. Mr. President, I want to take up the point raised by the Senator from New Hampshire about this particular project, how it was obsolete or out of date. Let me read the description. The description is:

> Provide empirically derived conclusions about ideological movements which support insurgency. It started in fiscal 1966 and is to end in 1971.

So it is not an obsolete project. That project is called "Ideology and Behavior." There are the subtitles which I read. I think there were five of them. One of them I particularly mentioned dealt with Ataturk. The University of Massachusetts is in charge of it. It is called "Religion and Revolution: A Study in Comparative Politics and Religion, Technical Report No. 6, August 3, 1968."

That is just 1 year ago. That is the subhead, with the overall project——

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

Mr. FULBRIGHT. Let me finish it first.

It says:

> Research supported by the advanced Research Projects Agency under order No. 883 and monitored by the Office of Naval Research, Group Psychology Branch, under contract NONR 3357(08), NR 177-907.

That is an example of what I mean when I say how far afield they go.

Mr. President, I yield to the distinguished majority leader with the understanding that the request he will make will come after this exchange and that I do not lose the floor.

AMENDMENT OF HIGHER EDUCATION ACT OF 1956—UNANIMOUS-CONSENT AGREEMENT

Mr. MANSFIELD. Mr. President, there seems to be some interest in the bill (S. 2721) to amend the Higher Education Act of 1965 to authorize Federal incentive payments to lenders with respect to insured student loans when necessary in the light of economic conditions, in order to assure that students will have reasonable access to such loans for financing their education.

After discussing this matter with the most interested people, I think, I ask unanimous consent that, at the conclusion of the prayer tomorrow—and the Senate will convene at 10 o'clock tomorrow morning—there be a time limitation of 1 hour on the banking amendment to be offered by the distinguished Senator from Colorado (Mr. DOMINICK).

Mr. JAVITS. Mr. President, may I identify it?

Mr. MANSFIELD. Yes.

Mr. JAVITS. The amendment deals with section 2(a)(6) of the bill, appearing on page 7, lines 11 through 17 inclusive.

Mr. MANSFIELD. I ask unanimous consent that there be a limitation of 1 hour on that amendment, the time to be equally divided between the majority and minority leaders, or whomever they may designate; one-half hour on other amendments, and 1 hour on the bill.

Mr. FULBRIGHT. Mr. President, reserving the right to object, earlier in the day I was informed that the Senator from Oregon (Mr. HATFIELD) wanted to speak. Has this request been cleared with the Senator from Oregon?

Mr. PROXMIRE. If the Senator will yield, it was cleared with him.

Mr. FULBRIGHT. The Senator from Wisconsin or someone else told me he wanted to speak in the morning. We were negotiating whether I was going to speak or whether he was today.

Mr. DIRKSEN. Mr. President, there was no order.

Mr. FULBRIGHT. I raised this ques-

tion because he discussed it with me. He did not delegate me to speak for him, although I thought he was owed that courtesy.

Mr. PROXMIRE. Mr. President, the Senator from Oregon expected to speak. He had a speech on peace through law, which relates directly to the bill, but I am quite sure he will be willing to speak directly after the vote.

Mr. FULBRIGHT. It does not make any difference to me.

Mr. STENNIS. Mr. President, reserving the right to object—and I do not object—let me ask the Senator from Arkansas if we can have an agreement now on a limitation of time with reference to his amendment. Would the Senator now entertain a unanimous-consent request along that line?

Mr. FULBRIGHT. Not until I finish my speech. I should have been through long before this. We passed three bills. Perhaps I should not yield so readily. I am too easy. I have not got through my speech and it is not a long one, only 20 pages. I could have finished it in 30 minutes if I had not been interrupted. The chairman of the Finance Committee interrupted me, and now there is this request, and there were two others. When I finish I shall be glad to talk.

The PRESIDING OFFICER. Is there objection to the unanimous-consent request of the majority leader? Without objection, the order is entered.

The unanimous-consent agreement, reduced to writing, is as follows:

Ordered, That, immediately after approval of the Journal on Tuesday, August 12, 1969, the Senate shall proceed to the consideration of the bill (S. 2721) to amend the Higher Educaiton Act of 1965 to authorize Federal incentive payments to lenders with respect to insured student loans when necessary, in the light of economic conditions, in order to assure that students will have reasonable access to such loans for financing their education, and that debate on the amendment to be proposed by the Senator from Colorado (Mr. DOMINICK) to Section 2 (a) (6), on page 7, beginning with line 11, shall be limited to one hour, to be equally divided and controlled by the majority and the minority leaders.

Provided further, That debate on all other amendments shall be limited to ½ hour, to be equally divided and controlled by the proponent of the amendment and the manager of the bill, or someone designated by him.

Ordered further, That debate on the bill shall be limited to one hour, to be equally divided and controlled by the majority and minority leaders.

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 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.

Mr. FULBRIGHT. Mr. President, without interruption, I would like to finish my speech. The Ataturk study is a fascinating one. I want to read some of the Ataturk study. This is the official summary:

SUMMARY

The Turkish Revolution led by Ataturk can be divided into two phases. During the first stage that began with Kemal's arrival in Anatolia in May 1919, religion and nationalism combined to provide the fervor and elan for a successful war of independence. The sovereignty of the Turkish nation was secured against foreign enemies and their domestic collaborators, and in October 1923 the Turkish republic was formally proclaimed. The second phase of this revolutionary upheaval lasted until Kemal's death in 1938 and involved a series of far-reaching political, legal and social reforms aimed at achieving the Westernization of Turkey. This program of radical reform deprived Islam of its political role and resulted in the construction and consolidation of a secular Turkish state. Both phases of this revolution had roots in the Ottoman period; in some ways the revolution of Ataturk was the culmination of a process of gradual reform that had begun well over one hundred years before the collapse of the Ottoman empire.

ABSTRACT

Beginning with a brief discussion of the decline and fall of the Ottoman Empire, the report analyzes the interplay between Ataturk and the forces of religious traditionalism in the Turkish revolution. Special attention is given to the role of religion in the struggle for national sovereignty that ended in 1923. The report concludes with a brief discussion of the position of Islam in contemporary Turkish society.

That is a current study, as current as any of them can be. It is a part of an ongoing project called "Ideology and Behavior."

This may be perfectly proper for the Union Theological Seminary, but I say it has no place in a defense-supported research project, which taxpayers pay for, usually at three times the amount it could be done for at Harvard, Yale, or the University of Arkansas. I think it is nonsense, frankly.

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

Mr. FULBRIGHT. I yield.

Mr. McINTYRE. All these programs seem to begin in fiscal year 1966 and terminate either in 1970 or 1971.

Mr. FULBRIGHT. This particular group does.

Mr. McINTYRE. The group the Senator has mentioned.

Mr. FULBRIGHT. That is right.

Mr. McINTYRE. He says they are current. I say we are here considering the fiscal year 1970 budget. It is also very difficult for me to know in what area of the social behavioral science research field he is involved, but I assume it must be policy planning. I have to take a wild guess at that. All he would say is, this includes your FCRC's and your universities.

The first thing I wish to point out is that what I was concerned with on the committee was the amount of programs and projects we have in effect during fiscal 1970 programs and projects that we are initiating and have underway.

For the Senator's information, we took $700,000 out of their $6.4 million request. We cut this budget 11 percent. The Senator's amendment, as I understand, proposes a cut of some $3 million.

This, as far as I can see, after a program has been as well scrubbed down as this one, would be so devastating as to bring it practically to a point of cessation.

Mr. FULBRIGHT. Programs of this kind ought to be ceased. That is the point I am making. I am not saying, "let us dispense with half of these." I have not read all of them, but I shall put the list in the RECORD at the conclusion of my remarks. They are descriptions of projects, and they ought to be ceased as a function of the Defense Department.

Mr. McINTYRE. What the Senator has done, of course, is pick out four or five, talking about Ataturk and Turkey, or some other things that had fancy names.

Mr. FULBRIGHT. No, those five are in one project.

Mr. McINTYRE. If the Senator will allow me to respond——

Mr. FULBRIGHT. Certainly.

Mr. McINTYRE. What he is doing is picking out four or five programs, singling them out for attention, and trying to cast innuendos about this very important part of the Defense Establishment.

Mr. FULBRIGHT. I certainly did not intend any innuendo. I intended to make a direct, flat statement that this is unjustified, unrelated, and ought to be stopped, as far as the Defense Department is concerned. What is the innuendo about that?

Mr. McINTYRE. The innuendo is that the Senator is going to put in the RECORD the list of the rest of the programs, but he is not going to read them out here.

Mr. FULBRIGHT. I will read them all, if the Senator prefers.

Mr. McINTYRE. I am ready to listen to them.

Mr. FULBRIGHT. The Senator is?

Mr. McINTYRE. Yes.

Mr. FULBRIGHT. Nobody else is. It will take a while to read them.

Mr. McINTYRE. We have heard about Ataturk. What else does the Senator have?

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

Mr. FULBRIGHT. Yes, I am happy to yield.

Mr. HART. I ask the Senator from New Hampshire, why should we get the last chapter on Ataturk? Why do we not stop where we are?

Mr. McINTYRE. I think the simple reason is that the vastness of this program of research gets to the point where, if we are not on the subcommittee which is looking into the matter, we do not have time to sit down and have the definitive story told us on every one of these programs. Is it all right for the Senator to come in and say, "Let us cut them all out"?

Mr. FULBRIGHT. The Senator is quite correct, and that is why I say he certainly should not take this as a criticism, at all.

Mr. McINTYRE. I do not.

Mr. FULBRIGHT. He certainly does not have time to look into these. These are activities that have no business being before the Committee on Armed Services. Nobody in the Committee on Armed Services has ever taken the time to look into them. Neither has the Bureau of the Budget. I asked Mr. Schultze, the Director of the Budget, whether he had looked over these projects. He said, "No." This was when he was the Director, last year. I asked him in open session, before the Committee on Finance, and that is what he told us.

If the Senator would like, I will read a few more.

Mr. McINTYRE. I think the Senator should read a few more. I do not know what he is talking about.

Mr. SYMINGTON. Mr. President, will the Senator yield to me at that point?

Mr. FULBRIGHT. I yield.

Mr. SYMINGTON. First, Mr. President, I commend the able Senator from New Hampshire for the superb work he did as chairman of the subcommittee, this year. I mean that with great sincerity. His subcommittee's effort and the report by the distinguished junior Senator from Nevada on technical airpower probably represent the finest work that has been done by this committee in a long time.

As I remember it, as a result of the work that was done by the able Senator from New Hampshire, in the taxpayers' interest, he has cut this budget by about $1 billion; is that not correct?

Mr. McINTYRE. That is correct; and on this particular program we have cut it back 11 percent.

Mr. SYMINGTON. As I understand it, what the Senator from Arkansas is saying, after his investigation, is that he would like to take an additional $45 million of this total budget, roughly; is that correct?

Mr. FULBRIGHT. That is correct. Spread over the various items. I stated it precisely in my opening comments.

Mr. SYMINGTON. So, therefore, what he is asking to take out of the research and development budget, after his study, is much less than one-half of 1 percent of what the able Senator from New Hampshire thought could be taken out, without affecting our national security.

I only mention that because I, too, was interested, a couple of years ago, in some of these problems. I believe they came up in a hearing of the Appropriations Committee, where there was a question about a considerable amount of money that was spent on a study of women divers in Korea. I questioned it, if the Senator remembers, and we were investigating why they did it. It turned out there was a pretty good reason: they dive in colder waters than divers in any other part of the world when they dive, I believe, for pearls.

I have not been present for most of this debate, but I think the Senator from New Hampshire has done a superb job in saving a billion dollars. We have been looking at these social sciences for a long time. If the Senator from Arkansas thinks he can add $45 million to that $1 billion, I would hope the facts could be dealt with on their merits, and not through any impingement on an already superb accomplishment.

Mr. McINTYRE. The difficulty is that the Senator from Arkansas comes in with some of these choice ones. All of a sudden, somebody asks, "Why are we studying why South Korean women can dive in cold water?"

The reason we studied this was that it apparently had little effect on their hearing. The actual facts support the study, but the question itself casts aspersions on all the rest of the program.

The committee on which the Senator from Missouri serves, as he knows, cut $700,000 out of this $6.4 million, and brought it down to $5.7 million. On top of that, the amendment of the Senator from Arkansas requests that we go further, and cut out another $3 million, bringing it down to $2.7 million. That is much too drastic, particularly in the face of the hard look we took at it.

Mr. FULBRIGHT. Mr. President, it depends on whether it is justified. If it is a big program that was proliferated without attention from anyone, then it ought to take a hard look.

Let me point out that this is not new with me. A year ago when the bill was being considered, I raised the question on the floor with the Senator from Mississippi.

The Senator from Mississippi will recall that we discussed the matter. And he said that he was going to look into it and have a study made. I congratulate him because he did so. All I say now is that I do not think it went far enough, in view of all of the overall circumstances of the government and the nature of the studies and the fact that the studies have no relevance whatever to military responsibility. That to me is the determining thing. I do not actually believe that anyone at this late date should be spending much money on looking into Ataturk's experience.

This has been studied from A to Z. Everyone knows about it.

The Senator said this is a peculiar one. I do not see the relevance of the "Sinhalese Buddhism Revolution of Ceylon," which is part of the same project.

It seems to me unrelated to military function.

Mr. McINTYRE. Is that part of it?

Mr. FULBRIGHT. This is one of the five parts of the "Ideology and Behavior" study.

If the Senator wants a different one, here is "Changing Roles of the Military in Developing Nations."

This is a completely different project. The contractor here is CRESS, which is the research center associated with American University. This one is dated February 1969. That is about as late as we can have.

It is entitled "The Chinese Warlord System: 1916 to 1928."

The author is Hsi-hseng Chi, assistant professor of political science at the University of North Carolina.

I will not read all of this just the foreword:

FOREWORD

This study was conducted under a program designed to encourage university interest in basic research in social science fields related to the responsibilities of the U.S. Army. The program is conducted under contract by The American University's Center for Research in Social Systems (CRESS), and CRESS in turn has entered into subcontracts supporting basic research in a number of major universities having a marked interest in one or more of these research fields.

The research program was formulated by CRESS in terms of broad subject areas within which research would be supported, with the scholars themselves selecting specific topics and research design and utilizing information normally available to academic and private individuals. Under the terms of the subcontract the authors are free to publish independently the results of such research.

In this study Hsi-sheng Chi describes the military aspects of the political contest for control of the central government in the context of the disorganized sociopolitical structure of China from 1916 to 1928. It was prepared at the University of Chicago's Center for Social Organization Studies under the supervision of Professor Morris Janowitz, principal social scientist for research conducted under subcontract between CRESS and the university.

The report is a useful corrective to the popular image of the Chinese warlords during this period of their greatest activity. The study points out that the warlords were not merely military men exploiting China's condition for private gain in their various domains, nor were they seeking to destroy or replace the central government in the classic pattern under which many Chinese dynasties have historically emerged.

To keep his study focused on the theme of the warlord system, the author chose not to deal with the activities of the incipient Chinese Communist Party during the 1916–1938 period.

I submit that kind of activity is unrelated to the Department of Defense. It is a kind of good will offering to various universities. I suppose, of course, that they would be appreciative of the Department of Defense and its good judgment.

That, as I say, is a different one. I have a lot of them. I do not think the Senator is interested in my reading them all.

The Senator will remember that my point is that these are not military-related investigations. They have nothing to do with the responsibility of the Department of Defense, so far as I am able to see.

I have not read all of the summaries.

Here is a long one in that same project on "Gandhi, Nonviolence and the Struggle for Indian Independence." It is a very interesting subject, but it has nothing to do, in my opinion, with the military department. And that is true of most of these.

I have a great variety of them here. I will have them printed in the RECORD at the conclusion of my remarks for people to read and determine their relevance to military responsibility.

I point out that I hope the Senator from New Hampshire does not take any of this as a reflection upon him or his case.

This has grown up over the past 25 years, just as a lot of this has, without any supervision. This is not the responsibility of the Senator from New Hampshire or of anyone else in particular.

It grew like Topsy. They had the money. There was a period during which we were so rich that we thought we could afford anything.

I confess to being a party to the dis-

tortion of our priorities. However, I now think that influence of the military in our Government has gone beyond all reason.

The Senator says that they cut this 11 percent. Is it not a fact that the budget had been increased over the past year's program by 5 percent?

Mr. McINTYRE. It was reduced by $500,000.

Mr. FULBRIGHT. Under what figure?

Mr. McINTYRE. In the policy plans, $6.9 million.

Mr. FULBRIGHT. I think for the last 2 preceding years the budget request at least had been increased.

I am interested in an exchange program. It has been cut 67 percent in Western Europe. It has been practically eliminated. It was only $56 million. And then it was $46 million. It is now $31 million. It is practically nothing.

But Department of Defense programs have gotten so big that they juggle around sums of $700 million or $500 million just as if it were a pittance.

Our Government loses its sense of perspective on military programs.

All I am trying to do is to bring this back into perspective. One way is to disassociate the Defense Department from sociological and ideological studies. They have nothing to do with it.

We could not do anything about the ABM, which we all grant to be defective, but it is at least a military program. These programs are not even military.

Mr. McINTYRE. Mr. President, will the Senator from Arkansas yield, so that I may answer his question?

Mr. FULBRIGHT. I yield to the Senator from New Hampshire.

Mr. McINTYRE. In fiscal 1969, the amount was $6.9 million. This was reduced to $6.41 million for fiscal year 1970. As I have said, that amount has already been reduced by the committee some $500,000, to make the amount about $5.9 million.

Mr. FULBRIGHT. The Senator is talking about two categories.

Mr. McINTYRE. I am talking about policy planning studies. I am trying to keep the Senator in one avenue without going to others.

Mr. FULBRIGHT. My bill relates to the total for 1970. In the total of the items for social and behavioral sciences and research studies there was an increase.

But the point I make is that we do not want to go off on the assumption that we are dealing only with a slight cut in a perfectly valid program. I am actually raising a question as to the justification for practically all of this program. I should like to have gone further than I did, but I comprised my principles in the hope that I could get something done toward redirecting the research activities of the Defense Department to defense matters and taking it out of unrelated matters.

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

Mr. FULBRIGHT. I yield to the chairman of the committee.

Mr. STENNIS. I appreciate the Senator's concern about this subject. I have already stated that our report suggests that we are going to undertake to transfer many of these items next year. In all sincerity, I propose to the Senator that he go through the hearings and pick out the items that he thinks should not be in the military section, and then of that group pick out the ones he thinks should come under the Department of State. If he will then join in an amendment taking them out of this bill, and if an authorization bill is required, he will have time in the Committee on Foreign Relations to hold hearings and purify the whole atmosphere. He can throw out the ones he does not want in this bill and then submit a definite report recommending an authorization.

Supplemental appropriation bills are coming along all the time. It is my privilege to be a member of the Committee on Appropriations. I will guarantee the Senator that I will fight to place in one of the supplemental appropriation bills any appropriations he may have approved in an authorization bill. That will get to the heart of the matter. It is the best way to have it properly considered.

I urge the Senator to consider the proposal seriously. I am satisfied that our committee will not be able fully to satisfy the viewpoint of the Senator from Arkansas. I say that with all deference to him, but here is a chance, really, to satisfy him with respect to items that relate to the State Department.

Mr. FULBRIGHT. I appreciate the Senator's comments.

First, I may say that I do not think a number of these should be transferred anywhere, if they are to be done at all. If they have any validity, they would be done by places such as Columbia, Harvard, and so forth. They have nothing to do with the State Department or the Defense Department. But since we are talking about a particular bill—well, I have described them as best I can. I do not see why there is any need for the State Department to pay money for research involving Ataturk government; I really do not.

Mr. STENNIS. I see that.

Mr. FULBRIGHT. I do not think that is valid.

I certainly will take under consideration the suggestion of the Senator from Mississippi. I think he genuinely would like to see this reform. Last year he told me that he would. I sense that he is sympathetic to the objective. Of course, I realize that once these things become imbedded in a great program, it is not easy to get them out. It is very difficult, indeed.

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

Mr. FULBRIGHT. We are dealing with such vast sums when we get into the Pentagon and this appropriation, compared with all the others, that it is hard to get back a sense of perspective.

We voted, a moment ago, $75 million just for what in political terms they call a slush fund, for no certain purpose; just a contingency fund. But the $31 million I mentioned a moment ago is for a program that has been going on 20 years, for 41 countries; and the cutback imposed means the death of about half of those programs.

I yield to the Senator from Michigan.

Mr. HART. Mr. President, I am sorry that the able chairman of the Committee on Armed Services temporarily has had to leave the Chamber.

Mr. FULBRIGHT. He said he had a telephone call.

Mr. HART. But while the Senator from New Hampshire is in the Chamber, permit me to make a comment that reinforces the Senator from Arkansas' expression of appreciation to the Senator from New Hampshire which he voiced a few minutes ago.

To get this matter into perspective, to figure out where we are and how far we have come, and then to take up the problem of how much further we have yet to go, I turn our minds back more than a year ago to the day when this bill was before the Senate in 1968. It was in April of 1968. The Senate had just enacted the surtax, with its direction that budgeted expenditures for that fiscal year be reduced by, I think, $6 billion. At that time, the report of the Committee on Armed Services accompanying the authorization bill reminded us that the Department of Defense had to share the burden of disciplining itself with respect to expenditures.

I recall sitting in the Chamber. The Senate had just acted, as I recall, on an agriculture bill to which a number of us had sought to attach some money to feed children during the summer, when schools were closed but stomachs still functioned.

Leafing through the report of this committee, a year ago in April, to the caption "Research, Development, Test, and Evaluation," we discovered that there was not any disciplining of the Pentagon on research and development proposed last year; rather, they proposed to increase it some $750 million, to close to a total of $8 billion.

I recall asking the able Senator from Mississippi, who was handling the bill, why the increase. He said, "Well, some of it was bookkeeping adjustment." The actual increase proposed to be authorized was only $508 million.

Mr. FULBRIGHT. A pittance.

Mr. HART. I offered an amendment at that time to hold the research and development figure at the then current level, which was somewhere between $7 and $8 billion. I am not sure precisely where it was.

The Senate—this indicates how far we have come—discussed that amendment for perhaps a couple of hours. I doubt that it was any longer. The Senator from Arkansas expressed a concern; others did. On a rollcall, the Senate rejected that amendment by three votes. So last year we were not able to hold the Defense Department to the then level of research and development spending authorized.

How far have we come? This year—and this goes to the contribution that the Senator from New Hampshire has made—the Committee on Armed Services itself has recommended a reduction of more than a billion dollars in research and development. That is progress in anybody's book.

Mr. FULBRIGHT. It certainly is.

Mr. HART. And it is largely a reflec-

tion of the leadership the Senator from New Hampshire took to try to get hold of this massive, surging—I guess that is a good way to describe seven and a half billion dollars that is running around the country for research purposes—area. He has done, indeed, a magnificent job.

Mr. FULBRIGHT. I agree with the Senator.

Mr. HART. He is able to cut a billion dollars where the Senate itself last year would not support our effort to maintain the then level.

So, first, we should understand the progress that has been made. I am thinking about the ABM vote, comparing it with the vote a year ago on research and development, which we lost by three votes. Even-Steven a few days ago on ABM. These defeats nonetheless have their long-term purpose.

Back to research and development: What is wrong with the effort now being made by the Senator from Arkansas, if in fact we can spot additional research and development which appropriately should not be charged to the Defense Department? An argument can be made as to whether somebody else should get the final chapter on Ataturk's government, not the Department of Defense. Why, if we can highlight the remaining research efforts which seem imprudent to authorize, should we not go ahead and do it? It, indeed, will be a very minor addition to the magnificent work of the Senator from New Hampshire, but it nonetheless will be some additional progress.

Mr. FULBRIGHT. I think the Senator has put it very well. I have said time and again that I do not mean any criticism of the Senator from New Hampshire—and the Senator from Mississippi, also.

Last year when I raised this matter—I confess that it was the first time I raised it—the Senator from Mississippi said, "I am going to look into it and make an effort." He did look into it. And he, with the Senator from New Hampshire, made a good effort.

I am trying to go further than that. Of course, we want to save the money, but I feel that to go into this area, for the military to do so, gives a wrong direction to our life. It gives a wrong impression to our university people, to our young people, and to other people of the militarization of the life of this country.

The Senator from Mississippi made a very moving statement this morning about our security.

I do not disagree with him about security. I only state that there is a lot more to security than simply military hardware. The health of our internal educational system, the health of our internal social system in all its aspects, our economy, all of it, are a part of it. A strong security stance cannot be maintained if justice is not done to the rest of our society. It is one entire ball of wax. It is not only defense. I think we have gone so far because of these recurrent crises in the foreign field involving military action that we have gotten our sense of perspective a little out of focus.

Here is one aspect of it that I do not think for a moment would harm our defense posture. I do not think the projects we have studied add one iota to the defense of this country. I think that is wrong.

I have said I have been guilty in the past of taking the attitude that our colleges and universities have been starved and needed to get money for the vast number of new students; that if the only way they could get it would be to take a handout from the Pentagon I would not complain too much. I have always supported Federal aid to education.

However, I have come to reconsider that approach for a variety of reasons. One of the main reasons is to get away from this attitude that the military has an undue influence in our universities. I have told about the visit of the students from MIT. Senators know about the riots. One aspect has been the fear on the part of students that the military dominated our society. I realize that the war has contributed to the situation. This is only one little segment of Defense activities I am talking about. It is not much we are asking.

As the Senator from Michigan said, "You have done a good job, but I think you can go further in these restricted areas." The amount is small. I hesitate when we deal with big sums.

I feel I am nit-picking when I ask for a cut of $45 million. On the other hand, the Senator from South Dakota and I would love to pick up $5 or $10 million to keep the exchange program alive. In that context it is a lot of money. To contemplate you could get that amount here for that program is beyond anyone's dream. Forty-five million dollars is a large sum of money, except with respect to the Pentagon, there it seems small.

I suppose people think I am nit-picking to save $45 million. But in addition to that I would like to get the Pentagon out of the business of subsidizing our liberal arts institutions. I used to think it would be a good idea because they were so poor they could use some help from the Defense Department. However, I feel the military has become too powerful in our entire society.

I am not trying to engage in commercialism, but I picked up Look magazine this week and most of it is devoted to the subject.

I would like to make a small contribution toward the rehabilitation of this country, and of returning to a humane society where the military has a place—but not the dominant place—in the Government.

I think this research program is an important area because much of it is in the academic field. What we do on programs like this will have much to do with the attitudes of this and future generations. That is the best explanation I can give.

Under the leadership of the Senator from New Hampshire we have made progress and I think we can make more progress.

I shall complete this part of my speech and insert in the RECORD the remainder of these projects. I might mention a few others in case anyone thinks that is the only one I have.

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

Mr. FULBRIGHT. I yield.

Mr. McINTYRE. Regarding the $700,000 cut that the committee recommended in this area against the $6.4 billion request, is it not possible that all those horrible examples may be the ones to go under the knife that the Department of Defense will cut out?

Mr. FULBRIGHT. I hope so.

I will describe a few of the others.

Another project, entitled "Social Change as a Result of Modernization," was designed, the description stated:

To determine most effective uses of DOD aid to developing nations so that conflict between traditional cultural values and pressures toward modernization are minimized.

The completed reports on this project are entitled:

1. "Institutional Obstacles to Industrial Development in Peru"
2. "Peruvian Managers Opinions on Problems of Industrialization"
3. "Some Advantages and Disadvantages of Small Scale Industry in a Highly Industrialized Economy"
4. "The Decline in Paternalism Among Peruvian and Japanese Laborers"
5. "Mutual Obligations Between Management and Workers in Peru"
6. "Some Organizational Adaptations to Labor Problems in Peru"

With respect to Peru it was no more than a couple of months ago, I believe, that the Peruvian Government invited our representatives to leave the country. Senators will recall the furor in Chile in connection with Camelot. I believe these activities contributed to the deterioration of our relations with these countries. These studies may have some intellectual value. I doubt that they are relevant to anything. We know that in Peru our relations recently hit an all-time low. Certainly research activities like this do not help the situation.

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

Mr. FULBRIGHT. I yield.

Mr. McINTYRE. That is an excellent study that the State Department might be interested in. It was in the area the chairman said he would like to transfer many of these programs. It might do the State Department good.

Mr. FULBRIGHT. I do not know what they have relevance to. I do not know what use the State Department would have of it, outside of a scholar writing a thesis for a Ph. D. Anything can have relevance to that.

After receiving a vast number of these completed research reports, I asked the Department of Defense to tell me how much each cost. After a month and a half of deliberation, the Department, in a letter of July 24 from Dr. Foster, finally told me that it did not know.

Any effort to isolate a cost figure for a given report would be arbitrary and probably would not represent the actual costs involved—

Dr. Foster's letter said, adding—

nor would a cost estimate represent a measure of the payoffs from the research.

I can well understand the Department's reluctance to put a price tag on, or try to assess the military benefits of,

a report like "The Ataturk Revolution in Turkey." How can the Senate, or the public, be expected to assess the value of this research when neither we nor the Department of Defense knows how much it costs? I ask unanimous consent to have the letter printed in the RECORD.

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

DIRECTOR OF DEFENSE RESEARCH AND ENGINEERING,
Washington, D.C., July 24, 1969.

Hon. J. W. FULBRIGHT,
Chairman, Committee on Foreign Relations, U.S. Senate, Washington, D.C.

DEAR MR. CHAIRMAN: This letter is in response to your request of June 10, 1969, for the costs of the individual research reports sent to you on 4 June 1969.

The reports which you received were produced from projects designed to provide a number of outputs of significance to DoD including: (1) a variety of technical reports and papers, in addition to a major final report covering the research and studies undertaken; (2) interchange between DoD officials and technical personnel in a position to lend an outside perspective to DoD problems; and (3) continued development of research results and capabilities relevant to DoD responsibilities. Funding of these projects is based on a total project cost, with such multiple outputs anticipated. Any effort to isolate a cost figure for a given report would be arbitrary and probably would not represent the actual costs involved. Nor would such a cost estimate represent a measure of the payoffs from the research.

In the case of projects not yet completed and for which only interim reports are available, significant results can be expected in the future. In the case of completed projects, the final report represents only a portion of the total output. For example, in one project funded over a period of 9 years, a total of 29 technical reports, 12 scientific journal publications, and significant contributions to a book were produced in addition to the final report which you received.

The total funding to date in the projects represented by the reports you requested was $11,530,408, covering a period of more than 15 years.

If you desire any further clarification on this matter, please let me know.

Sincerely,

G. L. TUCKER.
(For John S. Foster, Jr.)

Mr. FULBRIGHT. Mr. President, the proliferation of Defense-supported research in foreign areas is illustrated by what has taken place in Thailand. The research bibliography for Thailand is 63 pages long and lists 508 separate reports. Much of this research was really foreign aid and should have been charged as such. The General Accounting Office recently found that in a country in South Asia, whose name I cannot use because of the security classification put on by the Defense Department, the Department had undertaken to spend $4.2 million on nine social science research projects which the GAO believes should have been charged against foreign aid. I do not believe that the Department of Defense should dispense foreign aid through a research program.

Mr. McINTYRE. Is not the Senator talking about some past history? Are not these programs which were years ago?

Mr. FULBRIGHT. There is no way for me to foresee the future. All I can talk about is past history and what has been done. If I were a prophet and could tell the Senator what is going to happen next year, I would talk about it, but the Senator knows I can talk about only that which has happened.

Mr. McINTYRE. The Senator is talking in a foreign area, regarding security. This area is less than a $1 million figure. There is also less than a $1 million figure for Korea and Thailand. That is for fiscal 1970. What the Senator is talking about happened a year or two ago.

Mr. FULBRIGHT. I have a list in my hand right now. I am glad to show it to the Senator. It is secret. It concerns Project Agile. If the Senator will come over here, I can show it to him because it is against the law for me to read it into the record. It is a research project. I am not at liberty to talk about it.

Mr. McINTYRE. Not the Agile program.

Mr. FULBRIGHT. It is a current program. It is not past history. Here it is.

Mr. McINTYRE. The Agile program is a counterinsurgency study.

Mr. FULBRIGHT. It is called that. The GAO, as I told the Senator, says it looks like foreign aid. We can make a play on the words about it. If it were actually foreign aid—and that is what it is, at least the GAO thinks it is, and it strikes me that way too.

Mr. McINTYRE. If the funds are cut, this program will have to bear the brunt of that cut.

Mr. FULBRIGHT. I am glad to hear that, but if the Senator wishes to look at this specific thing I am questioning, it is right here. It is secret. It tells the situation and some of the things that we cannot mention the precise name of. I can assure the Senator that this is not dreamed up. As to the statement about Thailand, the Senator does not question that, I believe.

In the next fiscal year the Department of Defense proposes to spend $7,547,000 on research about foreign areas. Yet only $125,000 is budgeted for external research by the agency responsible for our Nation's foreign affairs, the Department of State. The entire budget for the State Department's Bureau of Intelligence and Research is only two-thirds the $6.2 million budgeted by the Defense Department for foreign policy research. It is obvious that the Department of Defense is involved in many research activities simply because it, and not the Federal agency with proper jurisdiction, has the money available. Although the Armed Services Committee has recommended that efforts be made to transfer some of this research to other agencies, particularly the Department of State, I believe it will find that much of this work is of no interest to other agencies when they must foot the bill.

Another aspect of the military research program which merits a drastic reduction is research carried out by foreign institutions, primarily colleges and universities. According to the Defense Department, 440 research projects are now underway in 44 foreign countries throughout the non-Communist world. The sum of $5.7 million is budgeted for foreign research in 1970 and a staff of 100 Defense Department employees is stationed abroad just to look after the program. There is trouble aplenty over military research being carried out in our educational institutions and there is no need to ask for the same kind of trouble in 44 other countries. A compelling need in our foreign affairs today is to make the American presence abroad less visible; we do not accomplish that by linking foreign universities to our Military Establishment.

Finally, I wish to mention a specific aspect of Defense Department research arrangements with American universities. Of the top 500 defense research contractors, 99 are educational institutions and the Defense Department's 1970 budget for university research would be increased by 20 percent over last year, to a total of $306 million. But I wish to discuss only one small part of that effort, Project Themis, the Department's program to build up the science departments, physical and social, of universities around the country which do not now do much research for the military. The budget request for Themis is $33 million, up 12 percent over 1969, and will support continuation of 92 projects at 52 universities and colleges, plus allowing initiation of an additional 25 projects. Admiral Rickover, in discussing this project last year said:

> Now it seems to be the most farfetched reasoning to conclude that it is the Department of Defense that must help develop these sciences and train these scientists. The result of a project like Themis is that there will be university professors who get additional money besides their university salaries—money given them by the Department of Defense and therefore to some extent beholden to the military. This strikes me as most undesirable.

Project Themis could be cut back drastically with no ill effects to the Nation's defense posture. The Department of Defense is not the proper agency to provide Federal aid to education.

Mr. President, our constituents are growing increasingly bitter over continued increases in taxes, waste in defense spending, and the lack of funds for urgent social needs. We have just passed a bill to extend the 10-percent war tax. I believe that we owe it to the taxpayers to eliminate all unnecessary spending and that these Department of Defense research activities should receive the same critical questioning they would receive if they were being financed by other Government agencies.

The committee has recommended an 8-percent cut in the military sciences item, the funding source for most of the programs I have discussed. This is but a slap on the wrist and I think that the circumstances call for a more meaningful reduction in nonessential research activities. I propose that the Senate cut this category by an additional 7 percent to, in effect, impose a 15-percent surtax on these programs, with the cuts to be allocated between the Federal contract research centers, particularly the nonphysical science activities of these organizations; other social and behavioral science work; foreign research; and

Project Themis. My amendment would also reduce by $5 million the funds for Project Agile, the overseas research which is funded under the "Other equipment" category.

It cannot be said that the amendment ties the hands of the Defense Department since each service will be left with considerable flexibility to distribute the cutback within these general areas. I might add that, under provisions of this bill, the Department of Defense will still have a $75 million emergency fund to play with, if the Senate's action today is held up in conference. This is still half again as much as was voted last year.

It is time that the Senate took a hard look at what the taxpayers' money is being spent for in the Defense research program. This amendment is but a small step—but it is a step in the right direction.

I urge the Senate to adopt it.

Mr. President, I ask unanimous consent that an article in the June 27 issue of the New York Times, entitled "Think Tank Offers Modified Policy For Vietnam," to which I referred in my comments, be printed in the RECORD; and in addition the summaries of a number of other recent research projects of the type I have been discussing.

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

"THINK TANK" OFFERS MODIFIED POLICY FOR VIETNAM

WASHINGTON, June 26—A proposal for a modified strategy in Vietnam, conceived by a "think tank," is circulating at high levels in the Nixon Administration.

The authors of the plan, at the Hudson Institute in Westchester County, N.Y., are said to maintain that it could cut American casualties to a handful, make the war "acceptable" in the United States and either increase chances for a peace settlement or offer a long-term chance of "winning" the war.

The proposal includes a reduction of American forces to 100,000 or 200,000 men by the middle of 1971, reliance only on volunteers, extension of the tour of duty to two years for each soldier and construction of new types of "death-belt barriers" around Saigon and along the Cambodian border to block infiltration. It also calls for new combat tactics.

Officials said that the institute's proposal had grown out of a series of studies in Vietnam financed by the Defense Department. The principal architect of the new approach is Herman Kahn, a witty, rotund physicist who made his reputation as a nuclear-war strategist.

BROAD RANGE OF STAFF

The Hudson Institute, situated at Croton-on-Hudson, is a small, independent organization that makes analytical studies for Government departments and private industry. Its staff includes physicists, economists, social scientists, mathematicians and former members of the diplomatic, intelligence and military services.

Administration officials who have attended briefings on the plan in recent weeks at the Pentagon. The State Department and the White House say it combines old and new ideas in a wide-ranging package that has "considerable appeal."

One official said that while is was unlikely the whole package would be carried out, some of the ideas were "being woven into the fabric of our strategy." He declined to say which ones.

Reached by telephone today, Mr. Kahn said it would be "inappropriate" for him to discuss the plan. But others who have heard his briefings filled in some details.

The Hudson plan would cut the present force of 540,000 American servicemen in Vietnam over the next two years to a strength of 100,000 to 200,000. Half of these would form a strategic reserve force of two to three combat divisions that would be pulled back to the coast. It would be available primarily to reinforce South Vietnamese troops if North Vietnam suddenly moved a large new invasion force into the country.

MORE SPECIAL FORCES URGED

The rest would be in tactical fighter squadrons, helicopter companies, long-range artillery batteries and logistics units. Their job would be to support the South Vietnamese military units that would take over the principal burden of fighting the war.

This breakdown is similar to the concept already tentatively accepted by the Administration in its long-range planning, officials say.

But the Hudson plan differs in some details. For example, it would double or triple American Special Forces units in Vietnam to build larger units of irregular Montagnard tribesmen to roam the desolate border regions of the country, harassing enemy troops. At present, the Administration is cutting down on Special Forces as more and more of the irregular units are turned over to South Vietnamese leadership.

The Hudson plan would deemphasize large-unit sweeps through enemy base camps, substituting many very small patrol actions lasting several days each. When a patrol found an enemy force or camp, it would call in air strikes and artillery fire.

Most large South Vietnamese military units would be drawn back toward the populous coastal plain. There they would provide a screen behind which local troops and a much enlarged police force would provide greater security by setting up thousands of night ambush positions to catch enemy guerrillas and agents trying to slip in or out of the populated regions and to root out the Vietcong's undercover agents in the villages.

Mobile reaction forces would be put on call around the clock to reinforce any position that was attacked by a sizable enemy force.

A novel part of the plan calls for construction of two deep fortified canals. One would run along the Cambodian border from the Gulf of Siam to a point west of Saigon where it would veer eastward and connect with a similar canal around the periphery of Saigon.

The earth dredged from the canals would form a bank 50 yards high. Two chainlink fences would be built, one on the canal side of the slope, the other along the top of the bank. The far bank of the canal would be fortified with barbed wire, minefields and electronic sensors. Heavy air strikes and artillery barrages would be brought down at any point where an attempt was made to breach the barrier.

SOCIAL CHANGE AS A RESULT OF MODERNIZATION

Description: To determine most effective uses of DOD aid to developing nations so that conflict between traditional cultural values and pressures toward modernization are minimized. Transfer to non-DOD agency under discussion.

Contractor: Kalamazoo College.
Fiscal Year: Start 1966; end 1970.
Cost: Unknown.

PERUVIAN MANAGERS' OPINIONS ON PROBLEMS OF INDUSTRIALIZATION

(By Stillman Bradfield, Kalamazoo College and Anibal Del Aguila Peru-Kalamazoo Project, 1967)

Abstract

This paper contains a brief analysis of part of a questionnaire administered to 100 graduates of an executive development program in Lima, Peru. They were employed in many different sectors of the economy, and half were at least part owners of the company where they worked. It focusses on managers' opinions as to the major problems they face on their jobs, and their opinions as to the major obstacles to industrial development in Peru. The most important single on-the-job problem they identified was in the area of finance, followed by production and sales. In general, they did not perceive accounting, industrial relations, administration and organization, or government regulations and controls, as important problem areas in their companies as compared with the first three mentioned. A closer examination of the problems within these areas indicated that they felt that most of them were outside their area of control, and most commonly outside the influence of the company.

SOCIAL CHANGE AS A RESULT OF MODERNIZATION

Description: To determine most effective uses of DOD aid to developing nations so that conflict between traditional cultural values and pressures toward modernization are minimized. Transfer to non-DOD agency under discussion.

Contractor: Kalamazoo College.
Fiscal Year: Start, 1966; End, 1970.
Cost: Unknown.

SOME ADVANTAGES AND DISADVANTAGES OF SMALL-SCALE INDUSTRY IN A HIGHLY INDUSTRIALIZED ECONOMY

(By Stillman Bradfield, Kalamazoo College, and Anibal Del Aguila, Peru-Kalamazoo Project, 1967)

This work was carried out under financial support from the Advanced Research Projects Agency, Department of Defense. The contract with Kalamazoo College is administered by the Group Psychology Branch of the Office of Naval Research.

Abstract

The survival of many of the small scale manufacturers in Kalamazoo is explained in terms of the special flexibilities and opportunities they possess which enable them to isolate themselves from the competition of larger producers, and occupy a special niche in the market. Close, personal contact between the owner-manager of a small manufacturing plant and his employees, suppliers and customers enable him to give special attention when required, and also to be able to obtain good technical advice when needed. Inefficiencies resulting from a lack of specialization of personnel are in part compensated for by the costs avoided when the manager fulfills all of these functions himself.

SOCIAL CHANGE AS A RESULT OF MODERNIZATION

Description: To determine most effective uses of DOD aid to developing nations so that conflict between traditional cultural values and pressures toward modernization are minimized. Transfer to non-DOD agency under discussion.

Contractor: Kalamazoo College.
Fiscal Year: Start, 1966; End, 1970.
Cost: Unknown.

THE DECLINE IN PATERNALISM AMONG PERUVIAN AND JAPANESE LABORERS

(By Stillman Bradfield, Kalamazoo College, 1968)

This work was carried out with financial support from the Advanced Research Projects Agency and The Wenner-Gren Foundation. The Contract with Kalamazoo College is administered by the Group Psychology Branch of the Office of Naval Research.

Abstract

This study compares questionnaire responses of Peruvian and Japanese laborers with respect to their opinions of their duties to their companies and their companies' obligations to them.

Workers in both countries see manage-

ment as obliged to continue employment of workers regardless of the economic situation. Similarly, workers in both countries expect paternalistic treatment by the company where this is to their economic benefit, in such areas as recreation, vacation, savings, housing, etc. However, Peruvians were generally more willing to return traditional loyalties to the company than were the Japanese.

In both countries the trend seems to be away from paternalism, especially on work issues. Workers of both countries are willing to continue recognizing traditional status obligations in off-job areas where there are no economic costs. Where the costs fall to the company, paternalistic treatment is still favored. Workers in both countries, but more so in Peru, are pressing for more participation in the decisions that affect how they carry out their jobs.

SOCIAL CHANGE AS A RESULT OF MODERNIZATION

Description: To determine most effective uses of DOD aid to developing nations so that conflict between traditional cultural values and pressures toward modernization are minimized. Transfer to non-DOD agency under discussion.

Contractor: Kalamazoo College.

Fiscal Year: Start, 1966; end, 1970.

Cost: Unknown

SOME ORGANIZATIONAL ADAPTATIONS TO LABOR PROBLEMS IN PERU

(By Stillman Bradfield, Kalamazoo College, 1969)

This work was carried out with financial support from the Advanced Research Projects Agency and the Wenner-Gren Foundation. The contract with Kalamazoo College is administered by the Group Psychology Branch of the Office of Naval Research.

Abstract

Owing primarily to rigidities in labor-management relations, a number of Peruvian industries are moving toward a system of subcontracting for major services. This passes on many of the labor relations' headaches to smaller companies, and leaves the principal company in a more flexible position, viz a viz changes in market demand for its product. The system also provides advantages for the subcontracting companies and quite possibly for the country as a whole. It provides a mechanism by which capital can be attracted into industry, the maximization of managerial resources in the country, and the development of new entrepreneurial talent.

SOCIAL CHANGE AS A RESULT OF MODERNIZATION

Description: To determine most effective uses of DOD aid to developing nations so that conflict between traditional cultural values and pressures toward modernization are minimized. Transfer to non-DOD agency under discussion.

Contractor: Kalamazoo College.

Fiscal Year: Start, 1966; End, 1970.

Cost: Unknown.

INSTITUTIONAL OBSTACLES TO INDUSTRIAL DEVELOPMENT IN PERU

(By Stillman Bradfield, Anibal Del Aguila, September 1966)

Introduction

The Peru-Kalamazoo Project is a two-year project doing a comparative study between similar industries producing the same product, on the same scale, with the same technology in both Peru and in Kalamazoo, Michigan to specify as nearly as possible the institutional obstacles to industrial development in Peru. We will be concerned with the following questions:

(1) To what extent do the same technology and scale of operation require the same work organization and behavior in two different countries at different stages of development?

(2) To what extent are work organization and behavior in industry affected by different sets of institutional conditions operating in the society at large?

(3) In what ways do these sets of institutional influences either promote or impede the industrial development of Peru?

This report is concerned with giving some of the results of our first two and a half months of field work. This has been an exploratory stage in which we have been concerned with visiting 25 industrial plants in 20 different industries, and talking with businessmen, engineers, and labor leaders as to the problems they face in carrying out their jobs. We also attended a number of conferences and meetings with engineers, businessmen, government officials, and labor leaders.

SOCIAL CHANGE AS A RESULTS OF MODERNIZATION

Description: To determine most effective uses of DOD aid to developing nations so that conflict between traditional cultural values and pressures toward modernization are minimized. Transfer to non-DOD agency under discussion.

Contractor: Kalamazoo College.

Fiscal Year: Start, 1966; end, 1970.

Cost: Unknown.

MUTUAL OBLIGATIONS BETWEEN MANAGEMENT AND WORKERS IN PERU

(By Stillman Bradfield, Kalamazoo College, 1968)

This work was carried out with financial support from the Advanced Research Projects Agency and the Wenner-Gren Foundation. The contract with Kalamazoo College is administered by the Group Psychology Branch of the Office of Naval Research.

Abstract

This paper compares questionnaire response of management and labor sectors in Peru on their opinions as to the duties of the worker and the company's obligation to the workers. There is surprising agreement between the management and labor groups interviewed on important issues, such as: that the incompetent worker should be fired; that impersonal, objective criteria should be used in selecting new workers; that reasonable working rules should be strictly enforced; that high quality norms should be insisted upon; and, that supervisors should try to settle the problems of workers if at all possible rather than pass them all on to higher management. Generally there was also agreement between both sectors that ability, rather than seniority, should be the determining criteria for wage increases.

IDEOLOGY AND BEHAVIOR

Description: Provide empirically derived conclusions about ideological movements which support insurgency. (Terminating; in final report stage.)

Contractor: University of Massachusetts.

Fiscal Year: Start, 1966; end, 1971.

Cost: Unknown.

THE ATATURK REVOLUTION IN TURKEY

(By Guenter Lewy, Department of Government, University of Massachusetts, Amherst; Religion and Revolution, a study in comparative politics and religion, technical report No. 6, August 1968)

(Research supported by the Advanced Research Projects Agency under Order number 883 and monitored by the Office of Naval Research, Group Psychology Branch, under contract Nonr-3357(08), NR 177-907.)

Summary

The Turkish Revolution led by Ataturk can be divided into two phases. During the first stage that began with Kemal's arrival in Anatolia in May 1919, religion and nationalism combined to provide the fervor and elan for a successful war of independence. The sovereignty of the Turkish nation was secured against foreign enemies and their domestic collaborators, and in October 1923 the Turkish republic was formally proclaimed. The second phase of this revolutionary upheaval lasted until Kemal's death in 1938 and involved a series of far-reaching political, legal and social reforms aimed at achieving the Westernization of Turkey. This program of radical reform deprived Islam of its political role and resulted in the construction and consolidation of a secular Turkish state. Both phases of this revolution had roots in the Ottoman period; in some ways the revolution of Ataturk was the culmination of a process of gradual reform that had begun well over one hundred years before the collapse of the Ottoman empire.

Abstract

Beginning with a brief discussion of the decline and fall of the Ottoman Empire, the report analyzes the interplay between Ataturk and the forces of religious traditionalism in the Turkish revolution. Special attention is given to the role of religion in the struggle for national sovereignty that ended in 1923. The report concludes with a brief discussion of the position of Islam in contemporary Turkish society.

IDEOLOGY AND BEHAVIOR

Description: Provide empirically derived conclusions about ideological movements which support insurgency. (Terminating; in final report stage.)

Contractor: University of Massachusetts.

Fiscal Year: Start, 1966; end, 1971.

Cost: Unknown.

THE SINHALESE BUDDHIST REVOLUTION OF CEYLON 1956–1959

(By Guenter Lewy, Department of Government, University of Massachusetts, Amherst, technical report No. 1, January 1967)

Abstract

Research sponsored by the Advanced Research Projects Agency under Order number 883 and monitored by the Office of Naval Research, Group Psychology Branch under contract Nonr-3357(08), NR 117-907.

The origins of the resurgence of Buddhism in Ceylon following the election victory of the *Sri Lanka* Freedom Party, headed by S.W.R.D. *Bandaranaike*, in 1956 are analyzed. Bandaranaike failed to control the Buddhist elements who had helped him to obtain political power and he was assassinated by a Buddhist monk in September 1959. The report concludes with a discussion of the future of organized Buddhism as a political force in Ceylon.

IDEOLOGY AND BEHAVIOR

Description: Provide empirically derived conclusions about ideological movements which support insurgency. (Terminating; in final report stage.)

Contractor: University of Massachusetts.

Fiscal year, start 1966; end 1971.

Cost: Unknown.

MILITANT HINDU NATIONALISM: THE EARLY PHASE

(By Guenter Lewy, Department of Government, University of Massachusetts, Amherst Religion and Revolution; A Study in Comparative Politics and Religion, technical report No. 2, April 1967)

Research sponsored by the Advanced Research Projects Agency under Order number 883 and monitored by the Office of Naval Research, Group Psychology Branch under contract Nonr-3357(08), NR 177-907.

Abstract

Following a brief discussion of the Indian political tradition, the report analyses the

origins and significance of militant Hindu nationalism in the period 1880–1916. The ideas of several representative nationalist leaders—B. G. Tilak, Aurobindo Ghose, Lajpat Rai, B. P. Pal—are examined and their influence on the terrorist movement is discussed. The report concludes with some thoughts on contemporary Hindu communalism.

IDEOLOGY AND BEHAVIOR

Description: Provides empirically derived conclusions about ideological movements which support insurgency. (Terminating; in final report stage.)
Contractor: University of Massachusetts.
Fiscal year start, 1966; end 1971.
Cost: Unknown.

GANDHI, NON-VIOLENCE, AND THE STRUGGLE FOR INDIAN INDEPENDENCE

(By Guenter Lewy, Department of Government, University of Massachusetts, Amherst, Religion and Revolution; A Study in Comparative Politics and Religion technical report No. 4, November 1967)

Research sponsored by the Advanced Research Projects Agency under Order number 883 and monitored by the Office of Naval Research, Group Psychology Branch under contract No. NR-3357(08), NR 177-907.

Abstract

The report begins with an analysis of the character and the intellectual origins of the Gandhian doctrine of Satyagraha. The dominant force in Gandhi's life, it is concluded, was Hinduism. His appeal to the Indian masses rested upon his standing as a Hindu holy man. Gandhi's role in the Congress' struggle for independence is discussed. The tension between Gandhi's functioning as a prophetic figure, following what he considered to be the voice of God within him, and his role as a national leader paying heed to political realities, accounts for many of the mistakes committed by the Congress; it probably delayed the achievement of Indian independence.

IDEOLOGY AND BEHAVIOR

Description: Provide empirically derived conclusions about ideological movements which support insurgency. (Terminating; in final report stage.)
Contractor: University of Massachusetts.
Fiscal year start, 1966; *end,* 1971.
Cost: Unknown.

THE EGYPTIAN REVOLUTION: NASSERISM AND ISLAM

(By Guenter Lewy, Department of Government, University of Massachusetts, Amherst; Religion and Revolution, A Study in Comparative Politics and Religion; technical report No. 5, March 1968)

Research supported by the Advanced Research Project Agency under Order number 883 and monitored by the Office of Naval Research, Group Psychology Branch, under contract Nonr-3357(08), NR 177-907.

Abstract

Following an introductory discussion of the Islamic political tradition, the report examines the events leading up to the seizure of power by the Free Officers, led by Nasser, in July 1952. Relations with the Muslim Brotherhood are traced and the role of Islam in the ideology of Nasserism as well as in Egyptian foreign policy, domestic reform, education, law and the court system are discussed. The report concludes with an analysis of the interaction between the Islamic religion, modernization and legitimacy.

IDEOLOGY AND BEHAVIOR

Description: Provide empirically derived conclusions about ideological movements which support insurgency. (Terminating; in final report stage.)
Contractor: University of Massachusetts.
Fiscal year start, 1966; *end,* 1971.
Cost: Unknown.

MILITANT BUDDHIST NATIONALISM: THE CASE OF BURMA

(By Guenter Lewy, Department of Government, University of Massachusetts, Amherst; Religion and Revolution, A Study in Comparative Politics and Religion, technical report No. 3, August 1967)

Research sponsored by the Advanced Research Projects Agency under Order number 883 and monitored by the Office of Naval Research, Group Psychology Branch, under contract Nonr-3357(08), NR 177-907.

Abstract

Following a brief discussion of the interaction of Buddhism and government in traditional Burma until 1885, the report analyzes the emergency of the political monks as the main force in the militant nationalist movement for Burmese independence. Buddhist monks played an important role in the violent agitation of the 1920's and in the Saya San Rebellion of 1930–31. In the 1930's the monks are gradually overtaken by secular-minded nationalists. The report concludes with a brief examination of the place of Buddhism in post-independence Burma.

CHANGING ROLES OF THE MILITARY IN DEVELOPING NATIONS

Description: Subcontracted studies of changing roles of military establishments.
Contractor: CRESS.
Fiscal year: Start, 1964; end, 1969.
Cost: Unknown.

THE CHINESE WARLORDS SYSTEM: 1916 TO 1928

(By Hsi-hseng Chi, February 1969; the American University Center for Research in Social Systems, 5010 Wisconsin Avenue, N.W., Washington, D.C. 20016)

The author

Hsi-sheng Chi is an Assistant Professor of Political Science at the University of North Carolina. He received a B.A. in literature from Tunghai University, Taiwan, and is at present a Ph.D. candidate at the University of Chicago.

A substantially revised and enlarged version of this report has been submitted by the author to the University of Chicago as a doctoral dissertation.

Foreword

This study was conducted under a program designed to encourage university interest in basic research in social science fields related to the responsibilities of the U.S. Army. The program is conducted under contract by The American University's Center for Research in Social Systems (CRESS), and CRESS in turn has entered into subcontracts supporting basic research in a number of major universities having a marked interest in one or more of these research fields.

The research program was formulated by CRESS in terms of broad subject areas within which research would be supported, with the scholars themselves selecting specific topics and research design and utilizing information normally available to academic and private individuals. Under the terms of the subcontract the authors are free to publish independently the results of such research.

In this study Hsi-sheng Chi describes the military aspects of the political contest for control of the central government in the context of the disorganized sociopolitical structure of China from 1916 to 1928. It was prepared at the University of Chicago's Center for Social Organization Studies under the supervision of Professor Morris Janowitz, principal social scientist for research conducted under subcontract between CRESS and the university.

The report is a useful corrective to the popular image of the Chinese warlords during this period of their greatest activity. The study points out that the warlords were not merely military men exploiting China's condition for private gain in their various domains, nor were they seeking to destroy or replace the central government in the classic pattern under which many Chinese dynasties have historically emerged.

To keep his study focused on the theme of the warlord system, the author chose not to deal with the activities of the incipient Chinese Communist Party during the 1916–1938 period.

ABSTRACT

The steady weakening of the Manchus in the China of the early twentieth century and the expanding military strength of the warlords created a climate for civil war. The warlords were unable to unite the country in spite of their dominance in both military and political spheres. The eventual rise to power of Chiaing Kai-shek and the Kuomintang brought about the decline in the warlords' widespread domination. (Extinction of the warlords was not accomplished until the Communist takeover in 1949.)

CHANGING ROLES OF THE MILITARY IN DEVELOPING NATIONS

Description: Subcontracted studies of changing roles of military establishments.
Contractor: CRESS.
Fiscal year: Start, 1964; end 1969.
Cost: Unknown.

A SURVEY OF ELITE STUDIES

(By Carl Beck, James M. Malloy, and William R. Campbell, assisted by Jerry L. Weaver, March 1965; the American University Center for Research in Social Systems, 5010 Wisconsin Avenue, N.W., Washington, D.C. 20016)

Foreword

This survey was conducted, as a part of SORO's Basic Studies research program, under sub-contract to the University of Pittsburgh with Dr. Carl Beck of the Department of Political Science as principal investigator. The Basic Studies Division was formed to encourage, promote, and conduct research on fundamental social and behavioral processes that influence the U.S. Army's special warfare mission in developing nations and remote areas. One such fundamental area of interest is leadership structure, interaction, and processes.

Leadership in the emerging nations is widely recognized as a crucial factor in the insurgency situations that many of these countries face. It follows that success of the U.S. counterinsurgent mission is dependent upon knowledge that will be helpful in dealing with indigenous civilian and military leadership groups. An understanding of leadership structure and interaction is required. The knowledge needed is to be found in answers to the following types of questions:

What leadership techniques are common to most of the political systems found in emerging nations?

What techniques are unique to particular kinds of political systems?

Are there identifiable patterns of change for leadership groups in these contexts?

Do patterns vary according to different types of political systems? Only with this kind of background knowledge is it possible to assess adequately the significance, to a counterinsurgent situation, of specific types of changes in leadership groups, or the use of particular kinds of leadership techniques. The problems presently being faced in Viet

Nam are a dramatic demonstration of this need.

In planning and developing research programs in new areas of interest to the U.S. Army, the essential first step is a survey of past literature and research to indicate gaps in existing knowledge as well as the need for future work. Dr Beck's paper was designed to serve this purpose for both the military and academic communities. It was decided to assess current understanding of the role and functions of leadership groups in different types of political systems. In so doing, Dr. Beck supplies us with a conceptual essay on "the study of political elites" that considers the problems of identifying elites, describing elite structure, etiquette, and techniques of control, conceptualizes idealized elite systems, and analyses political elite change. This essay should be of special interest to military users, since it provides a systematic approach to leadership groups and leadership interaction. It should also be of value to researchers who require a brief state-of-knowledge assessment as a basis for planning. Dr. Beck also includes a bibliography of over 290 references for those who wish to delve further into particular problems or examine special areas of the world in more detail.

In addition to the materials contained in this report, Dr. Beck prepared abstracts of the studies listed in the bibliography and an inventory of major propositions and statements about elite structure and interaction. These are available on loan from the SORO Library as source materials for researchers and military personnel who may wish to conduct further work in this important problem area.

RITCHIE P. LOWRY,
Acting Chairman, Basic Studies Division.

CHANGING ROLES OF THE MILITARY IN DEVELOPING NATIONS

Description: Subcontracted studies of changing roles of military establishments.
Contractor: CRESS.
Fiscal year: *Start* 1964; *end*, 1969.
Cost: Unknown.

SOCIAL STRUCTURE AND REVOLUTION

(By Jack Bloom, August 1966; prepared under subcontract by the University of Chicago, Center for Research in Social Systems, The American University, 5010 Wisconsin Avenue, N.W., Washington, D.C. 20016)

Abstract

Few researchers have studied revolutions from the standpoint of purely social structural analysis. This paper adopts that perspective and looks at revolution as a special case of social change, as a part of a developmental process. In particular, three countries in the middle 19th century (Germany, France, and Great Britain) are compared and contrasted to determine whether or not changing relationships between social status groupings can become the basis for predicting revolutionary outcomes.

Six "classes" are identified: aristocracy, bourgeoisie, petite bourgeoisie, artisans, industrial workers, and peasantry. France and Germany offer examples of revolutionary development which resulted in failures in their own separate ways. Britain offers an example of a country with similar cultural preconditions but which had no complete revolutionary development. Comparisons of class structure and interaction in these cases disclose important relationships. For example, in the development of revolutionary processes key roles are played by (1) the petite bourgeoisie and artisans who can act as determining swing groups, (2) a viable and powerful aristocracy who can determine the ultimate outcome of revolutions particularly as other groups relate to or align with them, (3) the relationship between the aristocracy and the peasantry especially as this determines the attitude of the peasantry toward revolution, and (4) all classes as internecine conflict and antagonism may redirect and diffuse hostilities. Schematic depictions are provided for these types of relationships. Further research can be conducted by broadening the case base to test the applicability of these ideas for predicting the development of revolutionary processes in a society.

CHANGING ROLES OF THE MILITARY IN DEVELOPING NATIONS

Description: Subcontracted studies of changing roles of military establishments.
Contractor: CRESS.
Fiscal year: *Start*, 1964; *End* 1969.
Cost: Unknown.

PROBLEMS OF STUDYING MILITARY ROLES IN OTHER CULTURES: A WORKING CONFERENCE

(By Ritchie P. Lowry, editor, September 1967)

Abstract

On 26, 27, and 28, May 1965 a conference was convened by what was then the Special Operations Research Office (now the Center for Research in Social Systems) of The American University in Washington, D.C. The purpose of the conference was to discuss research experience and strategies in the study of changing military roles in developing areas. Some 15 scholars from major universities and selected representatives of SORO (CRESS) who were identified as having conducted significant research in the subject of discussion were invited to participate. Some types of problems covered in the 10 major papers and comments include problems of analyzing field research experience, problems of questionnaire experience, problems of achieving clarity in studying military roles, and the problems of the influence of political and sensitivity bias. Individual presentations were grouped within three sessions of the conference: An Introduction to the Topic, Problems of Studying Military Roles in Latin America, and Problems of Studying Military Roles in the Near and Far East.

CHANGING ROLES OF THE MILITARY IN DEVELOPING NATIONS

Description: Subcontracted studies of changing roles of military establishments.
Contractor: CRESS:
Fiscal year: Start, 1964; end, 1969.
Cost: Unknown.

CROSS-NATIONAL STUDIES OF CIVIL VIOLENCE

(By Ted Gurr with Charles Ruttenberg, May 1969)

Foreword

This report was produced under a program designed to increase university research interest in fields related to the U.S. Army mission and to support basic research. The program is conducted by the Center for Research in Social Systems (CRESS), and for it CRESS has negotiated subcontracts with a number of major universities that have a marked interest in one or more of the appropriate subject fields. This report was prepared at Princeton University under such a subcontract.

The paper summarizes the first phases of research designed to evaluate a multivariate theory of "the genesis of civil violence," using cross-national aggregate data for a large number of policies. Some of the methods and data developed, the results of initial multiple correlation analyses, and a new coding instrument for collecting systematic information on characteristics of civil strife are reported on here. The initial phase of research is completed; the larger comparative study of which it is part is still in process. Much additional research, using a variety of techniques, will be required before any substantial proportion of the questions raised by the theoretical model and by the results reported here can be answered.

SOCIAL PROCESSES RELEVANT TO MILITARY PLANNING FOR STABILITY STUDIES OF AFRICAN GROUPS

Description: Study of African sociopolitical structures, dynamics, and leadership resources and attitudes.
Contractor: CRESS.
Fiscal year: Start, 1967; end, 1969.
Cost: Unknown.

URBAN DYNAMICS AND BLACK AFRICA

(By William J. Hanna, Judith L. Hanna, June 1968; the American University Center for Research in Social Systems, 5010 Wisconsin Avenue, N.W., Washington, D.C. 20016)

Authors' preface

From Dakar to Mombasa, and from Fort Lamy to Lusaka, Black Africa's land and people display great diversity. Yet using Black Africa as the geographic unit of analysis is a viable research strategy because of the area's marked similarities in colonial past, revolutionary change, and contemporary dynamics. In addition, there is virtual unity in race—although not all indigenous Africans nor Negroid—and, at least according to some Africans, there is considerable cultural uniformity.

We have chosen to study the towns of independent Black Africa for reasons of policy, science, and personal experience. Towns are keys to understanding the countries in which they are located, because they are centers of African cultural, social, economic, and political innovation and diffusion. The rapidity of change in some spheres, illustrated by the independence surge in the late 1950's and early 1960's as well as by the recent spate of military coups d'etat, makes analyses of the contemporary dynamics of towns a prerequisite for policy decisions which are relevant to current realities. Implicit throughout the study is our assumption that the policymaker's choices among alternatives of action and inaction are improved by increased understanding and that science and government should be mutually supportive.

Social science may also be served. After reading more than one thousand papers, articles, and books concerned with towns in Black Africa, we concluded that the available information had not yet been well integrated and that its theoretical relevance had not yet been fully extracted. Thus, the scientific justification for this study is whatever progress it makes toward such integration and theoretical development, as well as toward the identification of critical knowledge gaps.

At the personal level, it is our hope that reports such as this may in some small way repay the people of Africa for the hospitality and friendship they have shown us here and abroad. Repayment might come from more informed policymaking by those outside Africa who are concerned with the continent. Or, it might come by helping to bring African data into the mainstream of world social science, through our efforts directly or by whatever catalyzing effect we have upon others.

FOREIGN COMMUNICATIONS AND DEFENSE

Description: Describe communication mechanisms of China and Soviet Union and develop computer simulation of message flow so as to predict spread of information and news in future. (Expires 9/69)
Contractor: MIT/Dr. Ithiel Pool.
Fiscal year: Start, 1963; end, 1970.
Cost: Unknown.

THE USE OF FREE TIME BY YOUNG PEOPLE IN SOVIET SOCIETY

(By F. Gayle Durham, Research Program on Problems of International Communication and Security, Center for International Studies, Massachusetts Institute of Technology, Cambridge, Mass., January 1966)

Preface

The use of an individual's free time, and its quantity, are very relevant to this communications behavior. The activities available to him for use during his free hours to a great extent involve mass media and conversation with friends. Much of the information he gleans from his environment is accumulated during his free time use of these sources, although his working hours and so-called "self-maintenance" time are also by no means devoid of information-gathering activity.

The study of the use of free time in Soviet society is particularly interesting, since it both provides the reader unfamiliar with the daily life of the Soviet citizen some insight into the influences on those leisure and informative activities, and allows an assessment of the effectuality of the efforts of the regime to mutate the character of its citizens through means of mass influence during those activities.

* * * * *

In order to survey the use of free time, we have chosen one sub-group of the population for preliminary investigation. This group may be termed young people, and includes specifically those between the ages of sixteen and thirty. Our reasons for this choice stem from various considerations. Inasmuch as our underlying concern is to learn more about how Soviet citizens use communications media, we chose a group which we believe to be more or less homogeneous in its patterns of daily life.

The research was sponsored by the Advanced Research Projects Agency of the Department of Defense (ARPA) under contract #920F–9717 and monitored by the Air Force Office of Scientific Research (AFOSR) under contract AF 49(638)–1237.

METHODOLOGY FOR ANALYSIS OF INTERNAL SOCIAL MOVEMENTS

Description: Providing predictive base for forecasting social movements in selected countries.

Contractor: University of Pittsburgh/Holzner and Yang.

Fiscal year: Start, 1966; end, 1970.

Cost: Unknown.

Conducted under AFOSR grant No. AF–AFOSR–1304–67.

Report period: July 1, 1967–June 30, 1968.

Final report: Not for publication.

METHODOLOGY FOR THE ANALYSIS OF INTERNAL SOCIAL MOVEMENTS (SOCIAL MOVEMENTS AND SOCIAL SYSTEM CHANGE)

(By Burkart Holzner and Ching-Kun Yang, August 1968, Department of Sociology, University of Pittsburgh, Pittsburgh, Pa.)

Abstract

This project develops methods and theory for the study of *incidents of violent social protest* and broad *social movements* in the context of social system change. The method of building computer based inventories of incidents of protest and conflict permits the quantitative description of large numbers of such events, based on easily accessible public records and historical documents. Critical instance case studies supplement the quantitative data through detailed qualitative investigation. The project's frame of reference emphasizes *event sequence analysis* in *conflict* and mobilization. In order to assess flexibility and power of the procedure, long time series, the entire *19th century*, were chosen for incident inventories on two societies of widely different characteristics. An Oriental society (*China*) and a Western society (*Germany*) were selected. The data gathering phase for China (31,000 incidents) has been completed, for Germany it is presently underway.

FOREIGN COMMUNICATIONS AND DEFENSE

Description: Describe communications mechanisms of China and Soviet Union and develop computer simulation of message flow so as to predict spread of information and news in future. (Expires 9/69)

Contractor: MIT/Dr. Ithiel Pool.

Fiscal Year: Start, 1963; end, 1970.

Cost: Unknown.

THE FILM INDUSTRY IN COMMUNIST CHINA

(By Alan P. L. Liu, research program on problems of international communications and security, Center for International Studies, Massachusetts Institute of Technology)

Introduction

This is a study of the film industry in Communist China. It is part of a research program on international communication conducted by the Center for International Studies, Massachusetts Institute of Technology. The research for this paper was sponsored by the Advanced Research Projects Agency of the Department of Defense (ARPA) under contract #920F–9717 and monitored by the Air Force Office of Scientific Research (AFOSR) under contract AF 49(638)–1237.

This report seeks to update the data on the subject and to understand the dynamics of the Chinese Communist film industry. In order to put the present film industry into its proper socio-historical context, we also deal briefly with the Chinese films in pre-Communist era.

The report is based almost exclusively on Chinese publications. They include mainly Chinese Communist press reports and translated Chinese materials. Only three non-Communist books (Chinese) could be found on Chinese films and our brief discussion on the pre-Communist period was based on them. We were particularly interested in statistical information on the present Chinese film industry. Yet propaganda-free statistical reports from Communist China were hard to come by. After 1959 even publications of propagandistic statistical information from Communist China stopped. Since 1964 there have been some signs of the availability of such statistics but systematic statistical reports such as those published before 1957 have not yet appeared. We have practically exhausted all the major sources on this subject in Chinese which are publicly available abroad. We have combed the holdings in such major libraries as the Chinese-Japanese Library and the East Asian Research Center at Harvard University, The Library of Congress and the Hoover Institute at Stanford University. As our research continues, new information will be acquired. This report, representing research done so far, will be enlarged and updated in the future.

BEHAVIOR NORMS: JAPANESE AND AMERICAN YOUTH

Description: Comparison of attitudes and behavior of the youth of two countries for military assistance and manpower resources purposes.

Contractor: University of Maryland/Dr. E. McGinnies.

Fiscal Year: Start, 1967; end, 1969.

Cost: Unknown.

A cross-cultural study of normative behavior among Japanese and American girls in the 11 to 18-year age range, by Satoru Inomata, Litt D., Department of Psychology, Shiga University; Elliott McGinnies, Ph.D., Department of Psychology, University of Maryland)

Since 1945, the Japanese people have adopted many of the precepts and practices of American democracy. Adolescent boys and girls in Japan are now growing up in this new social climate. How are Japanese young people reacting to the dramatic changes that have taken place in their country? Are they coming increasingly to resemble their American counterparts, or have they taken on the form rather than the substance of Western political and social values? In order to approach some answers to these questions, we undertook a cross-cultural study of social attitudes among the youth of Japan, patterning our survey after one conducted with American teenagers a few years previously. In this way we hoped to be able to make comparisons between the social attitudes of teenagers in Japan and in the USA. We adopted the same questionnaire materials and methods of sampling used in a nation-wide survey of American youth by the Institute for Social Research at the University of Michigan.

ANTHROPOLOGICAL RESEARCH TO ASSIST NAVY STRATEGICAL PLANNING

Description: Investigator will combine anthropological variables with econometric techniques in order to conceptualize and predict mobility in foreign military hierarchies.

Contractor: University of Texas.

Fiscal year: Start, 1968; end, 1970.

Cost: Unknown.

MATHEMATICAL PROGRAMING AND ECONOMIC ANTHROPOLOGY

(By Ira R. Buchler, J. R. McGoodwin, Department of Anthropology, University of Texas)

Presented at a conference on Mathematical Approaches to Cultural Evolution.

Technical Report 1: Comparative Econometrics Project.

This research was sponsored by the Group Psychology Branch, Office of Naval Research (Contract No. N00014-67-A-0126-0005; NR 170-717/1-5-68 Code 452) as the initial technical report of the Comparative Econometrics Project—Ira R. Buchler, Director.

Introductory comments

The general purpose of this paper is (1) to provide a partial and preliminary survey of several related mathematical decision-making models—in particular, mathematical (or linear) programming—(2) to consider their relevance for a wide class of optimization problems in economic anthropology, and (3) to assess some of their implications for various theoretical issues in evolutionary studies—the related notions of "cultural intensity" and "evolutionary potential." This essay is the initial (and therefore tentative) report in a series of studies that will demonstrate the underlying mathematical relatedness of military and economic programming and logistic problems on the one hand and aspects of economic anthropology, economic development, social organization and the prediction of mobility processes in political systems on the other. This discussion is consequently directly relevant to the formalist/substantivist opposition in economic anthropology, a theoretical bifurcation that is due to a considerable extent to the substantivist *magnum opus Trade and Market in the Early Empires* (Polanyi et al., 1957).

THE DEVELOPMENT OF A METHOD FOR FORECASTING DECISIONS AND ACTIONS FOR MILITARY GROUPS

Description: Make cross-national data base analysis of the effects of different military postures and strategies on the decisionmaking of foreign military groups; research will also be conducted on the predicted responses of these groups to perceive politico-military threats.

Contractor: Western Behavioral Science Institute.

Fiscal year: Start, 1966; end, 1970.

Cost: Unknown.

VALUES, ATTITUDES, AND MULTINATIONAL DECISIONMAKING

(Introduction by John R. Raser, Western Behavioral Sciences Institute, principal investigator, September 30, 1968)

The research reported in these papers was supported in part by the Office of Naval Research, Contract No. N00014-66-C0279, NR 170-704 (Group Psychology).

Introduction

There is a close analogy between the worldwide problems of poverty and war at the international level and the problems of poverty and civil disorder on the national level. In both cases an understanding of the aspirations, values, and opinions of all parties involved is of fundamental importance, both for the successful implementation of programs to even out the differences creating tension and conflict and for the avoidance of escalation of smaller conflicts into disastrous ones. This project is oriented towards the study of the values and opinions about interpersonal, social and international relations of future elites in a representative number of nations of the world.

One premise underlying the study is that "A more complete understanding of others' values, attitudes, and ways of thinking increases one's ability to communicate effectively with them." Such communication may be across the conference table, through the medium of a strategy which one pursues, or simply that one behaves in a certain way due to his expectations about how others will respond in the long or short run. From this point of view information on the basic values and attitudes of future decisionmakers in all nations will be of immeasurable value in helping them to deal more effectively with military, diplomatic, and political decision-makers of other countries as they pursue their careers, adding to the possibility that mankind's common interest in survival may override misunderstanding and misperception of the goals and values of others, by providing a common framework within which national differences in real interests may be seen.

The Conflicts of the world today are, however, only partly based on misperceptions and lack of mutual understanding of the values of others; the conflicts are themselves indicators of the large differences found in the international system. The aim is therefore also to understand some of the factors which create the antagonism and lack of common interest at the international level. The focus of the project is on the impact of the nation-state on the values and opinions of its citizens in nations differing markedly in political system, level of industrialization, investment in military and police forces, and size. Finally, it is a major aim of the project to provide some insight into the background of the student unrest which today, and probably more so in the future, is an important source of political change.

ROLE DIFFERENTIATION IN THAI SOCIAL STRCUTURE IN TERMS OF A SEMANTIC ANALYSIS OF THAI PRONOUNS AND ROLES

(By W. Wichiarajote and Marilyn Wilkins, Institute of Communications Research, University of Illinois, Technical Report No. 57 (68-2), June, 1968; Communication, Cooperation, and Negotiation, in Culturally Heterogeneous Groups)

(Project Supported by the Advanced Research Projects Agency, ARPA Order No. 454 Under Office of Naval Research Contract NR 177-472, Nonr 1834(1936), Fred E. Fiedler and Harry C. Triandis, Principal Investigators.)

Abstract

Fourteen Thai first-person pronouns and sixty Thai social roles were scored on a common set of eleven features. Following a model of semantic feature analysis developed by Osgood, usage of the various pronouns within the various roles was predicted: appropriate (+), permissible (0), or incongrous (−). These predictions were obtained by multiplying feature codings on the pronouns with corresponding codings on the roles; the algebraic sum of these products yielded a +, 0, or − outcome for each pronoun-role combination.

Validity of the model was evaluated in terms of: the percentage of predictions which were accurate; correspondence of the semantic features with factors obtained through factor analysis; and the information revealed concerning the structure of Thai role differentation.

Fifty-three Thai high school students were asked to judge the appropriateness of the 14 x 60 pronoun-role combinations. This data constituted the criteria for evaluating success of the semantic features and also provided material for the factor analysis.

Six factors were found to describe 94% of the variance. They appeared to incorporate nine of the eleven semantic features. These, in turn, accurately predicted 85% of the *Ss'* specific judgments. The semantic features further revealed a hierarchic, tree-like structure within the semantic patterns of Thai pronouns and social roles.

TRANSFER OF TECHNOLOGY UNDER MILITARY AUSPICES

Description: Cooperation with foreign military assistance and training programs.

Contractor: Howard University, Dr. D. Spencer.

Fiscal Year: Start, 1964; end, 1970.

Cost: Unknown.

MILITARY TRANSFER OF TECHNOLOGY—INTERNATIONAL TECHNO-ECONOMIC TRANSFERS VIA MILITARY BY-PRODUCTS AND INITIATIVE BASED ON CASES FROM JAPAN AND OTHER PACIFIC COUNTRIES

(By Daniel L. Spencer, Chairman, Department of Economics, Howard University, Washington, D.C.)

ABSTRACT

Transfer of technology through military and related channels. Case studies drawn from Japan, Taiwan, and Korea. The materials constitute a first attempt to bulldoze through a new dimension in cost/benefit assessments of military activity overseas. Concludes that a dollar spent on military assistance may produce as much benefit as, or more than, a dollar spent on economic assistance.

TRANSFER OF TECHNOLOGY UNDER MILITARY AUSPICES

Description: Cooperation with foreign military assistance and training programs.

Contractor: Howard University, Dr. D. Spencer.

Fiscal Year: Start, 1964; end, 1970.

Cost: Unknown.

THE TRANSFER OF TECHNOLOGY TO DEVELOPING COUNTRIES—PAPERS AND PROCEEDINGS OF A CONFERENCE HELD AT AIRLIE HOUSE, WARRENTON, VA., APRIL 28-30, 1966

(Edited with an introduction and summary by Daniel L. Spencer and Alexander Woroniak, Department of Economics, Howard University, Washington, D.C.; prepared under Grant No. AF-AFOSR 533-66 from the Air Force Office of Scientific Research, Office of Aerospace Research, U.S. Air Force)

FOREWORD

"The United States and the West must either lead in the process of modernizing the underdeveloped area, or by default, contribute to a kind of world in which our institutions and values cannot survive." This statement by Gabriel Almond echos the thinking of a generation of American leaders who have invested substantial resources and other efforts to improve the conditions of life in deficit areas in the hope that economic advance would contribute to political stabilization and create the soil in which democratic institutions might take root.

The easy optimism that flourished after World War II has been jarred by the experience gained in two decades of foreign aid and technical assistance to backward and stagnant areas. We have learned that neither economic advance nor political stabilization can be automatically initiated by the investment of U.S. resources. Dr. Carlos Chagas, President of the National Academy of Sciences of Brazil, insists that the technological gap separating the advanced nations from the so-called developing nations has grown wider rather than narrower during the last decade, despite extensive international cooperation. On a more hopeful note, Walt W. Rostow has postulated a theory of economic evolution which includes a "take-off" stage where rapid industrialization can be expected.

The papers that follow were prepared by a group of scholars who are too sophisticated to believe that rapid economic development is a necessary consequence of programs of material aid and technical assistance. While they are fully capable as interpreters of economic history and could develop attractive hypotheses relating to the development of economic institutions, for the purposes of the present conference they have directed their attention to a narrower field of economic theory in an attempt to elucidate the processes of technological transfer and structural change which are basic to economic advancement in backward areas.

Dr. Daniel L. Spencer was encouraged by the Air Force Office of Scientific Research to conduct a conference on technological transfer, because it was felt that further useful work in this field might be stimulated by summing up the current state of knowledge, and focusing attention on problems of a methodological and theoretical nature that are obstacles to further understanding of these important processes.

Our interest in problems of the kind addressed at the conference stems from the fact that the mission of AFOSR is to sponsor basic research in areas of potential applicability to the military. The present effort is part of a research program devoted to those scientific and technical fields which might serve to improve the manner in which U.S. military personnel, skills, equipment, and procurement policies can be exploited to the greatest benefit for the host country and to realize the U.S. national objectives to aid our friends and strengthen our allies. There are many channels within the military services for the use of information derived from research on foreign economic development. Military assistance programs, mobile training teams, technical training, and advanced education provided by the U.S. services for foreign military personnel are some of the bridges to the field of application.

It is a source of gratification to the Air Force Office of Scientific Research that our expectations with regard to the conference on technological transfer and structural change have been fully realized. This task exemplifies the objective of the organization to sponsor basic research in fields relevant to future plans and activities.

CHARLES E. HUTCHINSON,
Air Force Office of Scientific Research.

EXHIBIT 1

TABLE I.—FEDERAL OBLIGATIONS FOR RESEARCH; TOTAL, DEFENSE, AND NATIONAL SCIENCE FOUNDATION, FISCAL YEARS 1956–69

[In millions of dollars]

Year	Total	DOD	NSF
1956	852	482	16
1957	925	445	30
1958[1]	1,079	489	33
1959	1,403	523	54
1960	1,941	861	68
1961	2,620	1,173	77
1962	3,273	1,311	104
1963	4,041	1,605	141
1964	4,464	1,672	156
1965	4,854	1,751	172
1966	5,271	1,849	224
1967	5,273	1,591	241
1968[2]	5,406	1,425	255
1969[2]	5,990	1,658	280

[1] The U.S.S.R. lofted Sputnik on Oct. 4, 1957.
[2] Estimates by the NSF.

Source: "Federal Funds for Research, Development, and Other Scientific Activities, Fiscal Years 1967, 1968 and 1969," vol. XVIII. National Science Foundation Report NSF 68–27, table C–91.

TABLE II.—FEDERAL OBLIGATIONS FOR BASIC RESEARCH; TOTAL, DEFENSE, AND NATIONAL SCIENCE FOUNDATION, FISCAL YEARS 1952–69

[Millions of dollars]

Year	Total	DOD	NSF
1952	162	72	1
1953	154	65	2
1954	148	52	5
1955	162	53	10
1956	206	78	15
1957	262	84	30
1958	335	111	[1] 33
1959	517	137	54
1960	610	168	68
1961	825	173	77
1962	1,106	204	104
1963	1,389	231	141
1964	1,567	241	155
1965	1,690	263	171
1966	1,844	262	223
1967	2,015	284	239
1968	2,093	246	[2] 251
1969	2,354	320	[2] 274

[1] The U.S.S.R. lofted Sputnik on Oct. 4, 1957.
[2] Estimated by the NSF.

Source: "Federal Funds for Research, Development, and other Scientific Activities, Fiscal Years 1967, 1968, and 1969," vol. XVII, op. cit., table C–92.

TABLE III.—FEDERAL OBLIGATIONS FOR RESEARCH BY AGENCY AND PERFORMER; TOTAL, DEFENSE AND NATIONAL SCIENCE FOUNDATION

[In thousands of dollars]

Department/Agency	Total	Universities and colleges	FFRDCS[1] administered by univs. and colleges	FFRDCS[1] administered by nonprofit institutions
Fiscal year 1967:				
Total[2]	5,273,021	1,348,469	427,497	47,577
DOD	1,591,331	246,507	81,681	36,545
NSF	241,164	198,458	16,907	----------
Fiscal year 1968:				
Total[3]	5,405,590	1,396,754	447,180	39,706
DOD	1,424,590	226,537	90,630	25,743
NSF	255,464	210,483	17,798	532
Fiscal year 1969:				
Total[4]	5,989,550	1,555,509	466,903	41,224
DOD	1,658,142	277,365	98,303	26,886
NSF	279,882	230,377	19,652	244

[1] Federally funded research and development centers.
[2] "Federal Funds for Research, Development, and Other Scientific Activities, Fiscal Years 1967, 1968, and 1969," vol. XVII, op. cit., table C–11
[3] Ibid., table C–11.
[4] Ibid., table C–12.

TABLE IV. FEDERAL OBLIGATIONS FOR RESEARCH BY AGENCY AND FIELD OF SCIENCE, FISCAL YEARS 1967–69

[In thousands of dollars]

Department/agency	Total	Life sciences	Psychological sciences	Physical sciences	Environmental science	Mathematics	Engineering sciences	Social sciences	Other sciences
Fiscal year 1967:[1]									
Total	5,273,021	1,451,386	108,042	1,074,416	670,101	130,021	1,555,014	188,687	95,354
DOD	1,591,331	106,245	23,438	327,479	148,783	89,903	804,060	8,912	82,511
NSF	241,164	57,570	8,040	69,550	42,938	18,887	24,273	16,060	3,846
Fiscal year 1968:[2]									
Total	5,405,590	1,586,090	112,753	1,136,553	649,549	107,086	1,524,161	207,504	81,898
DOD	1,424,590	93,638	24,196	312,634	127,631	68,227	722,460	8,178	67,626
NSF	255,464	60,148	8,014	71,587	48,284	19,582	26,965	17,100	3,784
Fiscal year 1969:[3]									
Total	5,989,550	1,765,306	130,642	1,289,778	611,671	144,661	1,695,361	250,524	101,607
DOD	1,658,142	111,060	28,690	352,895	130,463	102,205	841,468	8,242	83,119
NSF	279,882	63,720	8,176	80,899	51,948	22,212	28,342	19,451	5,134

[1] "Federal Funds for Research, Development, and Other Scientific Activities, Fiscal Years 1967, 1968, and 1969," vol. XVII, op. cit., table C–14.
[2] Ibid., table C–15.
[3] Ibid., table C–16.

TABLE V.—FEDERAL OBLIGATIONS FOR BASIC RESEARCH BY AGENCY AND FIELD OF SCIENCE, FISCAL YEARS 1967–69

[In thousands of dollars]

Department/agency	Total	Life sciences	Psychological sciences	Physical sciences	Environmental sciences	Mathematics	Engineering sciences	Social sciences	Other sciences
Fiscal year 1967:[1]									
Total	2,015,182	612,041	60,044	712,929	321,034	64,639	183,998	56,869	3,628
DOD	284,316	32,656	9,234	99,925	49,364	31,191	57,394	3,450	1,102
NSF	238,562	57,570	8,040	69,550	42,938	18,887	24,273	14,869	2,435
Fiscal year 1968:[2]									
Total	2,092,766	652,869	64,876	726,171	340,436	57,238	179,573	61,796	9,867
DOD	246,428	28,336	7,721	76,781	47,863	25,004	50,938	2,485	7,300
NSF	251,375	59,137	8,014	71,587	48,113	19,582	26,698	15,744	2,500
Fiscal year 1969:[3]									
Total	2,353,665	716,981	74,665	828,147	382,233	76,255	191,443	69,300	14,651
DOD	320,250	37,644	12,035	92,035	56,027	41,010	66,769	3,730	11,000
NSF	274,253	62,606	8,176	80,899	51,569	22,212	27,517	17,605	3,579

[1] "Federal Funds for Research, Development, and Other Scientific Activities, Fiscal Years 1967, 1968, and 1969," vol. XVII, op. cit., table C–33.
[2] Ibid., table C–34.
[3] Ibid., table C–35.

TABLE IV.—FEDERAL OBLIGATIONS FOR BEHAVIORAL SCIENCE RESEARCH, 1960 AND 1968

[In thousands of dollars]

Agency	1960 (obligations)			1968 (estimate)		
	Psychological sciences	Social sciences	Total	Psychological sciences	Social sciences	Total
Department of Agriculture	----------	16,760	16,760	----------	32,873	32,873
Department of Commerce	113	2,929	3,042	402	7,434	7,836
Department of Defense (total)	17,959	504	18,463	25,747	8,684	34,431
Army	5,215	400	5,615	8,856	2,278	11,134
Navy	8,209	----------	8,209	7,151	----------	7,151
Air Force	4,535	104	4,639	5,830	1,938	7,768
Defense agencies	----------	----------	----------	2,850	3,055	5,905
Defensewide funds	----------	----------	----------	1,060	1,413	2,473
Department of Health, Education, and Welfare (total)	16,308	7,103	23,411	79,462	87,716	167,178
Administration on Aging	----------	----------	----------	447	592	1,039
Food and Drug Administration	----------	----------	----------	1,000	200	1,200
Office of Education	4,779	1,540	6,319	24,444	26,991	51,435
Office of Vocational Rehabilitation	----------	----------	----------	3,500	14,921	18,421

Footnotes at end of table.

TABLE IV.—FEDERAL OBLIGATIONS FOR BEHAVIORAL SCIENCE RESEARCH, 1960 AND 1968 a—Continued

[In thousands of dollars]

Agency	1960 (obligations)			1968 (estimate)		
	Psychological sciences	Social sciences	Total	Psychological sciences	Social sciences	Total
HEW—Continued						
Public Health Service	11,529	4,094	15,623	49,655	28,895	78,550
National Institutes of Health	(11,506)	(3,282)	(14,788)	(14,352)	(3,850)	(18,382)
Social security Administration		1,469	1,469	200	5,267	5,467
Welfare Administration					10,850	10,850
St. Elizabeths Hospital				216		216
Department of Housing and Urban Development					10,665	10,665
Department of Interior	46	1,061	1,107	587	6,244	6,831
Department of Labor		1,562	1,562		9,988	9,988
Department of State (total)		122	122		1,025	1,025
Departmental funds					125	125
International Cooperation Administration		122	122			
Agency for International Development					900	900
Department of Transportation					4,279	4,279
National Science Foundation	2,597	1,823	4,420	8,953	18,812	27,765
National Aeronautics and Space Administration		430	430	5,073	1,455	6,528
Office of Economic Opportunity					11,000	11,000
U.S. Arms Control and Disarmament Agency				190	2,083	2,273
Veterans' Administration	1,005		1,005	3,654		3,654
Other agencies	213	2,560	2,773	319	7,065	7,384
Total	38,241	34,854	73,095	124,387	209,323	333,710

Source: "The Behavioral Sciences and the Federal Government," a report of the Advisory Committee on Government Programs in the Behavioral Sciences, National Research Council, National Academy of Sciences, 1968, p. 39.

TABLE VII.—FEDERAL OBLIGATIONS FOR BASIC RESEARCH IN PSYCHOLOGICAL AND SOCIAL SCIENCES, FISCAL YEARS 1966–69

[Dollar amounts in thousands]

	Department of Defense							
	Social psychology	Anthropology	Economics	Sociology	Other	Total DOD	Total Federal	Percent DOD/Federal
Fiscal year 1966 [1]	$5,259	$271	$150	$810	$1,404	$7,954	$65,819	12.1
Fiscal year 1967 [2]	4,763	40	25	268	3,117	8,213	79,919	10.2
Fiscal year 1968 [3]	4,076	85	19	300	2,081	6,561	86,651	7.6
Fiscal year 1969 [4]	7,376	125	32	412	3,161	11,106	100,772	11.1

[1] Federal funds for research, development and other scientific activities, fiscal years 1966, 1967, 1968 (vol. XVI) p. 155.
[2] Federal funds for research, development and other scientific activities, fiscal years 1967, 1968, 1969 (vol. XVII) p. 159.
[3] Ibid., p. 160.
[4] Ibid., p. 161.

TABLE VIII.—FEDERAL OBLIGATIONS FOR APPLIED RESEARCH IN PSYCHOLOGICAL AND SOCIAL SCIENCES, FISCAL YEARS 1966–69

[Dollar amounts in thousands]

	Department of Defense							
	Social psychology	Anthropology	Economics	Sociology	Other	Total DOD	Total Federal	Percent DOD/Federal
Fiscal year 1966 [1]	$7,835	$324	$632	$2,155	$2,631	$13,577	$156,706	8.7
Fiscal year 1967 [2]	8,201	578	1,009	1,715	2,160	13,663	168,973	8.1
Fiscal year 1968 [3]	6,985	789	796	974	3,134	12,678	179,611	7.1
Fiscal year 1969 [4]	7,297	660	885	1,067	1,900	11,809	222,502	5.3

[1] Federal funds for research, development and other scientific activities, fiscal years 1966, 1967, 1968, (vol. XVI) p. 178.
[2] Federal funds for research, development and other scientific activities, fiscal years 1967, 1968, 1969, (vol. XVII) p. 190.
[3] Ibid., p. 191.
[4] Ibid., p. 192.

TABLE IX.—FEDERAL OBLIGATIONS FOR RESEARCH (BASIC AND APPLIED) IN THE PSYCHOLOGICAL AND SOCIAL SCIENCES, FISCAL YEARS 1966–69

[Dollar amounts in thousands]

	Department of Defense							
	Social psychology	Anthropology	Economics	Sociology	Other	Total DOD	Total Federal	Percent DOD/Federal
Fiscal year 1966	$13,094	$595	$782	$2,965	$4,095	$21,531	$222,525	9.7
Fiscal year 1967	12,964	618	1,034	1,983	5,277	21,876	248,892	8.8
Fiscal year 1968	11,061	874	815	1,274	5,215	19,239	266,262	7.2
Fiscal year 1969	14,673	725	917	1,479	5,061	22,915	323,274	7.1

Source: Tables VII and VIII.

Mr. FULBRIGHT. Mr. President, if there is nothing further on that subject, I have an item on an unrelated subject to discuss.

Does the Senator wish me to yield?

Mr. STENNIS. Just 1 minute; not over 2 minutes.

Mr. FULBRIGHT. I yield.

Mr STENNIS. The Senator has completed his remarks. The committee has not used any time. Nevertheless, we might agree now on a limit applicable tomorrow, if the Senator is inclined at all to do so. Would an hour to a side be satisfactory?

Mr. FULBRIGHT. There are a number of Senators—the Senator from Michigan is one—who wish to speak on the subject. I think I ought to consult them before I agree. I personally have completed my remarks. We should give notice to Senators interested in the subject.

Mr. STENNIS. If we could have a quorum call——

Mr. FULBRIGHT. There is one Senator in particular who should be consulted. Outside of the ABM subject, the Senator from Wisconsin has been the "clearance" in this. The Senator knows

that. I have coordinated this effort with him. I would not wish to enter into any kind of an agreement without a quorum call and without his having notice, because he feels a special responsibility in this matter. The Senator is aware of that.

Mr. STENNIS. Very good. I thought, though, if we could give that notice and have a quorum call——

Mr. FULBRIGHT. We had better do it tomorrow.

Mr. STENNIS. Tomorrow there will be so many other Senators competing for time.

Mr. FULBRIGHT. I may make this suggestion. I am committed to make the statement I am about to make. I must get it in the RECORD. While I am doing that, perhaps the Senator or someone for him could get in touch with the Senator from Wisconsin, and also, I would hope, the Senator from Michigan, whom I mentioned a moment ago, and see what their views are. While I am making this address, perhaps the Senator could get in touch with the Senator from Wisconsin.

Mr. McINTYRE. Mr. President, will Senator yield me 2 minutes?

Mr. FULBRIGHT. I yield.

Mr. McINTYRE. Mr. President, in view of the fact that the Senator has had his say here about what these policy planning projects are, I thought I might read into the RECORD some that my subcommittee was concerned with:

Japanese rearmament, nuclear, and space programs: A study of factors and developments affecting the Japanese military contribution to the U.S. effort in Asia, including the security pact.

Chinese military and foreign policy: A continuing analysis of the background and fundamental characteristics of Chinese foreign and military policies to elucidate their implications for U.S. research provides background for consultations with air staff officials and for inputs to interdepartmental studies, such as work on strategic posture toward China.

European security issues a continuing examination of trends in the political and military relations of European states: including possible changes in European security arrangements and national developments affecting the overall European military posture.

Soviet military and foreign policy: A continuing study of Soviet military doctrine, use of military strength for political purposes, foreign policy, and political institutions in the Soviet Union and East European states.

Military representation in U.S. missions: Examines better method of military representation in handling military aid in foreign countries, specifically India, Indonesia, Brazil, and Iran.

That is just naming five. This year these will cost about $580,000. In comparison with those that our distinguished friend from Arkansas has been referring to, Ataturk and others, it makes a lot of sense to me that we should keep on studying these issues on a continuing basis.

Mr. STENNIS. Until a few years ago, the authorization bill for the military program did not require that the research and development items be included in it, but we learned that we were not getting a major part of a certain weapons system before us—in other words, we just picked it up when it was ready to come off the assembly line, and we had to go back to get all the research and development, the tests, and the engineering. That was when we invented the law to require the research and development. What we were after was to get all the information on the weapons—the hardware, was the way we referred to it—before the Armed Services Committee.

But when we got the research and development required by law, we got a great many other things that we were not particularly interested in. They were related, to a degree, and their number seems to have increased greatly year by year. There are so many of them, and many of them are so disassociated, that it is very difficult properly to evaluate all of them.

As I recommended to the Senator from Arkansas—and his response was very logical—we would be glad for anyone to go through and pick out a list that pertained more to the functions of other committees. I suppose almost any kind of list of subjects for research and development might pertain remotely to the work of any committee.

But if Senators will bring out lists of those that belong more properly in the State Department, perhaps some in the Department of Commerce and other departments, they can go to their respective logical places. But this year, after we got into this matter—and the subcommittee did a remarkable job—we could not just turn the file upside down, pour them out on the table, sweep them out with the afternoon trash, and leave them there with nothing done about them and no one to pass on them. We could not summarily reject the whole thing.

So we performed a selective process, here, the best we could, and I hope that when this bill is finally completed we can obtain a further review of it, with the help of the Department of Defense and others, and make specific recommendations as to where these projects should go. But in the meantime, this is just an alternative to cutting them all off.

I hope the Senate will see fit, with the leadership of the Senator from Arkansas and other interested Senators, to find a way to adjust it for this year, and then we will take an approach next year that will be perhaps more satisfactory.

I make these remarks to show clearly what the purpose is, and what the committee is trying to do.

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

Mr. STENNIS. I yield.

Mr. FULBRIGHT. I wish to say that the Senator from Mississippi has been most reasonable in his reaction, both last year when this matter first came up, and now. I appreciate what he has said today. I believe the Senator; and I certainly want to reemphasize that I mean no criticism of him.

As I told the Senator, I asked the Director of the Budget, Mr. Schultze, in open session, whether he had looked at it at all. He said he had not.

This is an enormous and complicated program, and there are many more important things, that cost money and are more important to our security. Therefore, I think the Senator from Mississippi would probably be derelict in his duty if he did spend a lot of time on these projects, because I do not think they are really that important.

But I would like to get our information in order, so to speak, to try to get back on the track.

I think there was a period a few years ago when many of us were interested in universities. I live in a university town, and it is always publicized that "we got a research project of $15,000," and so on. At the time, it seemed all right. But I think it has got out of hand, and I would like to get it back on the track. I think the Senator from Mississippi has shown every indication that he shares that view, and all we have to do now is find out a way to do it. I thank the Senator very much for his remarks.

Mr. STENNIS. I thank the Senator from Arkansas for his kind remarks.

LET'S PUT SPACE TO EARTHLY USES

Mr. FULBRIGHT. Mr. President, I do not think any other Senator wishes to pursue this subject. I want to make some remarks about another subject which has been much in the public eye and which is not, unfortunately, relevant to the pending business but is relevant to something the public is interested in. I feel compelled to make these comments before we recess. I had hoped to have a more appropriate time to make them, but I must do it now.

Like it or not—and I am not at all sure I do—there is no greater spur to human exertion than competition. From the chariot races of ancient Rome to the major league baseball of modern America, contests of courage and skill have provided people with thrills and entertainment. Competition is also one of the powerful engines of economic growth and technological innovation. The rivalry of merchants and manufacturers was a powerful force in setting off the industrial revolution and is still a major—if somewhat dogmatized—factor in our modern economy. The competitive instinct broke the 4-minute mile and sent astronauts to the moon; it also sent tens of millions of people to premature deaths in the two world wars.

Competition between nations differs from the rivalry of individuals in that it is conducted on a far greater scale, brings to bear vastly greater resources, affects the lives of many more people, and is more likely than other rivalries to be conducted without rules or restraints to assure the survival of the participants. In other respects I perceive no important differences between the rivalries of individuals, teams, corporations, armies, and nations. All are engaged in a contest for self-maximization, not just to excel but to exceed, not just to do something well but to do it better than somebody else.

Competition is not the only spur to human exertion. At least in Western cultures the challenge of overcoming natural obstacles has fired the adventur-

ous spirit in man: The mountain challenges the climber, the wave the surf rider, the sea the mariner, the jungle the explorer, the universe the astronaut.

By paradoxical contrast, unnatural—by which I mean manmade—obstacles have no such motivating magic. For most of us such unnatural obstacles as decaying cities and polluted water and air are a tolerated nuisance rather than a motivating challenge—the accepted price of something called "progress." Western man, it seems, has come close to reversing the ancient stoicism of the East: Restless and insatiable in challenging nature's creations, he is becoming passive and fatalistic about his own. He will leap to the stars and yet squat miserably in his own fouled nest. Were it not so paradoxical and so debilitating, one might even take this for a new form of spirituality.

Be all that as it may, the competitive instinct is probably the most reliable tool of human creativity. But it has certain risks about it, one being the constant danger that a zealous competitor will compete too well and so put an end to the competition. In sports, in business, and in politics it is essential to confine the contest within rules which will prevent anyone from succeeding too completely, thereupon putting an end to the game and robbing mankind of the creative benefits of the competitive process.

The genius of the American Constitution is that, at least up to now, it has kept the game going and the competitors in competition. The division of governmental powers among three branches and 50 States puts the various contenders for power in the position of having little chance of victory but an excellent chance of survival in the continuing struggle for power. The system works tolerably well largely because it does not depend too heavily on human conscience and voluntary restraints, which, admirable though these are, must be counted among the less reliable of human attributes. Instead, with unsentimental realism, the framers of our Constitution faced up to the universality of the human drive to self-aggrandizement, recognized it for the creative but dangerous force that it is, and harnessed it into a system of regulated rivalries, free enough to generate political energy, restrained enough to protect the people from despotism.

Difficult as it is to control, the competitive instinct is even more difficult to acknowledge. Only in sports are competitions conducted in their own name; the game is for its own sake, for the fun of playing and the hope of winning. But in politics we feel a compulsion to dress up our contentious impulses in the vocabulary of ideals and ideology. No matter what the fight and who is involved in it, we suppose, almost invariably, that some great principle is at stake, some noble and unselfish purpose, such as realizing our own great ideals or, more commonly, saving people from the wicked designs of our rivals.

To hear the Soviet and American leaders talk about the cold war, nothing could be further from their pristine thoughts than any notion of self-aggrandizement or getting one up on the other. Heaven forbid. By their own accounting of it the Russian leaders sit up nights in the Kremlin thinking up ways to lift the yoke of oppression from the downtrodden of the earth. President Nixon, for his part, recalled in a recent speech that the United States had suffered over a million casualties in four wars in this century, and then claimed that it had all be done out of saintly altruism. He declared:

> Whatever faults we may have as a nation we have asked nothing for ourselves in return for those sacrifices. We have been generous toward those whom we have fought. We've helped our former foes as well as our friends in the task of reconstruction. We are proud of this record and we bring the same attitude in our search for a settlement in Vietnam.[1]

I do not suggest that Mr. Nixon was insincere in asserting that we had suffered a million casualties in four wars as an act of pure altruism. Undoubtedly he meant it, but that does not make it true. Most of us have a deep and touching faith in our own virtue, and most politicians have an equally tender regard for their own rhetoric. Few people are more moved by a moving speech than the speaker himself—but that does not make what he says true.

Nor do I suggest that there are no ideals or generous impulses in politics. I suggest only that they are far less controlling than we like to believe; that more often than not what we take for principle is not principle at all but rationalization; that the thing we are usually rationalizing is our instinct for competition; and that, if anything approaches a controlling influence on our behavior, it is this appetite for contest. I further suggest that there would be much to gain from a candid acknowledgement of our own political nature. Indeed, it is only by recognizing the fragility of our ideals, the limited role they play in guiding our behavior, and their susceptibility to corruption by rationalization that we can have any hope of translating them into reality. The Founding Fathers had no illusions about the behavior of their fellow men and, because of their realism, they were able to discipline the struggle for power so as to protect the people from despotism.

That brings me to the space race and to its possible uses for earthly purposes. The landing of Mr. Armstrong and Colonel Aldrin on the moon called forth a great deal of poeticizing about the human spirit bursting its earthly bonds, about the nobility of man's endless search for knowledge, and about the boundless but unspecified benefits for mankind certain to derive from the setting of human feet upon the surface of the moon.

In all this I perceive not humbug pure and simple but rather more sententiousness than plain hard truth. Americans went to the moon for a number of reasons, of which, I am convinced, the most important by far was our desire to beat the Russians. The kick was not just in getting there but in getting their first. A football team does not celebrate the number of points it got if the other team got more points. Similarly, when Khrushchev cavorted over his sputnik back in 1957, it was not so much in delight over what the Russians had done as in delight over what they had done that we had not done. Then in early 1961 Yuri Gagarin made his flight around the earth, the United States was embarrassed at the Bay of Pigs, and the American people in general and the Kennedy administration in particular were plunged into depths of gloom and self-flagellation. These events stoked the fires of American competitiveness. It was then that the Apollo program was approved and we set off on the $30 billion crash program that put Mr. Armstrong and Colonel Aldrin on the moon last week.

I do not wish to belittle the achievement in identifying the driving force behind it. But neither do I see any point in glorifying the motive out of appreciation for the achievement. In the space race thus far both Russians and Americans have accomplished technological prodigies and have done so for the most part because of the desire of each to surpass the other. Although some of us have thought the space contest hasty and extravagant in cost, it has certainly been a more constructive contest than the deadly race in armaments. It has, however, been wasteful: Efforts have been duplicated, priorities distorted, and resources diverted from more urgent needs. The competition bids fair to get out of hand, to pass beyond creativity to prodigality of worse.

I would not eliminate the competition. People like it much too much, and if through some miracle the Russians and Americans could bring themselves to get together, drop the space race and proceed to explore the universe all cooperative and lovey-dovey, it would spoil everybody's fun and likely rob the project of its creative drive. What we might try to do is to devise a way of putting limits on the competition, keeping it within financial bounds, and generally regulating the rivalry in such a way as to have the contest without being consumed by it.

Until now the Soviet-American space rivalry has been a contest without rules, and contests without rules are full of hazard for the participants. There is a latent militarism about the space race. As Prof. George Wald commented on the moon landing:

> What should have been a great flight of the human spirit comes to us heavy with threat. Those almost miraculous guidance systems that so uncannily find their targets, will they one day be guiding missiles to find us?[2]

Spurred by an overly intense desire to "win," the contest has broken the bounds of "true science," which the great 19th century French physiologist Claude Bernard said, "teaches us to doubt and in ignorance to refrain."

Oblivious in our haste to such cautionary warnings, we have scarcely thought

[1] Speech of May 14, 1969.

[2] "Intellectuals Deeply Divided Over Implications of Feat," The Washington Post, July 22, 1969.

of the consequences and the cost. If we thought seriously about the consequences of space exploration, we might at least hesitate before exporting our human imperfections to other worlds. As to the cost, we have diverted not only the $30 billion on the cash account but incalculable stores of scientific energy which, like the money itself, might well have been allocated differently if we had stopped to weigh our priorities.

Had sober counsels prevailed, we might well not have seen men land on the moon in the year 1969. The event might have been deferred until 1979 or 1989. Can anyone seriously argue that that would have been one of the great tragedies of human history? Suppose—as we are sometimes urged to suppose—that cautious counsels had prevailed in 15th century Spain and Columbus had not made his voyage in 1492. In all probability Ferdinand Magellan or Sir Francis Drake—but surely somebody—would have discovered America a few years or several decades later. America would still have been there, waiting to be discovered, and—with the possible exception of our own—the planets will still be intact, available for exploration, in the year 2000.

Much as we enjoy—and perhaps in a psychological sense require—the rivalry, it is worthwhile trying to put it in perspective. Neither the Soviet sputnik nor the American moon landing proved anything much about the two countries' ideologies. As Mr. Harry Schwartz pointed out recently, the Apollo program was as socialistic in its management and financing as the Soviet space program, employing the private corporations which built the hardware as "servants of the state." Even the three astronauts were Government employees.[3]

As far as ideology is concerned, we did not prove anything much one way or the other by going to the moon. Nor, I think, did the moon landing prove, disprove, or in any important way really bear upon ideals, principles, or our trumpeted desire to serve humanity. What it did prove is some things that hardly needed proving: That America has great wealth, an advanced technology, and impressive managerial capacity. It also demonstrated our fierce competitive capacity—especially where the Russians are involved—and our very keen desire to command the awe and admiration of the world.

Taking all these factors into account, and considering also that the score is now evened out—the Russians were first in space but we were first on the moon—it seems like a good time to institute a set of rules for regulating future competitions in space exploration. For this purpose the Soviet Union and the United States might call for the creation of a United Nations space authority to serve as a clearinghouse for scientific information, to operate orbiting space laboratories and arrange to have them manned by scientists from different countries, and to assign or at least coordinate national space ventures in such a way as to eliminate costly duplication without eliminating the exhilarating competition. An international space authority might even encourage competitive ventures but in such a way that national programs are complementary to each other. Another possible function of a United Nations space authority would be to govern and administer the economic exploitation of the moon—should that ever prove feasible—and to do so as the agent of the United Nations.

We already have an international treaty for the rescue of astronauts and a space treaty which provides that—

> The exploration and use of outer space, including the moon and other celestial bodies, shall be carried out for the benefit and in the interests of all countries. . . .

It would be a major step forward if we could now negotiate a new space treaty which would go beyond the disavowal of national claims of sovereignty in the existing treaty and explicitly recognize the United Nations as the "owner" or sovereign of extraterrestrial bodies and also define the functions and responsibilities of a United Nations space authority, particularly the ways in which it would regulate and coordinate national space exploration programs.

The overall objective of such a treaty would be to regulate but not eliminate the competition in space. One benefit of such an arrangement is that it would allow the space powers to reduce their expenditures and so reallocate funds to more pressing domestic and international requirements.

Another, perhaps greater benefit would be the breathing of new life into the United Nations by assigning to it a significant new supranational responsibility. Nothing has done more to enhance the prestige of the Soviet Union and the United States than their spectacular achievements in space. I am not at all sure why this should have been so, and I am far from convinced that moonshots are a rational criterion for prestige, or, for that matter, that the very concept of "prestige" is a rational one. But these are only one man's arrant ruminations. Quite obviously, prestige is important, and space spectaculars are a sure-fire way to get it. If they work for the Soviet Union and the United States, they ought to work for the United Nations and so contribute to that most urgent of human necessities: the building of an international community.

The Russians seem interested. According to press reports, Premier Kosygin expressed genuine interest in space cooperation to former Vice President Humphrey in a recent meeting in Moscow. The relatively friendly Soviet treatment of the flight of Apollo 11 and the warm reception given to the astronaut Col. Frank Borman in the Soviet Union are also favorable straws in the wind. I strongly urge the Nixon administration to respond to these with prompt and specific proposals.

These proposals which I make are modest ones, cut to the specifications of our modest human capacities in matters of a nontechnological nature. Their realization, should that prove possible, will not usher in the millenium, any more than the moon landing itself. But the creation of a United Nations space authority would, I think, represent a useful step forward on the long, tortuous road toward the development of effective international institutions. I do not share President Nixon's exuberant belief, as he expressed it to the returning astronauts, that the week of the moon landing was "the greatest week in the history of the world since the Creation," or even that the moon landing "changed the world," or that "the world is closer together" as a result of it. I do believe, however, that the world could be brought a little closer together by a space treaty vesting important new responsibilities in the United Nations and, if not the "greatest week in the history of the world since the Creation," it might at least make for one of the better weeks of recent years.

The world in general, and America in particular, had a week's holiday from themselves during the flight of Apollo 11, and perhaps it did us all good. But the astronauts have now come back to earth, and the rest of us have got to come back to earth too. Little as we may like it, it is the same earth from which we took leave for our brief holiday on the moon. The squalid nightmare of Vietnam is still there, and so are the arms race, the population explosion and all the other tragedies and incongruities of the human condition. Not even a million Saturn rockets jam-packed with earthly emigrants could separate us from the earth's problems because the earth's problems are human creations, built into us by God or nature or evolution, and wherever we go we will carry them with us.

Neither the moonflight nor all the panegyrics it has inspired is going to change much about the human condition. Men have been achieving technological marvels for the last two centuries, and kings and presidents and popes and preachers have been heralding new eras of brotherly love for the last two millenia. Neither has had an appreciable effect on the moral condition of the human race. The only hope we have of changing that—if it can be changed—is by facing up to certain facts of experience, of which the most important is that man, the technological genius, is a moral primitive. If there is ever to be such a thing as a human community, it will have to begin with the candid recognition that man's capacity for brotherly love is limited. As a species, we do not really like each other all that well and our problem is to seek out practical ways of learning to put up with each other so as to have some hope of survival. If that is not the most promising of foundations on which to build, it has at least the solidity of truth.

Mr. President, I ask unanimous consent to have printed in the RECORD at this point three recent, significant articles on the implications of space exploration. One, by Lord Ritchie-Calder, is entitled "Moonshoot—the Great Diversion" and appeared in the New York Times on July 19, 1969. A second, by Harry Schwartz, is entitled "Capitalist Moon or Socialist Moon?" It appeared in the

[3] "Capitalist Moon or Socialist Moon?", *The New York Times*, July 21, 1969.

New York Times on July 21, 1969. The third, by the historian and urbanologist Lewis Mumford, is called, "No: 'A Symbolic Act of War . . .'" and it appeared in the New York Times on July 21, 1969.

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

TOPICS: MOONSHOT—THE GREAT DIVERSION

(By Lord Ritchie-Calder)

LONDON.—The climax of H. G. Wells's film "Things to Come" was the dispatch of a youth and a girl to the moon. He placed the moon-landing in 2055 A.D. In his scenario (1935) he wrote:

"For man there is no rest and no ending. He must go on—conquest beyond conquest. This little planet and its winds and ways, and all the laws of mind and matter that restrain him. Then the planets about him, and at last out across immensity to the stars. And when he has conquered all the deeps of space and all the mysteries of time—still he will be but beginning."

The blast-off was just in time because the crowds, led by Theotocopulos, tried to stop it.

MAN'S ADVENTURE

At that time I was working closely with Wells and I do not think he would have cast me for the role of Theotocopulos. I certainly would not have foreseen myself as an old curmudgeon croaking "it's all a mistake." But then I was not a Professor of International Relations counting the cost and the consequences. I saw it, as Wells saw it, and as President Kennedy saw it later, as man's great adventure, his restless destiny, and as an inspiration for young people. Today, I have my profound misgivings and I find that all curmudgeons are not old and that doubts are shared by young people in America as well as elsewhere.

Dare one utter a heresy "fugitive into space" and suggest that it is an evasion and an exasperation of the problems of our own planet?

Wells got his time-scale wrong—86 years out—because he did not foresee the technique of the crash program, whereby, as in the case of the Manhattan Project, a fundamental scientific discovery could be converted into a cataclysmic nuclear device in less than five years, simply by mobilizing scientists and turning them into technologists, redirecting a vast engineering potential and, cost no objection, assembling men, methods and materials into an implosive operation.

The technique was repeated in the space program. From the modest, common-purpose-of-mankind, objectives of the International Geophysical Year, twelve years ago, the space program erupted into fierce competition. The United States and the U.S.S.R. had agreed to put satellites into orbit as part of the I.G.Y. purpose of observing our planet from outside and studying the external forces impinging on it.

If Sputnik I had not got into orbit first, if American prestige had not been affronted, if it had not been made the excuse for "the missile gap" furor, we would not have had the technologically bombastic competition between the superpowers and the yip-hurroo of "man on the moon by 1970." And man would still, as a common purpose without deadlines, have broken the gravitational fences of his planet and extended his telemetric senses throughout the solar system and beyond.

Instead, we have seen a fantastic diversion of human ingenuity—always with military inflections. The tens of billions are only the cash bookkeeping of this diversion which has drained brains from all over the world as well as from every university and college in the United States and the U.S.S.R. Through the military-industrial complex (with all deference to NASA) it now represents about a tenth of the economy of the United States. That, an outsider may be allowed to say, is a perilous commitment.

CAUTION OF TRUE SCIENCE

A century ago Claude Bernard, the great French physiologist, enjoined his colleagues, "true science teaches us to doubt and in ignorance to refrain." This means that science feels its way, with a mine detector, from one safe foothold to another.

Men-in-a-hurry do not observe those safeguards, although, as in the case of quarantine, they acknowledge the risks. Quarantine against what? If moon-bugs should exist they would have been conditioned to extremes of heat and cold quite remote from the incubation periods of anything on earth. Wells in another context, his "War of the Worlds," saved the earth from the Martians by killing them off with our atmospheric germs. It would be ironical if a naked planet should invade ours with its germs.

Meanwhile the conditions of this planet, from which only the astronauts can escape, deteriorate, inescapably, unless man vetoes the evoluation of his species in a nuclear war, the present population of over 3,500,000,000 will have doubled by the end of the century. We have to feed, house and clothe them. This is by far the biggest threat we face (with it goes urbanization, environmental pollution, race tensions, the lot). Of course, we cannot eat space hardware or turn elections into food calories, but the human ingenuity which is being squandered on the space race could, to better purpose have been directed to those problems.

The world is crying out for bread and is being offered moondust.

CAPITALIST MOON OR SOCIALIST MOON?

(By Harry Schwartz)

Long ago the question was asked how a future titan of private enterprise—a Henry Ford or John D. Rockefeller of space—might organize and finance the first manned trip to the moon.

An American science fiction writer posed and fictionally solved the problem in an ingenious and unjustly forgotten short story. The author had his entrepreneur-hero raise the needed money by selling advance monopoly concessions on the moon to the earth's great corporations, each paying handsomely for the exclusive right to mine minerals, run radio stations, or operate manufacturing enterprises on or under the lunar surface.

Matters have not turned out that way. The race to the moon has been a competition between governments, each financing the huge costs from the public treasury. The three Apollo astronauts are all government employes, and Neil Armstrong—the first man ever to walk on the moon—belongs to the civil service. James Webb and Thomas Paine, the two chiefs of NASA this past decade, are both energetic people, but they are successful bureaucrats, not entrepreneurs in the grand Ford-Rockefeller tradition.

Realization of these facts should dispose of any notion that the race to the moon was in any sense a test between two ideologically based economic systems. The stereotype has been that this was a competition between American capitalism and Soviet socialism. But the triumphant United States moon program was as socialistic in its central direction and financing as its rival Soviet effort. The huge private corporations that built the Apollo hardware made immense contributions, of course, but only as servants of the state that paid the bills. And Luna 15 is an effective reminder that Soviet enterprises too can build space hardware.

WHAT LUNAR ADMINISTRATION?

This ironic history is relevant because it helps focus attention on a question immediately raised by the historic first manned landing on the moon. Is it to be a socialist moon or a capitalist moon?

It can be taken for granted that tomorrow's lunar world will have mines, factories, hotels, newspapers, radio and television stations, and probably even professional sports teams like the Mets and the Jets. Are they to be run by private businesses as the science fiction writer mentioned above assumed, or will they simply be bureaucratic subsections of some huge over-all MAA (Moon Administrative Authority), or whatever it may be called.

Are those lunar hotels to be Hilton swank or Intourist spartan? Should securities analysts be gearing up to study the prospects of companies named Lunar Industries Inc. or Moon Minerals Exploration Ltd.?

One difficulty in answering these questions is that nobody owns the moon. The Apollo 11 astronauts won't have to pay anyone for the lunar rocks they intend to pick up and bring to earth. Nor is there any landlord to whom they will have to pay rent for the territory that they land on and explore.

Until very recently such questions of property rights on the moon seemed as unimportant as the possibility of men landing there seemed fantastic. Now the landing is a reality, and problems that yesterday only science fiction writers worried about are today on the agenda of world politics and economies.

The Space Treaty adopted and ratified by most nations a few years ago—including the U.S. and the U.S.S.R.—declares that "the exploration and use of outer space, including the Moon . . . shall be carried out for the benefit and in the interests of all countries." But these and other vague provisions give little guidance for solving the practical problems ahead, especially in the present concrete situation where only two nations have the capability to send men and equipment to the moon. One possible outcome is the transfer of the ideological rivalry to the second inhabited world. American lunar mines, factories, hotels and the like might be run by private firms, while their Soviet analogues might simply be branches of the corresponding Moscow ministries. The wastes and daners in this "solution" are plain.

FOR U.N. OWNERSHIP

A much more sensible way out—but one that may be hard to achieve because it was not decided before men reached the moon—is for the nations of the world to agree that the United Nations is the owner of the moon.

Then the U.N. could assign different sectors of the future lunar economy on the basis of competitive bids offered by rival private companies and government agencies in all countries. The income thus received could be used to help the poverty-stricken nations of the world, regardless of political or economic systems. That solution would make the moon an instrument for unifying mankind, not continuing or widening today's dangerous fissures.

NO: "A SYMBOLIC ACT OF WAR"

(By Lewis Mumford)

The most conspicuous scientific and technical achievements of our age—nuclear bombs, rockets, computers—are all direct products of war, and are still being promoted, under the guise of "Research and Development" for military and political ends that would shrivel under rational examination and candid moral appraisal. The moon-landing program is no exception: it is a symbolic act of war, and the slogan the astronauts will carry, proclaiming that it is for the benefit of mankind, is on the same level as the Air Force's monstrous hypocrisy—"Our Profession is Peace."

The program to land men on the moon serves more than one purpose. From a military standpoint, it was deliberately planned as a means of swiftly perfecting the equipment for total extermination—the strategic

goal toward which our entire megatechnic power system, in the lethal grip of the "myth of the machine" is now pointed. The secondary purpose of space exploration, which commends it to our affluent society, is to support on a more exorbitant scale than ever the military-industrial-scientific establishment and maintain the current rates of industrial expansion and financial inflation.

In order to achieve both military power and economic "prosperity" and support the power elite and their factotums in the style to which they are accustomed, every other human enterprise must either be trimmed to meet their needs or abandoned. It is no accident that the climatic moon landing coincides with cutbacks in education, the bankruptcy of hospital services, the closing of libraries and museums, and the mounting defilement of the urban and natural environment, to say nothing of many other evidences of gross social failure and human deterioration.

In order to make this misappropriation of public funds and human energies acceptable, the Space Agency has turned the moon landing program into a national sporting event whose excitement is augmented by the fact that, as in speed racing, it provides a morbid thrill in the ever-present possibility of a spectacularly violent death. To further mask the real nature of this enterprise, the promoters of space exploration have made the credulous and the scientifically uninformed believe that a better future may await mankind on the sterile moon, or on an even more life-hostile Mars—as if such a change of scene would bring our sick rulers and their still acquiescent victims back to health.

The old name for such regressive escapist fantasies was lunacy, and that epithet is still accurate as both a topographical and a psychiatric description. If the military space strategists do not terminate their own activities by turning the whole planet into a crematorium, they will soon transform it into a collective lunatic asylum, in which the patients, the attendants, the physicians, and the Board of Guardians (read Pentagon and Kremlin) will suffer the same hallucinations and be under the same escapist compulsions. They have already demonstrated their inability to perceive, still less to cope with, the earthy human realities that urgently demand attention.

If a successful moon landing leads to a further expansion of space exploration, with a further drain on more important human enterprises and a further neglect of the conditions essential for human survival and development, we may look forward to a corresponding increase in social demoralization and psychological regression. Only a return to full waking consciousness, with an overwhelming transfer of interest from our dehumanized technology to the human person, will suffice to bring our moonstruck nation back to earth. Meanwhile, thanks to the very triumphs of technology, the human race hovers on the edge of catastrophe.

Mr. FULBRIGHT. Mr. President, we have in my State a very perceptive editor of one of the best newspapers in that part of the world, Mr. Tom Dearmore, who has written an article on this subject entitled "Big Event, but Bigger Talk," published in the Baxter Bulletin, of Mountain Home, Ark., on Thursday, July 31, 1969. I ask unanimous consent that the article be printed in the RECORD.

The PRESIDING OFFICER (Mr. ALLEN in the chair). Without objection, it is so ordered.

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

BIG EVENT, BUT BIGGER TALK

(By Tom Dearmore)

Millions of eyes strained as the astronauts plummeted toward the sea last Thursday, and a television reporter aboard the Hornet said that no doubt the President would shortly contribute a few words to put the epochal event "in perspective."

We were braced for a barrage of verbal extravagance from all sides and the President set the tone with some high-powered hogwash.

As the moon voyagers peered out of the window of their aluminum coop, Mr. Nixon told them, "This is the greatest week in the history of the world since the Creation."

We would rather have the word of the Creator for that. There have been some pretty great weeks since the earth was put together, and in any case one must have the advantage of hindsight to determine what was really number one. One must judge the effects, the spin-offs.

Certainly the moon landing was the finest triumph of technology since the Creation, although to us it is little less remarkable than the transmission of the human voice through the air, around the earth. Being able to sit in Mountain Home and view that golden sunrise on the Pacific with the crew of the carrier Hornet, via satellite, is still something we've not quite figured out.

If greatness is thought of in terms of national power and prestige and of mechanical genius, this episode may indeed have been the most colossal. We showed the rest of the world—and especially the Soviets, who bombed out miserably before the eyes of all human-kind—how it's done. We showed 'em, too, that we are capable of laying a rocket-borne warhead promptly and accurately on any country that threatens us. Defense Secretary Laird was quick to employ the success of the moonshot as an argument for the administration's antiballistic missile program, which is in trouble in the Senate. And no doubt the people in the Pentagon who are hot to deploy the frightening MIRV missile (a rocket which, when lofted, can shoot from its nose several more nuclear missiles at different targets) will take heart from this bullseye achievement.

The President, who wasn't very hot for the space program back when it was getting started, is now an onward-and-upward man. "In the year 2000," he said last week, "we on this earth will have visited new worlds where there will be a form of life." Vice President Agnew already had given it away that that's Mars they're talking about

Much more important than whether earthmen will be cultivating squash on Mars someday is whether there will be any form of life—or any satisfactory life—here on the neglected earth. With the proliferation of nuclear rockets and the refinement of the Multiple Independently Targetable Re-entry Vehicle (spray-nose MIRV), the earth is becoming one big finely-tuned time bomb. Power stance depends not just on moon jaunts but on having the jim-dandiest Doomsday machinery. No doubt the competition will continue until somebody leans on the wrong button.

Then there is the population bomb, which threatens to create by the year 2000 the hellish conditions of famine and congestion that could trigger the Doomsday weaponry, if that isn't done by accident beforehand.

To Mr. Nixon's credit, he has taken a firm position in recent days on this question, asking the Congress to set up a commission to begin dealing with the population explosion in the U.S. Noting that there are now 3½ billion people on the planet, he said it is "likely that the earth will contain over seven billion human beings by the end of this century." The test will be whether he proposes any space-scale programs to deal with this impending tide and with other earth ills which could wreck society before the Mars rocket gets airborne.

Of course there are those among us who could have been more flamboyant than Mr. Nixon. If Hubert Humphrey had won last November, the carrier Hornet might still be sitting at the recovery site while the President continued his extemporaneous remarks. It isn't inconceivable that the talkathon would include the assertion that the moon caper was GREATER than the Creation.

Mr. Nixon wasn't the only one to go on a rhetorical binge. Down at Little Rock, some folks called Station KARK–TV to protest the moonshot's bumping favorite programs off the air. In a fine patriotic lather, the station hustled out an editorial which concluded: "You people who called to complain about the Apollo 11 coverage on television . . . do not deserve the privilege of calling yourselves Americans!"

That old dreary, silly business of "who is a true American" again. When will we ever learn that this is a variegated country whose heritage is liberty. It was framed for the tolerance of diversity, and that's what makes it exciting. A man may think anything he wishes, and Americans think just about everything under the sun. A man may want to dress up in an Uncle Sam suit and play the national anthem on a trombone atop his house when the Mars rocket takes off, or he may want to play solitaire in his storm cellar and say phooey on it. Either way, he doesn't have to have his "American" credentials stamped by anybody. That's what the ole Revolution of '76 was all about, and it's still more exhilarating than any skyrocket.

This country's main benisons have been spiritual, not material. We feel quite certain that the moon landing wasn't the greatest even since the Creation (we rate the arrival of Christianity and the discovery of the New World ahead of it), and we can't believe it was even the greatest in the history of the nation. The signing of the Declaration of Independence was more electrifying, launching an irreversible drive for human consideration that is chain-reacting right along through the 20th Century. Mr. Jefferson and his pen put a mighty big thing in orbit.

We doubt that Americans are as excited about moon walks as they once were about the exploration and settlement of the vast lands west of the Appalachians. This over-entertained, under-concerned, inflating, festering country has a case of the spiritual blahs. There was no starburst of ecstasy at the great moon event, else why did the stock market not only fail to respond but go into a nosedive?

The incredible has become commonplace. And a good many Americans are dispirited over the Vietnam nightmare and the intractable domestic ailments. Perhaps many feel that the person is becoming less significant as computers take over the brainwork and even the handwork. Maybe an awareness grows that there is more concern about things than about people. Most of the public purse is spent on gadgetry that amazes but doesn't satisfy. Our guess is that satisfaction can come only from remedying human dilemmas, building a harmonious and equitable society in which ancient hates are subdued.

There may be hope for that in the moon episode. Marvelous capabilities have been demonstrated and possibly, as Mr. Nixon told the astronauts, "the world has been drawn closer together." But the social and political sciences will prove much harder to crack than the physical sciences, and a strong public will is needed. Space exploits must not become an expensive escape from the responsibilities of earth.

TRANSACTION OF ROUTINE MORNING BUSINESS

By unanimous consent the following routine morning business was transacted.

EXECUTIVE COMMUNICATIONS, ETC.

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

REPORT ON CLAIM OF THE HAVASUPAI TRIBE OF THE HAVASUPAI RESERVATION, ARIZONA

A letter from the Chairman, Indian Claims Commission, transmitting, pursuant to law, a report that proceedings under the act have been concluded on Docket No. 91, the Havasupai Tribe of the Havasupai Reservation, Arizona, Plaintiff, v. the United States of America, Defendant (with accompanying papers); to the Committee on Appropriations.

PUBLIC TRANSPORTATION ASSISTANCE ACT OF 1969

A letter from the Secretary of Transportation, transmitting a draft of proposed legislation to provide long-term financing for expanded urban public transportation programs, and for other purposes (with accompanying papers); to the Committee on Banking and Currency.

REPORTS OF COMPTROLLER GENERAL

A letter from the Comptroller General of the United States, transmitting, pursuant to law, a report on efforts to collect International Postal Debts and to pay postal amounts owed in excess foreign currencies, Post Office, Department of State (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 effectiveness and administration of the Community Action Program under title II of the Economic Opportunity Act of 1964, Human Development Corporation, St. Louis City and St. Louis County, Mo., Office of Economic Opportunity (with an accompanying report); to the Committee on Government Operations.

REPORT ON CLAIMS PAID UNDER THE MILITARY PERSONNEL AND CIVILIAN EMPLOYEES' CLAIMS ACT OF 1964

A letter from the President, Panama Canal Company, Balboa Heights, C.Z., transmitting, pursuant to law, a report on claims paid by that Company during the period July 1, 1968 to June 30, 1969, under the Military Personnel and Civilian Employees' Claims Act of 1964 (with an accompanying report); to the Committee on the Judiciary.

PROSPECTUS FOR ALTERATIONS AT THE POST OFFICE AND COURTHOUSE, MIAMI, FLA.

A letter from the Acting Administrator, General Services Administration, transmitting, pursuant to law, copies of a prospectus for alterations at the Post Office and Courthouse, Miami, Fla. (with an accompanying paper); to the Committee on Public Works.

PETITIONS AND MEMORIALS

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

By the ACTING PRESIDENT pro tempore:

Resolutions of the Legislature of the Commonwealth of Massachusetts; to the Committee on Banking and Currency:

"RESOLUTIONS MEMORIALIZING THE CONGRESS OF THE UNITED STATES TO ENACT LEGISLATION TO ESTABLISH A MASS TRANSIT FUND

"Whereas, Our national welfare requires the provision for good urban transportation with the properly balanced use of private vehicles and modern mass transportation; and

"Whereas, A good deal of the present imbalance in our transportation system can be attributed to extravagant governmental aid and consideration to the automobile to the almost total exclusion of all other modes of transportation; and

"Whereas, Because of the impossibility of financing a large mass transportation capital improvement program from the fare box and because the fiscal position of state and local governments in urban areas prohibits financing of such a program, substantial Federal financial participation is called for; therefore be it

"Resolved, That the Massachusetts House of Representatives respectfully urges the Congress of the United States to enact Senate Bill No. 1032, legislation to establish a mass transit fund to provide matching funds for building or expanding mass transit systems; and be it further

"Resolved, That copies of these resolutions be sent forthwith by the Secretary of the Commonwealth to the President of the United States, to the presiding officers of both branches of the Congress and to the members thereof from the Commonwealth.

"House of Representatives, adopted July 28, 1969.

"Wallace C. Mills, Clerk.

"A true copy.

"Attest

"JOHN F. X. DAVOREN,
"Secretary of the Commonwealth."

A joint resolution of the Legislature, State of California; to the Committee on Banking and Currency:

"ASSEMBLY JOINT RESOLUTION No. 57

"Relative to community development

"Whereas, In 1968 the California Legislature enacted into law as Chapter 1392 of the Statutes of 1968 Assembly Bill No. 115, introduced by Assemblyman Robert T. Monagan; and

"Whereas, Such Chapter 1392 establishes a program to make it possible for residents of substandard and deteriorated housing areas to form renewal area agencies in their neighborhoods, issue tax-exempt bonds, and, by working cooperatively with local governments, plan, finance, and carry out necessary rehabilitation or rebuilding in the renewal areas; and

"Whereas, Such program will alleviate some of the economic forces which tend to drive low-income residents out of their neighborhoods; and

"Whereas, Congressman William S. Mailliard has introduced H.R. 11596 before the Congress of the United States, which bill, if enacted, will authorize the extension of federal mortgage guarantee to bonds of a type issued under the program established under Assemblyman Monagan's bill; and

"Whereas, Such mortgage guarantee is urgently needed to expedite the rebuilding and rehabilitation of neighborhoods under renewal area agency programs; now, therefore, be it

"Resolved by the Assembly and Senate of the State of California, jointly, That the Legislature of the State of California memorializes the President and the Congress of the United States to enact legislation to authorize the extension of federal mortgage guarantee to bonds of a type issued under Assemblyman Monagan's bill; and be it further

"Resolved, That the Chief Clerk of the Assembly transmit copies of this resolution to the President and Vice President of the United States, to the Speaker of the House of Representatives, to the Departments of Housing and Urban Development and Health, Education, and Welfare, to the Chairman of the House Banking and Currency Committee, and to each Senator and Representative from California in the Congress of the United States."

A joint resolution of the Legislature, State of California; to the Committee on Interior and Insular Affairs:

"ASSEMBLY JOINT RESOLUTION No. 37

"Relative to oil drilling.

"Whereas, Section 6871.2 was added to the Public Resources Code of this state by the Cunningham-Shell Tidelands Act of 1955 (Ch. 1724, Stats. 1955) to prohibit oil and gas development operations in designated areas of tide and submerged lands in the Counties of Los Angeles, Santa Barbara, Orange, San Diego, and San Luis Obispo, and the section was subsequently amended in 1963 to create additional oil drilling sanctuaries with respect to certain tide and submerged oil lands in the Counties of Monterey, Humboldt, and Mendocino; now, therefore, be it

"Resolved by the Assembly and Senate of the State of California, jointly, That the Legislature of the State of California respectfully memorializes the President and the Congress of the United States to prohibit oil and gas development operations on such submerged federal lands off the California coast as would represent an extension to the outer continental shelf of the boundaries of the oil drilling sanctuary areas which have been created with respect to certain tide and submerged lands of the state; and be it further

"Resolved, That, with respect to those areas on the Outer Continental Shelf off the coast of California where oil and gas development operations are conducted under federal lease, the Legislature of the State of California respectfully memorializes the President and the Congress of the United States to allocate to the state 37½ percent of the net revenue received by the federal government from the conduct of such operations; and be it further

"Resolved, That the Chief Clerk of the Assembly transmit copies of this resolution to the President and Vice President of the United States, to the Secretary of the Interior, to the Speaker of the House of Representatives, and to each Senator and Representative from California in the Congress of the United States."

A joint resolution of the Legislature, State of California; to the Committee on Public Works:

"ASSEMBLY JOINT RESOLUTION No. 19

"Relative to the New Melones Dam and Reservoir project.

"Whereas, The New Melones Dam and Reservoir Project on the Stanislaus River in California is presently under construction by the Army Corps of Engineers; and

"Whereas, The New Melones Reservoir upon completion will prevent frequent and highly damaging floods along the Stanislaus River and the San Joaquin River which cause millions of dollars in damage; and

"Whereas, In January of this year another major flood occurred on the Stanislaus River causing damage which is estimated at between one and two million dollars; and

"Whereas, This project will also provide substantial benefits for irrigation, recreation, fish enhancement, water quality control, and power production in a wide area of central California; and

"Whereas, The California Water Commission after extended study has recommended that sufficient funds be appropriated during the fiscal year 1969–1970 to advance construction of the dam and insure the earliest possible completion of the project; and

"Whereas, Recurring floods, the growing need for water for irrigation and domestic purposes, and the increasing demand for recreational developments in the area amply justify the earliest possible completion of the New Melones Dam and Reservoir Project; now, therefore, be it

"Resolved by the Assembly and Senate of the State of California, jointly, That the Legislature of the State of California respect-

fully memorializes the Congress of the United States to appropriate during the fiscal year 1969–1970 for construction of New Melones Dam on the Stanislaus River an amount sufficient to insure the earliest possible completion of the project; and be it further

"*Resolved*, That the Chief Clerk of the Assembly transmit copies of this resolution to the President and Vice President of the United States, to the Director of the Bureau of the Budget, to the Secretary of Defense, to the Chief of Engineers of the U.S. Army, to the Speaker of the House of Representatives, and to each Senator and Representative from California in the Congress of the United States."

A letter, in the nature of a petition, from Allan Feinblum, of New York, N.Y., urging all Americans to pray for the removal of all occupation forces from Prague; to the Committee on Foreign Relations.

A resolution adopted by the Common Council of the City of Milwaukee, Wis., urging the Congress to consider urban survival the No. 1 priority in America today; to the Committee on Banking and Currency.

A resolution adopted by the city council, city of Philadelphia, Pa., praying for the enactment of legislation to provide the grape harvesters and farmworkers generally with the right to bargain collectively; to the Committee on Labor and Public Welfare.

REPORTS OF COMMITTEES

The following reports of committees were submitted:

By Mr. McINTYRE, from the Committee on Banking and Currency, without amendment:

S. 2540. A bill to amend the Small Business Investment Act of 1958 (Rept. No. 91–369).

By Mr. HANSEN, from the Committee on Interior and Insular Affairs, without amendment:

S. 40. A bill to authorize the Secretary of the Interior to modify the operation of the Kortes unit, Missouri River Basin project, Wyoming, for fishery conservation (Rept. No. 371).

By Mr. McGOVERN, from the Committee on Interior and Insular Affairs, with an amendment:

S. 73. A bill to amend the act entitled "An act to authorize the sale and exchange of isolated tracts of tribal land on the Rosebud Sioux Indian Reservation, South Dakota (Rept. No. 91–372); and

S. 74. A bill to place in trust status certain lands on the Standing Rock Sioux Indian Reservation in North Dakota and South Dakota (Rept. No. 91–374).

By Mr. LONG, from the Committee on Finance, with amendments:

H.R. 10107. An act to continue for a temporary period the existing suspension of duty on certain istle (Rept. No. 91–373).

(The remarks of Mr. LONG when he reported the bill appear earlier in the RECORD under the appropriate heading.)

By Mr. EAGLETON, from the Committee on the District of Columbia, without amendment:

H.R. 12720. An act to provide for the conveyance of certain real property of the District of Columbia to the Washington International School, Inc. (Rept. No. 91–375).

S. 2815—SMALL BUSINESS ADMINISTRATION LEGISLATION FOR 1969—REPORT OF A COMMITTEE (S. REPT. NO. 91–370)

Mr. McINTYRE, from the Committee on Banking and Currency, reported an original bill (S. 2815) to amend section 4(c) of the Small Business Act and sections 302 and 304 of the Small Business Investment Act of 1958, and submitted a report thereon, which bill was placed on the calendar and the report was ordered to be printed.

EXECUTIVE REPORTS OF COMMITTEES

As in executive session,

The following favorable reports of nominations were submitted:

By Mr. EASTLAND, from the Committee on the Judiciary:

Robert G. Renner, of Minnesota, to be U.S. attorney for the district of Minnesota; and

Frederick B. Lacey, of New Jersey, to be U.S. attorney for the district of New Jersey.

By Mr. JACKSON, from the Committee on Interior and Insular Affairs:

Louis R. Bruce, of New York, to be Commissioner of Indian Affairs.

By Mr. LONG, from the Committee on Finance:

George M. Moore, of Maryland, to be a member of the U.S. Tariff Commission.

BILLS AND A JOINT RESOLUTION INTRODUCED

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

By Mr. SCOTT (for himself and Mr. SCHWEIKER):

S. 2813. A bill to amend title 38, United States Code, to increase the amount payable on burial and funeral expenses; to the Committee on Finance.

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

By Mr. TYDINGS:

S. 2814. A bill for the relief of Dr. Benedicto Garin; to the Committee on the Judiciary.

By Mr. McINTYRE:

S. 2815. A bill to amend section 4(c) of the Small Business Act and sections 302 and 304 of the Small Business Investment Act of 1958; placed on the calendar.

(The remarks of Mr. McINTYRE when he reported the bill appear earlier in the RECORD under the appropriate heading.)

By Mr. CRANSTON:

S. 2816. A bill to amend section 23 of the U.S. Housing Act of 1937 and section 101 of the Housing Act of 1949 to make it clear that certain specified requirements (including the workable program requirement) do not apply to low-rent housing in private accommodations which is or will be assisted (or purchased for resale) under these sections; to the Committee on Banking and Currency.

By Mr. MAGNUSON (by request):

S. 2817. A bill to amend the maritime lien provisions of the Ship Mortgage Act of 1920; to the Committee on Commerce.

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

By Mr. GURNEY:

S. 2818. A bill to amend title 10 of the United States Code to provide for additional nominations by Members of Congress of persons for appointment to the service academies by the secretaries of the military departments; to the Committee on Armed Services.

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

By Mr. THURMOND:

S. 2819. A bill to amend chapter 21 of title 28 of the United States Code to withdraw from justices, judges and courts of the United States jurisdiction to hear or determine certain questions relating to the exemption of church property from taxation; to the Committee on the Judiciary.

By Mr. TYDINGS:

S. 2820. A bill to amend title II of the Act of September 19, 1918, relating to industrial safety in the District of Columbia; to the Committee on the District of Columbia.

By Mr. BENNETT (for himself, Mr. SPARKMAN, Mr. TOWER, Mr. PERCY, and Mr. GOODELL):

S. 2821. A bill to provide long-term financing for expanded urban public transportation programs, and for other purposes; to the Committee on Banking and Currency.

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

By Mr. SPARKMAN (for himself and Mr. BENNETT):

S. 2822. A bill to carry out the recommendations of the Joint Commission on the Coinage and for other purposes; to the Committee on Banking and Currency.

By Mr. BYRD of West Virginia:

S. 2823. A bill to establish the Government Program Evaluation Commission; to the Committee on Government Operations.

S. 2824. A bill to amend the Internal Revenue Code of 1954 to increase the amount of the deduction for each personal exemption to $800; to the Committee on Finance.

By Mr. KENNEDY:

S. 2825. A bill to provide certain essential assistance to the U.S. fishing industry; to the Committee on Commerce.

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

By Mr. BYRD of West Virginia:

S.J. Res. 146. A joint resolution amending section 201(a) of the Budget and Accounting Act of 1921, as amended; to the Committee on Government Operations.

S. 2813—INTRODUCTION OF A BILL INCREASING VETERANS' BURIAL ALLOWANCE

Mr. SCOTT. Mr. President, I introduce, for appropriate reference, legislation to increase the veterans' allowance for burial and funeral expenses from $250 to $400. This increase would enable their survivors to arrange for a funeral and burial which is consistent with the dignity and esteem to which war veterans are entitled.

The need for this legislation is clear. The amount authorized for payment on veterans' funerals and burial expenses was last increased on August 18 in 1958, by Public Law 85–674, from $150 to $250. In truth, however, the $250 presently authorized has never been realistic when compared with the cost of providing a funeral and burial, and these expenses have increased by more than 21 percent since 1958. The cost involving both funeral services and gravesites now average for the Nation approximately $1,150 per person. Surely, after more than a decade has elapsed since the arbitrary figure of $250 was set, Congress can now see fit to raise this allowance to a level more consistent with the subsequent rise in costs.

Mr. President, you will recall that I introduced legislation earlier this year to provide for an establishment of additional national cemeteries in Pennsylvania. The bill which I am introducing today will give to the families of veterans who may not wish to be buried in

a national cemetery, the option of burial in a cemetery which is perhaps nearer to their homes. I believe it is altogether fitting that the families of our veterans should have such a choice. We in the Senate have an opportunity to provide a more equitable burial allowance for veterans. With this in mind, I urge early and favorable consideration of my bill.

Mr. President, I ask unanimous consent to have printed at this point in the RECORD the text of resolution No. 48 adopted at the 50th annual convention of the American Legion endorsing this proposal.

The PRESIDING OFFICER. The bill will be received and appropriately referred; and, without objection, the resolution will be printed in the RECORD.

The bill (S. 2813) to amend title 38, United States Code, to increase the amount payable on burial and funeral expenses, introduced by Mr. SCOTT, for himself and Mr. SCHWEIKER, was received, read twice by its title, and referred to the Committee on Finance.

The material presented by Mr. SCOTT is as follows:

RESOLUTION 48 (NORTH DAKOTA)

Subject: Seek legislation to increase the burial allowance under sections 902 and 903, title 38, United States Codes, from $250 to $400.

Whereas, the burial allowance payable by the Veterans Administration under 38 USC 902 and 903 on the burial and funeral expenses of a deceased veteran was last increased by the Act of August 18, 1958; and

Whereas, the burial allowance of $250 payable under these provisions of title 38, United States Code, is inadequate in comparison with the cost of providing preparation, transportation, and interment services; now, therefore, be it

Resolved, by The American Legion in National Convention assembled in New Orleans, Louisiana, September 10, 11, 12 1968, that The American Legion shall sponsor and support legislation to provide that the burial allowance authorized under 38 USC 902 and 903 be increased to $400.00.

S. 2817—INTRODUCTION OF A BILL RELATING TO MARITIME LIENS

Mr. MAGNUSON. Mr. President, I introduce by request of the American Association of Port Authorities, for appropriate reference, a bill to amend the maritime lien provisions of the Ship Mortgage Act of 1920.

I ask unanimous consent that the provisions of the bill, together with a memorandum in support of its proposed amendments to existing law, be printed in the RECORD.

The PRESIDING OFFICER. The bill will be received and appropriately referred; and, without objection, the bill and memorandum will be printed in the RECORD.

The bill (S. 2817) to amend the maritime lien provisions of the Ship Mortgage Act of 1920, introduced by Mr. MAGNUSON, by request, was received, read twice by its title, referred to the Committee on Commerce, and ordered to be printed in the RECORD, as follows:

S. 2817

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That section 30 of the Ship Mortgage Act of 1920 (46 U.S.C. 971–975) is amended as follows:

(1) by adding, at the end of subsection P thereof (46 U.S.C. 971), the following new sentence:

"Services furnished to a vessel in accordance with the provisions of a tariff filed with the Federal Maritime Commission pursuant to the rules of said Commission shall be deemed necessaries for all purposes."

(2) by inserting, in subsection R thereof (46 U.S.C. 973) after the word "but" and before the word "nothing", the following: ", except as hereinafter in this section provided," and adding, at the end of said subsection R, the following new sentence:

"No provision in any charter party, agreement for sale of a vessel, nor any other reason, shall be, or be construed to be, a sufficient reason to deny to any person, having a tariff on file with the Federal Maritime Commission pursuant to the rules of said Commission, a maritime lien for services, included in said tariff, which are furnished to a vessel."

The memorandum, presented by Mr. MAGNUSON, is as follows:

MEMORANDUM IN SUPPORT OF PROPOSED AMENDMENTS TO THE FEDERAL MARITIME LIEN LAW (46 U.S.C. 971–975)

Under existing law, the owners of a vessel may insert, in any "charter" of the vessel, a provision, known as a "prohibition of lien" clause, which denies to the charterer authority to bind the vessel to liens. When such a clause is in the "charter" a marine terminal operator who supplies facilities and services to the vessel cannot subject the vessel to a lien to aid in the collection of the charges for the services even though the charges he seeks to collect are part of his tariff on file with the Federal Maritime Commission in accordance with the requirements of the Commission.

In *Port of Tacoma* vs. *S.S. Duval,* 364 F. 2d 615 (CCA9th, 1966), the Port of Tacoma sought to assert a lien on the basis of its tariff on file with the Federal Maritime Commission. The Court held that the filed tariff did not prevail as against the "no-lien" clause in the charter party.

The decision in *Duval suggests* that if the tariff filing by Tacoma had been made under a situation which provided that tariffs filed with the Federal Maritime Commission were constructive notice, the result in the case might have been different. However, the case *does not hold* that the result would have been different. The decision actually turns on the provisions of the Federal Lien Law (46 U.S.C. 971 through 974) and, more specifically, the provision of that law (46 U.S.C. 973) requiring that a person seeking to impose a lien make inquiry as to the terms of a charter party. For convenience, a copy of the Federal Lien Law is attached hereto.

Consideration has been given to the possibility of amending the Shipping Act of 1916 (46 U.S.C. 801 *et seq.*) to provide that filed marine terminal tariffs shall be constructive notice to all the world of the charges made thereunder, etc. Such an amendment would not, however, resolve the Ports' problem because it would not eliminate the duty of inquiry imposed by the Lien Law. Thus, it would appear that the most practical legislative solution lies in amendments to the Lien Law. The simplest amendment to that Law might be said to be deletion of everything in Section 973 after the semi-colon in the fourth line. This would permit the imposition of liens by all persons covered in Section 971—a much broader class than marine terminal operators.

For this reason, any such proposed amendment would probably give rise to very serious opposition. Hence, the amendments here proposed run only to the benefit of marine terminal operators who are required to file their tariffs with the Federal Maritime Commission pursuant to FMC General Order 15.

The amendments have been drafted to accomplish two particular objectives:

1. The amendment to 46 U.S.C. 971 would eliminate any doubts as to whether or not terminal services provided to a vessel under and in accordance with the provisions of a tariff on file with the Federal Maritime Commission are included among the "necessaries" for which a lien may be had.

2. The amendments to 46 U.S.C. 973 would eliminate any possible argument that the supplier of "necessaries" to a vessel under a tariff filed with the Federal Maritime Commission should be denied a lien by reason of any alleged failures to exerecise "reasonable diligence" to ascertain the terms of a charter.

The overall limitation of the right to lien without inquiry to persons supplying services in accordance with the provisions of a tariff filed with the FMC in accordance with its Rules vests the Commission, through its Rule-making power, with control over the nature of the terminal services which may be the basis for a lien. At the same time, since this Rule-making power may not be arbitrarily exercised—notice and hearing requirements are applicable—the marine terminal operators to whom the protection of lien is to be afforded are protected against loss thereof without notice.

The need for protection of a lien arises from the fact that while it is theoretically possible for a marine terminal operator to inquire into the terms of a charter, it is often not practical to do so until the vessel is at the terminal. When the vessel is at the terminal, charges such as dockage, have already accrued. If the inquiry requires any period of time, the vessel may be already working with additional charges accrued against it. The only alternative the terminal operator has is to refuse to accept the vessel until his inquiry has been completed. This may result in a refusal by the vessel to use the terminal and a consequent loss of sorely needed revenues. And then if inquiry is made, unless it is exhaustive, the terminal operator can have no assurance that, in a later dispute, the extent thereof will be deemed adequate to satisfy the requirement of "reasonable diligence" since each case will necessarily turn on its own facts.

Reasonable vessel owners and responsible charterers should have no objection to the proposed amendment. The services furnished by marine terminal operators are essential to the employment of the vessel. The vessel selects the terminal from a wide range of terminals available to it.

It can ascertain the charges to which it will be subject at the terminal it selects by reviewing the terminal's filed and published tariff. Neither its owner nor its charterer should be able, by inserting a clause in a priviate contract, to force the marine terminal operator into civilian litigation against parties from another part of the world to recover the reasonable cost of the services he provides. The right to lien the vessel will insure settlement of any disputes which may arise without undue burden to either party.

S. 2818—INTRODUCTION OF A BILL RELATING TO APPOINTMENTS TO THE SERVICE ACADEMIES

Mr. GURNEY. Mr. President, today I am introducing legislation to benefit the National Service Academies, as well as the Congress and the Nation as a whole.

Under present law as provided title 10, United States Code, section 4342(a) each Member of Congress is authorized to nominate one principal candidate and nine alternates for each vacancy at either the Naval Academy, Air Force Academy, or West Point.

However, as each Member of Congress is allowed only five principal candidates in the academies at any one time, there

are occasions when he has no vacancies during a particular year.

If there are no vacancies, then the Member of Congress is powerless to make any nominations.

In fact, in my own case, if I place a man in each of the academies next year, then in 1971, I will have only one appointment to Annapolis and none to West Point or Air Force.

About 350 to 400 young men from Florida apply to each academy, each year. This would mean that 700–800 young men from Florida will have no chance at West Point and Air Force in 1971. This is harmful not only to Florida and other States, but also to the services.

These additional appointees would not be chargeable to the Member of Congress but to the Secretary of the Army. It will assist the academies measurably by deepening the pool for outstanding alternates and would provide the opportunity for the Member of Congress to nominate candidates every year.

Under the present system the Member of Congress who fills his quota is penalized as he is unable to nominate the following year. This prevents many outstanding young men from being given an opportunity to compete for a nomination to the academies. Also, some Members of Congress are inclined to hold back their appointments if none are available for the following year.

All in all, the purpose of this legislation is to assist the academies in filling their classes every year. There is no guarantee of one particular young man being selected but it will give those highly qualified young men who would ordinarily not have the opportunity of a nomination a chance to compete nationwide to enter one of the military academies.

Here is a bill which should have solid backing of every Member of Congress. It benefits all, it penalizes no one. It serves the academies, the armed services, and the Nation.

I strongly recommend that Congress make every effort to fully consider this legislation and pass it into law in the very near future.

The PRESIDING OFFICER. The bill will be received and appropriately referred.

The bill (S. 2818) to amend title 10 of the United States Code to provide for additional nominations by Members of Congress of persons for appointment to the service academies by the secretaries of the military departments; introduced by Mr. GURNEY, was received, read twice by its title, and referred to the Committee on Armed Services.

S. 2821—INTRODUCTION OF PUBLIC TRANSPORTATION ASSISTANCE ACT OF 1969

Mr. BENNETT. Mr. President, I introduce on behalf of myself and the distinguished chairman of the Senate Banking and Currency Committee (Mr. SPARKMAN), the Senator from Texas (Mr. TOWER), the Senator from Illinois (Mr. PERCY), and the Senator from New York (Mr. GOODELL), the Public Transportation Assistance Act of 1969.

This program is the most extensive transportation program ever proposed in our Nation's history and represents a major commitment on the part of the Nixon administration. In these years of tight budgets and expenditure controls, the President's proposal is significant recognition of the importance of public transit in our cities. The passage of this legislation will take the problems of public transportation out of their present "yearly nuisance" status and give them the kind of long-term planning priority that they must have, if they are ever to be solved.

I shall not discuss the statistical justification for this program or outline its general provisions; the President has already done this in his message. I would like, however, to address myself to one question which has been the subject of considerable discussion. I refer to the claim that has been raised by some that this bill is somehow deficient because it does not contain a trust fund. As a member of the Finance Committee as well as the Banking and Currency Committee, I feel I can discuss this question with some understanding of the complexities involved.

Many have pointed to the highway trust fund as a model for this legislation, and have insisted that anything short of that will not do the job. These people complain about the possibility that Congress might exercise its responsibility to review national priorities at some future time and give them less than they want in the way of funds for mass transit. It is to prevent Congress from performing this constitutional duty that they would establish a trust fund.

I do not oppose trust funds in and of themselves. There are some circumstances and the highway situation is one, where the service being provided should logically be paid for by those using it. The trust fund is a device to make sure that that will be done. In this case, however, the President has determined that this is a public responsibility and that the entire Nation should share in meeting it.

It, therefore, makes no sense to ask any one segment of the economy to shoulder the burden exclusively. I know such a concept would meet resistance in the Finance Committee as well as the Ways and Means Committee, and I endorse the President's decision to pay for this program out of the general funds.

On the other hand I recognize the need of the mayors and others concerned with this problem to have some assurance of Federal funds over more than a single appropriations cycle so that they can raise the local share of the cost. In this bill there is a provision for 5 years of contract authority which should give that kind of assurance. Those outside of Congress not familiar with the operation of contract authority have criticized this as being inadequate. I should point out to them that it is this same kind of authority which really makes the highway trust fund work. In effect, the public transportation program will operate in the same way as the highway trust fund except that funds will come from the general fund rather than from a single set of users.

Mr. President, there is much more that I could say, but the subject has been covered by both the Presidential message and the letter of transmittal signed by Secretary Volpe. Rather than repeat these specifics at this point, I request that a section-by-section analysis of the 1969 urban public transportation bill be printed at the conclusion of my remarks, together with a copy of the bill.

Mr. President, hearings on this legislation were held less than a month ago by the Banking and Currency Committee; and at that time, the administration promised us that this bill would be forthcoming.

The PRESIDING OFFICER. The bill will be received and appropriately referred; and, without objection, the bill and analysis will be printed in the RECORD.

The bill (S. 2821) to provide long-term financing for expanded urban public transportation programs, and for other purposes, introduced by Mr. BENNETT (for himself and other Senators), 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. 2821

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the Congress finds that the rapid urbanization and the continued dispersal of population and activities within urban areas has made the ability of all citizens to move quickly and at a reasonable cost an urgent national problem; that new directions in the Federal assistance programs for urban public transportation are imperative if efficient, safe and convenient transportation compatible with soundly planned urban areas to be achieved; and that success will require a Federal commitment to the expenditure of at least $10 billion over a twelve-year period to permit confident and continuing local planning, and greater flexibility in program administration. It is the purpose of this Act to create a partnership which permits the local community, through Federal financial assistance, to exercise the initiative necessary to satisfy its public transportation requirements.

SEC. 2. Section 3 of the Urban Mass Transportation Act of 1964 (49 U.S.C. 1602), as amended, is amended to read as follows:

"(a) The Secretary is authorized, in accordance with the provisions of this Act and on such terms and conditions as he may prescribe, to make grants or loans (directly, through the purchase of securities or equipment trust certificates, or otherwise) to assist States and local public bodies and agencies thereof and private transit systems in financing the acquisition, construction, reconstruction, and improvement of facilities and equipment for use, by operation or lease or otherwise, in public transportation service in urban areas and in coordinating such service with highway and other transportation in such areas. Eligible facilities and equipment may include land (but not public highways), buses and other rolling stock, and other real and personal property needed for an efficient and coordinated public transportation system. No grant or loan shall be provided under this section unless the Secretary determines that the applicant has or will have (1) the legal, financial, and technical capacity to carry out the proposed project, and (2) satisfactory continuing control, through operation or lease or otherwise, over the use of the facilities and equipment. The Secretary may make loans for real property acquisition pursuant to subsection (b) upon a determination, which shall be in lieu of the preceding

determinations, that the real property is reasonably expected to be required in connection with a public transportation system and that it will be used for that purpose within a reasonable period. No grant or loan funds shall be used for payment of operating expenses. No grant or loan shall be made for the benefit of a private transit system unless the application for assistance has been approved by the appropriate State or local public body or agency thereof, as determined by the Secretary. No grant shall be made directly to a private transit system unless the Secretary determines that (1) there is no appropriate State or local public body or agency thereof through which a grant for the benefit of a private transit system may be made and (2) the public interest does not require the establishment of a public body or agency for the purposes of that grant. An applicant for assistance under this section shall furnish a copy of its application to the Governor of each State affected concurrently with submission to the Secretary. If, within 30 days thereafter, the Governor submits comments to the Secretary, the Secretary must consider the comments before taking final action on the application.

"(b) The Secretary is authorized to make loans under this section to States or local public bodies and agencies thereof to finance the acquisition of real property and interests in real property for use as rights-of-way, station sites, and related purposes, on urban public transportation systems, including the net cost of property management and relocation payments made pursuant to section 7. Each loan agreement under this subsection shall provide for actual construction of urban public transportation facilities on acquired rights-of-way within a period not exceeding ten years following the fiscal year in which the agreement is made. Each agreement shall provide that in the event acquired real property or interests in real property are not to be used for right-of-way purposes, an appraisal of current value will be made at the time of that determination, which shall not be later than ten years following the fiscal year in which the agreement is made. Two-thirds of the increase in value, if any, over the original cost of the real property will be paid to the Secretary for credit to miscellaneous receipts of the Treasury. Repayment of amounts loaned shall be credited to miscellaneous receipts of the Treasury. A loan made under this subsection shall be repayable within ten years from the date of the loan agreement or on the date a grant agreement for actual construction of facilities on the acquired rights-of-way is made, whichever date is earlier. An applicant for assistance under this subsection shall furnish a copy of its application to the community comprehensive planning agency of the community affected concurrently with submission to the Secretary. If, within 30 days thereafter, the community comprehensive planning agency of the community affected submits comments to the Secretary, the Secretary must consider the comments before taking final action on the application.

"(c) No loan shall be made under this section for any project for which a grant is made under this section, except—

"(1) loans may be made for projects as to which grants are made for relocation payments; and

"(2) project grants may be made even though the real property involved in the project has been or will be acquired as a result of a loan under subsection (b).

Interest on loans made under this section shall be at a rate not less than (i) a rate determined by the Secretary of the Treasury, taking into consideration the current average market yield on outstanding marketable obligations of the United States with remaining periods to maturity comparable to the average maturities of such loans adjusted to the nearest one-eighth of one per centum, plus (ii) an allowance adequate in the judgment of the Secretary of Transportation to cover administrative costs and probable losses under the program. Except for loans for acquisition of real property or interests in real property under subsection (b), no loans shall be made, including renewals or extensions thereof, and no securities or obligations shall be purchased which have maturity dates in excess of forty years.

"(d) No financial assistance shall be provided under this Act to any State or local public body or agency thereof for the purpose, directly or indirectly, of acquiring any interest in, or purchasing any facilities or other property of, a private transportation company, or for the purpose of constructing, improving, or reconstructing any facilities or other property acquired (after the date of enactment of this Act) from any such company, or for the purpose of providing by contract or otherwise for the operation of public transportation facilities or equipment in competition with, or supplementary to, the service provided by an existing private transportation company, unless (1) the Secretary finds that such assistance is essential to a program, proposed or under active preparation, for a unified or officially coordinated urban transportation system as part of the comprehensively planned development of the urban area, (2) the Secretary finds that such program, to the maximum extent feasible, provides for the participation of private transportation companies, (3) just and adequate compensation will be paid to such companies for acquisition of their franchises or property to the extent required by applicable State or local laws, and (4) the Secretary of Labor certifies that such assistance complies with section 13(c) of this Act.

"(e) Any State or local public body or agency thereof which makes or approves applications for a grant or loan under this Act to finance the acquisition, construction, reconstruction or improvement of facilities or equipment which will substantially affect a community or its public transportation service shall certify to the Secretary that it has held public hearings, or has afforded the opportunity for such hearings, has considered the economic and social effects of the project for which application for financial assistance is made and its impact on the environment, and has found that the project is consistent with any plans for the comprehensive development of the urban area. If hearings have been held, a copy of the transcript of the hearings shall be submitted with the certification."

SEC. 3. (a) Subsection 4(a) of the Urban Mass Transportation Act of 1964 (49 U.S.C. 1603(a)), as amended, is amended by:

(1) changing "3" to "3(a) and 3(b)" in the first sentence thereof; and

(2) striking the penultimate sentence and inserting in place thereof the following sentences:

"Such remainder may be provided in whole or in part from other than public sources and any public or private transit system funds so provided shall be solely from undistributed cash surpluses, replacement or depreciation funds or reserves available in cash, or new capital. If a grant is made to a private transit system for the acquisition of buses or other rolling stock, the grant agreement shall include an undertaking by the grantee that it will establish an escrow account which shall be reserved for the purchase of buses or other rolling stock and into which shall be paid annually an amount equal to the annual depreciation on the buses or rolling stock."

(b) Section 4 of the Urban Mass Transportation Act of 1964 (49 U.S.C. 1603), as amended, is amended by adding the following new subsection:

"(c) To finance grants, loans, research, development, and demonstration projects, and administrative costs under this Act there is hereby authorized to be appropriated, to liquidate obligations incurred under this Act, not to exceed $300,000,000 for the fiscal year ending June 30, 1971; $400,000,000 for the fiscal year ending June 30, 1972; $600,000,000 for the fiscal year ending June 30, 1973; $800,000,000 for the fiscal year ending June 30, 1974; and $1,000,000,000 for the fiscal year ending June 30, 1975. Amounts authorized under this subsection shall become available for obligation, by the execution of grants or other contractual agreements, during the fiscal year for which they were first authorized and shall remain available until obligated."

SEC. 4. Section 5 of the Urban Mass Transportation Act of 1964 (49 U.S.C. 1604), as amended, is amended by striking the penultimate sentence and inserting in place thereof the following sentences:

"Such remainder may be provided in whole or in part from other than public sources and any public or private transit system funds so provided shall be solely from undistributed cash surpluses, replacement or depreciation funds or reserves available in cash, or new capital. If a grant is made to a private transit system for the acquisition of buses or other rolling stock, the grant agreement shall include an undertaking by the grantee that it will establish an escrow account which shall be reserved for the purchase of buses or other rolling stock and into which shall be paid annually an amount equal to the annual depreciation on the buses or rolling stock."

SEC. 5. Section 15 of the Urban Mass Transportation Act of 1964 (49 U.S.C. 1611), as amended, is amended to read as follows:

"Grants made under section 3 (other than for relocation payments in accordance with section 7(b)) before July 1, 1970, for projects in any one State shall not exceed in the aggregate 12½ per centum of the aggregate amount of grant funds authorized to be appropriated pursuant to section 4(b), except that the Secretary may, without regard to such limitation, enter into contracts for grants under section 3 aggregating not to exceed $12,500,000 (subject to the total authorization provided in section 4(b)) with local public bodies and agencies in States where more than two-thirds of the maximum grants permitted in the respective State under this section has been obligated. Grants made on or after July 1, 1970, under section 3 for projects in any one State may not exceed in the aggregate 12½ per centum of the aggregate amount of funds authorized to be obligated under subsection 4(c), except that 15 per centum of the aggregate amount of grant funds authorized to be obligated under subsection 4(c) may be used by the Secretary, without regard to this limitation, for grants in States where more than two-thirds of the maximum amounts permitted under this section has been obligated. In computing State limitations under this section, grants for relocation payments shall be excluded."

SEC. 6. Nothing herein shall affect the authority of the Secretary of Housing and Urban Development to make grants, under the authority of sections 6(a), 9, and 11 of the Urban Mass Transportation Act of 1964 (49 U.S.C. 1605(a), 1607a, 1607c et seq.), as amended, and Reorganization Plan No. 2 of 1968, for projects or activities primarily concerned with the relationship of urban transportation systems to the comprehensively planned development of urban areas, or the role of transportation planning in overall urban planning, out of funds appropriated to him for that purpose.

SEC. 7. (a) Reorganization Plan No. 2 of 1968 is amended by changing "Urban Mass Transportation Administration" to "Public Transportation Administration" wherever it occurs and by changing "Urban Mass Trans-

portation Administrator" to "Public Transportation Administrator" wherever it occurs.

(b) The Urban Mass Transportation Act of 1964, as amended, is further amended by changing the words "mass transportation" to "public transportation" wherever they occur.

SEC. 8. This Act may be cited as the "Public Transportation Assistance Act of 1969".

The analysis, presented by Mr. BENNETT, is as follows:

SECTION-BY-SECTION ANALYSIS

A bill to provide long-term financing for expanded urban public transportation programs, and for other purposes

Sec. 1—This section declares it to be the finding of the Congress that, in order to realize urgent national goals, the Federal commitment to assist urban public transportation must be raised to at least $10 billion over a twelve-year period. This is necessary to achieve efficient, safe and convenient transportation compatible with soundly planned urban areas. The purpose of the bill is to create a partnership in which local communities may exercise the initiatives to satisfy their urban transportation needs, with Federal financial assistance.

Sec. 2—Amends section 3 of the Act which is the basic authority for the program of grants and loans for the acquisition, construction, reconstruction and improvement of public transportation facilities and equipment.

3(a)—This subsection presently specifies the purposes for which the grants and loans under the program may be used, defines eligible sponsors, and prescribes certain capabilities that the proposed sponsor must display. The amended provisions spell out the authority of the Secretary to provide assistance on terms and conditions which he may prescribe, which might include, for example, the establishment of a uniform system of accounts.

Another change permits the Secretary to make loans for real property acquisition under new subsection 3(b) upon a finding that the land is reasonably required in connection with an urban public transportation system and will be used for the purpose within a reasonable time. He need not make the more detailed findings required by this section for grants and loans for other purposes.

There is a provision, also, which requires that the appropriate State Governor be furnished with a copy of the application for assistance so that he may have 30 days in which to comment. The Secretary must consider any such comments before taking final action on the application.

Finally, the subsection is amended to permit loan assistance to be extended directly to private transit companies; grant assistance may be provided directly only when the Secretary determines that there is no appropriate public body or agency through which to transmit funds and that the public interest does not require the establishment of one. Any application for a private operator must first be approved by the appropriate State or local public body or agency thereof.

3(b)—This subsection is new and provides the authority and mechanics for loans to enable public transportation systems to acquire rights-of-way in advance of construction. Loans for this purpose may include the net costs to the locality of relocation payments and property management and will require a Secretarial finding that the proposed acquisition is reasonably expected to be required for a public transportation system and that it will in fact be used for public transportation facilities within a reasonable period. Repayment of the loans must take place within ten years; however, if a grant is made for construction on that right-of-way, repayment of the loan must be made at the time of the grant. Repayment will be credited to the miscellaneous receipts of the Treasury.

The loan agreement would provide for construction not later than ten years after acquisition, but it is possible that acquired real property interests might ultimately not be used for that purpose. If and when such a determination is made, the Secretary would direct that an appraisal be made to determine how much, if any, the property has increased in value since acquisition. The Federal Government and local agency would share any profit on a two-to-one ratio respectively, which is the ratio for sharing project costs. The Federal Government would not share in losses in value of the property, however.

3(c)—This subsection (based on section 3(b) of the present Act), imposes restrictions on the making of loans and prescribes certain conditions on loans which are made. It prevents making both loans and grants for the same project, except where (1) the grant is made for relocation payments, and (2) the real property involved was acquired for rights-of-way, station sites, or related purposes pursuant to the authority added by the new subsection 3(b).

The effect of this subsection is to establish, by deleting certain provisions of the present Act, that loans are to be made only from the authorizations contained in this bill. Under the Act as originally passed, it was intended that Treasury borrowing, pursuant to section 203 of the Housing Amendments of 1955, would be employed for this purpose; however, to date under this scheme, no Treasury borrowing has occurred, and loans have been made only from specifically appropriated funds.

Finally, the subsection prescribes the manner of computing the interest rate, and establishes a maximum maturity period of forty years, for loans made under section 3; however, loans under subsection 3(b) are repayable within 10 years.

3(d)—This subsection, relating to safeguards for operators of private transportation companies, restates subsection 3(c) of the present Act, except to change the concept of "mass transportation" to "public transportation".

3(e)—This new substance will require the local agency making or approving an assistance application to show that it has held (or afforded the opportunity for) public hearings and has considered the economic and social aspects of the project, its urban impact and consistency with planning goals. It is similar to 23 U.S.C. 128, which applies to Federal-aid highways.

Sec. 3—The section would: (1) amend section 4(a) of the Act, which now requires a certain Secretarial findings before section 3 assistance can be provided, to reflect the less stringent criteria of new section 3(b) in the case of land acquisition loans; (2) further amend section 4(a), consistent with permitting private transit companies to receive assistance directly in certain cases, to allow those operators to supply all of the non-Federal share of net project costs. (Present law permits this only in the case of "demonstrated fiscal inability" of the public agency.) But the share contribution of the private company could not be paid out of current revenues, only out of surplus, replacement funds or reserves, or new capital; further, any private transit company receiving a grant will be required to establish a funded depreciation account for the purpose of replacing fully depreciated equipment, regardless of when acquired; and (3) add a new subsection (c) to section 4 providing authorizations for loans and administrative costs, as well as grants and other projects under the Act for fiscal years 1971–1975 and establishing contract authority.

The amounts authorized for appropriation, $300, $400, $600, and $800 million and $1 billion, respectively, for the first 5 years of the new program will increase the level of funding in graduated increments which will help to assure an effective and efficient build-up in the extent of Federal support. The authorized levels of funding, $300, $400, $600, and $800 million and $1 billion, would be available for obligation in their full amounts during the fiscal year for which first authorized, and would remain available until expended. The Secretary would be authorized to obligate these amounts through grants or other contractual agreements. These obligations would be liquidated by subsequent appropriations.

Sec. 4—Makes the same change to section 5 as is made to section 4(a) respecting the share of net project costs paid by a private transit company and the requirement for a fully funded depreciation account.

Sec. 5—Amends section 15 of the Act, which restricts the aggregate of grant projects (other than relocation grants) in any one State to 12½ percent of the total amount authorized for this purpose. The existing legislation anticipated that some States would experience serious inhibitions with this limit and, so, a discretionary pool of $12.5 million was established to be available for use in States which had previously received more than two-thirds of the maximum grants. Notwithstanding this fund, California is now, and a number of other populous States will soon be, at a point where they can receive no further assistance. In the period after 1970, the 12½ percent ceilings would continue to apply but the Secretary would have discretion to use up to 15 percent of the authorizations without reference to the ceilings. Thus, each year 15 percent of monies authorized could be used by the Secretary as a discretionary fund. A percentage figure for this fund, rather than a static dollar figure, is more appropirate for a long-range program with progressive increases up to a substantial figure.

Sec. 6—Section 1 of Reorganization Plan No. 2 of 1968 transferred to the Secretary the program authority under the Act. But that section reserved to the Secretary of HUD authority to make grants for or undertake such projects or activities under sections 6 (a), 9, and 11 of the Act (relating to research, development, and demonstrations; technical studies grants; and grants for research and training in urban transportation problems) as "primarily concern the relationship of urban transportation systems to the comprehensively planned development of urban areas, or the role of transportation planning in overall urban planning." It was contemplated that such grants would be made out of appropriations to HUD. Section 105 preserves that understanding and insures that the appropriations authorized under this Act would be available only for grants in furtherance of the functions of the Secretary of Transportation under the Act.

Sec. 7—This section makes several changes in titles and descriptive words to better reflect the nature of the programs. The Urban Mass Transportation Administration would become the Public Transportation Administration and the term "mass transportation" would be replaced by "public transportation."

Sec. 8—Gives the short title of the Act, the "Public Transportation Assistance Act of 1969."

ADDITIONAL COSPONSORS OF BILLS

S. 74

Mr. BYRD of West Virginia. Mr. President, at the request of the Senator from South Dakota (Mr. MCGOVERN), I ask unanimous consent that, at the next printing, the names of the Senators from North Dakota (Mr. BURDICK and Mr. YOUNG) be added as cosponsors of the bill (S. 74) to place in trust status cer-

tain lands on the Standing Rock Sioux Indian Reservation in North and South Dakota.

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

S. 746

Mr. METCALF. Mr. President, I ask unanimous consent that at the next printing of the bill (S. 746) to amend title XVIII of the Social Security Act so as to include chiropractors' services among the benefits provided by the insurance program established by part B of such title, the name of the Senator from New Mexico (Mr. MONTOYA) be added as a cosponsor.

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

S. 2461

Mr. METCALF. Mr. President, I ask unanimous consent, that, at the next printing, my name be added as a cosponsor of the bill (S. 2461) to amend the Randolph-Sheppard Act for the blind so as to make certain improvements therein, and for other purposes.

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

S. 2548

Mr. METCALF. Mr. President, I ask unanimous consent, that, at the next printing of the bill (S. 2548) to amend the National School Lunch Act and the Child Nutrition Act of 1966 to strengthen and improve the food service programs provided for children under such acts, my name be added as a cosponsor.

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

ADDITIONAL COSPONSOR OF BILL AND AMENDMENT

Mr. TYDINGS. Mr. President, I ask unanimous consent that the name of the Senator from Texas (Mr. YARBOROUGH) be added to as a cosponsor of my amendment (No. 113) to Senate bill 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, and also that his name be added to the bill at the next printing.

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

SENATE RESOLUTION 240—RESOLUTION TO AUTHORIZE THE EXPENDITURE OF CERTAIN FUNDS BY THE COMMITTEE ON THE JUDICIARY

Mr. EASTLAND submitted the following resolution (S. Res. 240); which was referred to the Committee on the Judiciary:

S. RES. 240

Resolved, That section 3 of Senate Resolution 33, agreed to February 17, 1967, is hereby amended by striking out "$400,000" where it appears therein and inserting in lieu thereof "402,100".

SENATE RESOLUTION 241—RESOLUTION AMENDING THE STANDING RULES OF THE SENATE WITH RESPECT TO REPORTS OF STANDING COMMITTEES

Mr. BYRD of West Virginia submitted the following resolution (S. Res. 241); which was referred to the Committee on Rules and Administration:

S. RES. 241

Resolved, That rule XXV of the Standing Rules of the Senate is amended by adding at the end thereof the following new paragraph:

"6. Every report from a standing committee (other than the Committee on Appropriations) accompaning a bill or joint resolution, recommending the creation or expansion of any function, activity, or authority in the Government to be in addition to those functions, activities, and authorities therefor existing at the time such report is submitted, shall contain a statement for each of the first five fiscal years during which each such additional or expanded function, activity, or authority recommended is to be in effect, disclosing the estimated appropriation or fund requirements attributable to the performance of such functions, activity, or authority, and, in such form as the committee may deem appropriate, a summarized comparison of such appropriation or fund requirements with the corresponding recommendations, if any, from the executive branch of the Government.".

NATIONAL TIMBER SUPPLY ACT OF 1969—AMENDMENTS

AMENDMENT NO. 133

Mr. BROOKE. Mr. President, I rise today to address a subject which is of great concern to me—the need to provide for efficient development and management of national forest commercial timberlands consistent with sound forestry management principles.

Earlier this year, I joined with Chairman SPARKMAN of the Banking and Currency Committee and a distinguished group of cosponsors in proposing the enactment of S. 1832—the National Timber Supply Act of 1969. This bill is designed to establish a High Timber Yield Fund, which would provide a reliable source of funds for our national forests. At present, the commercial timber receipts derived from our national forests are deposited into the Treasury and only a portion of these funds return to the national forests. By establishing this trust fund, the Forest Service would recoup a large amount of funds which otherwise would not be plowed back into forest management. In the last 5 years, the Forest Service estimates that $678 million would have been returned to the national forests for use in reforestation and other vital timber production projects, if such a trust fund had been in operation.

While I supported the general principles set forth in S. 1832 at the time of its introduction, I believed that further refinements were necessary. Accordingly, I joined with my distinguished colleague on the Banking and Currency Committee, Senator BENNETT of Utah, in proposing amendments on June 25, 1969, which would greatly improve trust fund operations contemplated by the bill.

I am submitting additional amendments today which are designed to further clarify the provisions of the bill. I propose to amend section 2 to recognize the importance of the conservation principles of multiple use and sustained yield. Timber yields should be increased; however, increased yields should not be realized at the expense of other national forest uses such as outdoor recreation, fish and wildlife, range forage, water quality, and wilderness. Accordingly, my amendments would specify that by enacting this bill, Congress intends no infringement of the policies set forth in the Multiple Use-Sustained Yield Act of June 12, 1960.

I am also introducing an amendment which would authorize the expenditure of trust fund money for timber management planning and timber sales supervision. Planning money is essential because planning cycles must be shortened significantly in order to revise allowable cuts in light of current data on the timber stock and the rate of investment on the land. The present plans are revised only once every 10 years. This cycle is far too long to keep pace with the contemplated rate of new investment in tree planting and other cultural measures. More intensive sales supervision must be exercised so as to minimize the adverse effects of commercial activity upon the forest environment.

I propose an additional amendment to section 7 of the bill, which would clarify Congress' intention to revise allowable annual harvesting rates to the extent commensurate with sound forestry management programs. Thus, any implication contained in the present bill that Congress intends to authorize overcutting the national forests in a manner inconsistent with sound forestry principles would be removed.

The amendments which I submit today are in accord with the goals of the Forest Service—namely, that timber yields from national forests be increased to the maximum extent feasible, consistent with established and proven forestry principles. I am hopeful that these amendments will receive favorable consideration by my colleagues in the Senate.

At this point in the RECORD, Mr. President, I ask unanimous consent that a copy of my amendments be printed.

The PRESIDING OFFICER. The amendments will be received and printed, and will be appropriately referred; and, without objection, the amendments will be printed in the RECORD.

The amendments (No. 133) were referred to the Committee on Agriculture, and Forestry as follows:

On page 1, line 6, beginning with the word "hereby," strike all through page 2, line 5, and insert the following: "finds that—

"(1) it is necessary to increase funds for effective conservation, planning, and management of national forest commercial timberlands;

"(2) it is necessary to increase substantially the timber yield from national forest commercial timberlands in order to increase the supply of wood products which are needed to meet increasing national demands, including the demand for home construction;

"(3) it is necessary to provide a reliable and adequate source of funds required to increase timber yield rates on such national forest commercial timberlands; and

"(4) a substantially increased yield of timber can be produced from the national forests within the policy of the Congress stated in the Multiple Use-Sustained Yield Act of June 12, 1960 (74 Stat. 215)."

On page 4, strike out lines 9 through 13 and insert in lieu thereof the following:

"(5) planning, preparation, and supervision, including marking, thinning, salvage, understory and overstory removal, and harvest sales;".

On page 4, lines 14, 15, and 17, change "(7)" "(8)", and "(9)" to "(6)", "(7)", and "(8)" respectively.

On page 5, line 10, strike out "which will result from" and insert in lieu thereof "expected to result when there is".

CONTINUATION OF PROGRAMS AUTHORIZED UNDER THE ECONOMIC OPPORTUNITY ACT OF 1964—AMENDMENTS

AMENDMENT NO. 134

Mr. MONDALE. Mr. President, today I submit an amendment to S. 1809, a bill to improve and extend the authorizing legislation for the Office of Economic Opportunity. This amendment to S. 1809, which I will offer in the executive sessions of the Employment, Manpower, and Poverty Subcommittee, provides an increase in the authorized appropriations for the legal services program from the suggested $50 million to $90 million.

As recognized in the 1965 authorization for the Office of Economic Opportunity's legal services program, provision for adequate legal counsel has special importance for the poor. Though endowed with special needs and problems, impoverished persons have for years been denied the attention which those problems require: Their interests have been neglected for decades, their rights have been victimized by century-long exploitation. Especially for the poor who are members of minority groups—for the black American, the Mexican American, the Puerto Rican, the American Indian, the Japanese American, and the Appalachian dirt farmer, "equal justice" has been an empty slogan, a promise never fulfilled and an ideal never attained.

Some of this injustice inheres strictly from "bad laws"; some of it results from misconstruction by the courts; and some of it is plainly a natural outgrowth of economic or racial prejudice. But most of it is the result of a very simple fact: the price of equal justice is adequate legal counsel, and the cost of adequate legal counsel, for many Americans is prohibitive.

When a poor person is the defendant in a civil lawsuit, his fate depends upon his ability to realize the possible effect of the action against him, and to obtain assistance or marshal the law to his own defense. An indigent almost never takes affirmative action to redress his grievances. Favorable court precedents do not automatically apply to him; someone with a knowledge of the law must see that his problem is one with an existing legal remedy. And if new law is to be developed to meet the problems of the poor, someone must know the problems and begin the long process of filing creative lawsuits.

By providing free legal counsel to poor and minority groups, the legal services branch of the OEO reflects the increased national awareness of the important relation between sound advocacy and equal justice. In its brief history, legal services has had a great impact on the poor and on the law, and is, perhaps, the most sucfessful of OEO operations.

Statistically speaking, legal services was funded last year at $46 million, supporting 265 programs and 1,400 lawyers in 49 States. During that period, over 600,000 cases were handled, over 2 million client contacts were established, and an assortment of services for clients was rendered: tenants were represented in disputes with landlords, consumers were protected against hidden credit schemes, and welfare recipients had their rights established. In addition, legal services attorneys have enforced Government minimum standards, fought for civil rights and the constitutional right to be heard, asserted Indian land claims, exposed the harmful effects of pesticides on farmworkers, and pushed for better living and working conditions for migrants.

For many people, legal services has made the difference between hope and despair; it has meant more than mere advice on legal matters; it has been the only authoritative, sympathetic, and trustworthy outlet available, the only symbol of hope in the culture of poverty.

Although it is making an important contribution, legal services is not receiving adequate funds. The 1,400 field lawyers now in legal services have not even come close to meeting the total legal needs of the poor; it is estimated that due to present limitations on the program's size, only 15 percent of the poor have access to legal services or VISTA lawyers. There are few projects in rural and sparsely populated areas such as Appalachia. Although an estimated 45 percent of the poor—those with incomes below the poverty line—about $3,300 for a family of four—are located east of the Mississippi and south of the Mason-Dixon line, only about 12 percent of legal service's lawyers are located there now. OEO records show that applications totaling $40 million in new programs from over 100 communities had to be turned down last year for lack of funds. And many of the country's metropolitan areas have no organized legal aid services. Mr. President, I ask unanimous consent that a list of these communities, indicating their size and location, be printed in the RECORD at this point.

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

TARGET AREAS OF UNMET LEGAL SERVICES FOR THE POOR*

METROPOLITAN AREAS OF OVER 100,000 POPULATION HAVING NO ORGANIZED LEGAL AID SERVICES, COMBINED POPULATION OVER 2 MILLION

Glendale, Calif	119,442
Fort Lauderdale, Fla	441,000
East Moline, Ill	339,000
Joliet, Ill	191,617
Anderson, Ind	130,000
Muncie, Ind	117,000
Terre Haute, Ind	167,000
Lexington, Ky	159,000
Jackson, Miss	271,546
Asheville, N.C	143,000
Steubenville, Ohio	170,000
Altoona, Pa	137,000
Memphis, Tenn	818,650
Galveston, Tex	157,000
Norfolk, Va	715,409
Wheeling, W. Va	281,000
Green Bay, Wis	137,000

CITIES OF 75,000 TO 100,000 POPULATION HAVING NO ORGANIZED LEGAL AID SERVICES

Cedar Rapids, Iowa	103,545
Davenport, Iowa	95,796
Sioux City, Iowa	89,159
Fall River, Mass	99,942
Lowell, Mass	92,107
Quincy, Mass	87,409
St. Joseph, Mo	79,673
Springfield, Mo	95,865
Raleigh, N.C	105,722
Hampton, Va	89,258
Huntington, W. Va	83,627

CITIES OVER 100,000 POPULATION HAVING NO ORGANIZED LEGAL AID SERVICES

Columbus, Ga	116,779
Newport News, Va	113,662
Portsmouth, Va	144,773

CITIES HAVING NO ORGANIZED LEGAL AID SERVICES (BUT HAVING A VOLUNTEER BAR ASSOCIATION ASSISTANCE PROGRAM)

Mobile, Ala	202,779
Montgomery, Ala	134,393
Chico, Calif	14,757
Abilene, Tex	90,368
Tyler, Tex	51,230
Bellington, Wash	34,688
Yakima, Wash	43,284
Oshkosh, Wis	45,110

*Source: National Legal Aid and Defender Association.

Mr. MONDALE. Mr. President, another indication of the need for increased funding for legal services is provided by figures detailing the tremendous case load handled by OEO lawyers. On the average, most lawyers in the United States handle no more than 100 clients per year; yet many of the present OEO lawyers serve from 600 to 1,000 clients each year. Such heavy case loads indicate not only the popularity of Legal Services in poverty-ridden communities, but also reflect the great burden placed upon its lawyers. Clearly, there is a need for increased Federal support for this important program.

In response to this need, the American Bar Association recommended in 1967, and again this year in compelling testimony before the Employment, Manpower and poverty Subcommittee, that funding for the legal services program be increased to $90 million. With that authorization, several improvements could be made:

First, existing offices could improve services by increasing the number of lawyers and para-legal assistants assigned

to them, decreasing the case load burden, and allowing for more work on time-consuming appellate litigation.

Second, 200 new offices could be opened in areas not now reached by the program.

Third, an additional 600 lawyers could be put in the field, raising the total to 2,000; 1,500 lawyers could be added overall.

Fourth, support could be given innovative "research and demonstration" programs, providing for the conduct of study into judicial administration and minority legal education.

Under this point, Mr. President, I wish to mention specifically one important demonstration project now being funded partially through OEO legal services, the "Council for Legal Educational Opportunities."

Since its inception in 1968, the Council has attempted to correct the deficiencies in minority legal education by recruiting and preparing minority group college graduates for entry into law schools.

Chartered under the sponsorship of the American Bar Association, CLEO reflects a growing concern for underrepresentation of minority groups in the legal profession. Blacks, for instance, account for only 1 percent of the Nation's 300,000 lawyers. On the average, there is one lawyer in the United States for every 637 people, but only one black lawyer for every 7,000 Negroes and less than one Indian lawyer for every 100,000 Indians.

By providing summer institutes and financial aid for minority group students, CLEO is helping to correct these imbalances. However, the $500,000 it presently receives from the OEO is inadequate for provision of adequate service; much more is necessary. I highly commend OEO for its contributions, and I strongly urge that support for its efforts be sizably increased.

By increasing legal services' funding to $90 million, $35 million could be provided for the funding of existing programs, $29 million could be allocated to the expansion of those programs, $8 million could be allotted for new programs in cities, $13 million could be earmarked for new rural projects, and $5 million could be reserved for demonstration projects such as CLEO. This support would provide what the ABA considers as "absolutely the minimum acceptable" program size, and would substantially improve upon what the administration's budget request of $55 million would provide.

The level of interest in the program indicates that $90 million authorization could be easily handled. According to legal services' estimates, an additional 1,500 lawyers could be recruited within 1 year if funds were available. Many young lawyers wish to serve in VISTA and the legal services, but limitations on the funds prevent them from performing needed tasks: of the 1,200 applications submitted by lawyers to the OEO Reginald Heber Field Service Fellowship program, only 250 could be accepted because of financial limitations.

Clearly, therefore, there is a need for more legal services to the poor, and for a supply of attorneys available to meet that need. All that remains to be made available is adequate financial support from the Government. "Equal justice under law," it has been said, is the objective of responsible government; raising the authorization for the OEO's legal services program to $90 million would be significant progress toward making that objective a reality.

The PRESIDING OFFICER. The amendment will be received and printed, and will be appropriately referred.

The amendment (No. 134) was referred to the Committee on Labor and Public Welfare.

ADDITIONAL COSPONSORS OF RESOLUTIONS

S. RES. 211

Mr. BROOKE. Mr. President, I ask unanimous consent that at the next printing the name of the junior Senator from Virginia (Mr. SPONG) be added as a cosponsor of the resolution (S. Res. 211) seeking agreement with the Union of Soviet Socialist Republics on limiting offensive and defensive strategic weapons and the suspension of test flights of reentry vehicles.

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

S. RES. 223

Mr. STEVENS. Mr. President, I ask unanimous consent that, at the next printing, the name of the Senator from Wyoming (Mr. HANSEN) be added as a cosponsor of the resolution (S. Res. 223) expressing the sense of the Senate of the United States with respect to establishment of at least one standard metropolitan statistical area in each State.

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

NOTICE OF HEARINGS ON S. 2577, ADDITIONAL MORTGAGE CREDIT

Mr. PROXMIRE. Mr. President, I wish to announce that the Subcommittee on Financial Institutions of the Committee on Banking and Currency will hold hearings on S. 2577, a bill to provide additional mortgage credit, and for other purposes.

The hearings will be held on Tuesday, Wednesday, and Thursday, September 9, 10, and 11, 1969, and will begin at 10 a.m. in room 5302, New Senate Office Building.

Persons desiring to testify or to submit written statements in connection with these hearings should notify Mr. Kenneth A. McLean, room 5300, New Senate Office Building, Washington, D.C. 20510; telephone 225–7391.

NOTICE OF HEARING SCHEDULED FOR AUGUST 12 ON THE FEDERAL GOVERNMENT'S MANPOWER CAPABILITY TO OVERSEE OIL RESOURCE DEVELOPMENT ACTIVITY IN ALASKA

Mr. JACKSON. Mr. President, the Special Subcommittee on Legislative Oversight of the Committee on Interior and Insular Affairs has scheduled a hearing for tomorrow, August 12, on the Federal Government's capability to manage and administer resource development activities in the State of Alaska. The hearing will be held in room 3110 of the New Senate Office Building at 1:30 p.m.

The purpose of the hearing is to review the Department of the Interior's manpower and funding requirements to oversee the growing development activity associated with the oil discovery on Alaska's north slope and the proposed 48-inch, 800-mile pipeline from Prudhoe Bay to Valdez, Alaska.

Witnesses scheduled to testify are Under Secretary Russell Train of the Department of the Interior and Mr. Carl Schwartz, Director, Natural Resources Programs Division, Bureau of the Budget.

NOTICE CONCERNING NOMINATION BEFORE THE COMMITTEE ON THE JUDICIARY

Mr. EASTLAND. Mr. President, the following nomination has been referred to and is now pending before the Committee on the Judiciary:

Marvin G. Washington, of Michigan, to be U.S. marshal for the western district of Michigan for the term of 4 years, vice, Floyd Stevens.

On behalf of the Committee on the Judiciary, notice is hereby given to all persons interested in this nomination to file with the committee, in writing, on or before Monday, August 18, 1969, any representations or objections they may wish to present concerning the above nomination, with a further statement whether it is their intention to appear at any hearing which may be scheduled.

SURVEILLANCE OF DEPARTMENT OF DEFENSE CONTRACTS

Mr. BYRD of West Virginia. Mr. President, I voted against the amendment offered by the Senator from Pennsylvania (Mr. SCHWEIKER) for the following reasons:

First. The Committee on Armed Services, in early January, instituted a program of surveillance of contracts by its own staff members, and obtained the services of men highly qualified in this field—some of the top men from the General Accounting Office on a reimbursable basis;

Second. The Armed Services Committee is now receiving quarterly reports on a number of major contracts representing, I understand, about 75 percent of the amount in dollars involved in defense appropriations;

Third. The Secretary of Defense has put in motion his own surveillance plan;

Fourth. The President of the United States early this year appointed a special panel made up of outstanding members to make a report as to what most needs to be done;

Fifth. Under the amendment, there is no estimate on the number of persons who would be required as new employees and no estimate of the cost of the operation;

Sixth. The Comptroller General of the United States has stated in a letter ad-

dressed to the chairman of the Senate Armed Services Committee his objections to the proposed amendment. He stated that before legislation of this type is enacted, it should be given the most careful consideration by Congress and that such legislation at this time without such hearings "would be unwise."

Mr. President, I am very much in favor of the basic idea of the amendment, but I believe that such proposal should be subjected to thorough hearings and close scrutiny by the Committee on Armed Services and the Committee on Government Operations. This would insure that the language would be carefully drawn. We would then know exactly what we were doing, what the cost would be, the number of new personnel needed, and so forth. The chairman of the Armed Services Committee has promised such hearings. The advice and report of the President's blue ribbon panel could also be used so as to assist the committee in devising the most effective legislation.

Should the amendment be rejected in conference, I would hope that the Committee on Armed Services would work with the Committee on Government Operations to develop and present appropriate legislation to meet the needs.

ACTION IS NEEDED NOW ON H.R. 11235—A BILL TO ENRICH THE LIVES OF OLDER AMERICANS

Mr. GOLDWATER. Mr. President, it is my purpose today to urge that the Senate call up for immediate action H.R. 11235, the Older Americans Act Amendments of 1969. This measure is of direct potential benefit to millions of our older citizens, and I believe a proper consideration for their needs demands that we deal with this legislation before we begin a recess.

The bill was cleared by the House in June, was reported favorably by the Committee on Labor and Public Welfare last Tuesday, and is pending on the Senate Calendar in readiness for our approval. In other words, the bill has sailed through many seas on its legislative voyage and needs but a slight assist to be propelled into home port.

To my knowledge this proposal has almost no opposition, and I believe the joint leadership would find it easy to arrange a time limitation or other agreement which would provide assurances that the measure will be expeditiously handled.

Mr. President, it is not possible for me to overstate the importance of the group of citizens to whom this measure is addressed. As a Senator from Arizona, one of our Nation's most favored retirement areas, I am quite familiar with the goals and qualities of our older citizens. In the past three decades the number of persons over 65 residing in our State has doubled five times. Indeed, citizens over 65 now comprise an impressive 9 percent of our entire population.

Looking at the national picture, the statistics are equally noteworthy. There are now 20 million persons in this country over 65 and a comparable number between the ages of 50 and 65.

But, statistics do not tell the whole story. There are other facts which are not well-known, and should be. These include the following:

First. Older Americans constitute one of the fastest growing minorities in the United States. Over the past 8 years their rate of growth was 13.4 percent compared to 11 percent for the country as a whole.

Second. Tomorrow's influence and impact of older people will exceed today's impact of the younger generation. Their rate of growth is about equal, but our older citizens, unlike the younger ones, possess the right to vote. In fact, the participation of older people in the voting process is greater than the national average. Let no one mistake it, this means that our senior citizens are going to be able to make their desires known in a way elected officials will have to answer.

Third. Under all existing Federal programs in the last year, only $1 per person was spent on our citizens over 65.

Fourth. Within all the Federal agencies and departments, fewer than 100 employees are working exclusively in programs for the elderly.

Mr. President, it is high time that we take note of these facts and begin to show a proper concern for the welfare of older persons. A small beginning was made with the passage of the Older Americans Act of 1965, but in its present form this is not nearly enough. Indeed, the authority for the grant and contract programs of this act ran out on June 30 of this year.

The best and simplest way to get rolling on programs to enrich the lives of older people is to pass H.R. 11235. The bill will extend the authority of the administration on Aging to support State and local services and projects dealing with older Americans. It will improve the administration of the Older Americans Act of 1965. And, it will create a double-barreled program aimed at utilizing volunteer services rendered by elderly persons.

The principal features and purposes of H.R. 11235 are the same as those included in S. 2120, which I have sponsored, and I am happy to give my complete endorsement to this worthwhile measure.

One feature that I particularly like about the bill is the flexibility it offers to local communities and agencies in choosing what projects will best fit their needs and interests. A broad range of activities will be supported under the proposed law and new approaches will be encouraged. It is important that we permit and stimulate the use of alternative approaches because it is the only thing that makes sense in light of the varying qualities of older Americans.

This group must not be stereotyped. It is simply not true that all persons who are age 65 or older have the same needs, personal goals, or desires. Some neither want, nor require, public services. Many wish only to utilize the skills and expertise that years of employment have given them in some continued, constructive manner. Others desire to supplement their savings by remaining in the labor force, while still others would like to benefit from special transportation services or home health aid or other selected projects.

Mr. President, this diversification has been the hallmark of the programs established in Arizona. It is reflected in 15 pilot projects that were run throughout our State during this past year in the field of aging. One project, which was operated by Yuma County, provided instruction for senior citizens in effective shopping, home maintenance, and health care. Another in Maricopa County provided employment referral services and transportation to jobs. A third in Casa Grande established a senior citizens center to encourage participation in, and provide opportunities for, a friendly and constructive community life.

Mr. President, one of the reasons why I support the bill now on the calendar is that it will enable Arizona and the other States to maintain and expand the fine activities which they have initiated under the original older Americans law.

But it is important to emphasize that the bill does more than simply carry on the programs begun under the 1965 law. If H.R. 11235 is passed, it will clearly make major and valuable improvements in the present law.

Primary among these is the authorization of grants to States in a manner which will significantly strengthen the capabilities of the State agencies and provide them with added options in their planning. For example, one new provision would increase the minimum allotment to each State from $25,000 to $75,000 for purposes of planning, coordinating, and evaluating programs. The dividends this will pay in improved administration of the law is self evident. Another new provision would assure that community projects which look promising will be eligible for the Federal support beyond 3 years, the limit imposed under the present law.

Finally, the bill lays heavy emphasis on the value and importance of volunteer service by older persons. This approach is based on a top-priority concern for one of the most deeply felt needs of every older person—the opportunity to contribute in a significant way to the community in which he resides.

In order to respond to this need, the bill would create a new national older Americans volunteer program composed of two parts. Part A would authorize a retired senior volunteer program designed to engage the energies and talents of persons 60 or over who wish to provide services needed in their own communities. These volunteers would give their services without compensation other than for transportation, meals, and out-of-pocket expenses. This is in recognition of the fact that the opportunity to be engaged in significant, purposeful activity is all the compensation many of our older persons wish to have.

Part B would for the first time provide a specific authorization for the foster grandparent program. This concept is a splended effort that has proven itself on an experimental basis and certainly warrants being carried forward as a regular program. Under this program, it will be possible for persons age 60 or over to render their services on a personal relationship basis to dependent and neglected children. Priority will be given to the enrollment of low-income persons who are

no longer in the work force and they will earn a small compensation for their services.

Mr. President, the invaluable benefit of both these programs lies in the great lift they give to the personal dignity and self-esteem of the older persons who render volunteer services.

In summary, it is my contention that an expanded law aimed at the needs of older Americans should receive our immediate consideration. In my opinion, the approaches set forth in H.R. 11235 represent an excellent blending of the best proposals introduced in this session and I wish to express my strongest support for this measure.

The bill strives to put public authority at the effective service of our older citizens. It provides us a means for demonstrating to the elderly that society has not shut them off and that there is a national policy to improve the well-being of all older persons. The bill is needed and needed now.

NIXON MASS TRANSIT PROPOSALS—TRANSPORTATION WITHOUT TRUST

Mr. WILLIAMS of New Jersey. Mr. President, President Nixon has at long last unveiled his mass transit proposals. Unfortunately, he has rejected the trust fund concept of financing outlined in S. 1032, which I introduced on February 7, 1969. His bill is, as the New York Times in its August 8, 1969 editorial so ably states, "Transportation Without Trust."

What is really needed for an adequate mass transit program is an assured Federal commitment. Such a commitment can only be given by guaranteed financing. The trust fund is the obvious answer. By its steady commitment of Federal support, the highway trust fund has built this Nation a network of concrete throughways of which we can all be proud. Surely our cities deserve similar treatment.

As the New York Times editorial goes on to state:

What is worse, the Administration's figures are no more than hopes and promises. Instead of establishing a trust fund, such as the highway system enjoys, the program calls for regular Congressional appropriations, sweetened a little with nonbinding commitments. Rejected in this approach is the pleading of Secretary of Transportation Volpe, the National League of Cities and the United Conference of Mayors—the authorities most directly involved in meeting the transportation crisis. Their contention is that without long-term assurance of Federal funds, rather than dependence on the changing temper of successive Congresses, it is often impossible to get bond issues approved for the local share needed to get a project underway.

This newspaper never has liked the trust fund approach in the case of Federal support for the highways. Our conviction has been that, with so assured a source of money derived from gasoline taxes, the road builders would complete their work of strangling the cities and despoiling the environment. Since they do have that guarantee, however, one that gives them some $4.5 billion a year, it is surely right to give comparable financial security to forms of transportation that are far more in the public interest.

If President Nixon were really concerned with solving our Nation's transit problems he would have endorsed the trust fund approach. Instead, he has tried to mislead the Nation by announcing a 12-year, $10 billion program subject to yearly appropriations. Similar approaches have been attempted in the past in the fields of air pollution and housing. They have resulted in utter failure and in unkept promises.

On March 10, 1969, at the fourth Annual International Conference on Urban Transportation in Pittsburgh, Secretary John Volpe unequivocally supported trust fund financing for mass transportation. More recently, the trust fund was endorsed by Mayor Lindsay of New York, Mayor Daley of Chicago, Mayor Yorty of Los Angeles, Mayor Alioto of San Francisco, Mayor White of Boston, Mayor Jonsson of Dallas, Mayor Cervantes of St. Louis, Mayor D'Alesandro of Baltimore, and Mayor Barr of Pittsburgh. In fact, Assistant Secretary of Transportation Braman, during his term as mayor of Seattle was one of the trust fund's most ardent supporters. All of these men are mayors of cities which are faced with the never-ending snarl of traffic which is strangling their lifelines.

We are told by reliable sources that Secretary Volpe fought the valiant fight and actually recommended trust fund financing to the White House. But, alas and alack he was overruled by the President's so-called economic experts.

It seems that in this administration every Cabinet officer must be "Knowlesed" at least once.

Now the Department of Transportation tells us that if we do not support the Nixon-Burns bill there will be no legislation at all. They tell us that the Congress will not pass a trust fund bill—that the administration will not endorse it.

I would hope that in the weeks ahead President Nixon and his 19th century economists would heed this advice and endorse trust fund financing—which our cities can rely upon for adequate mass transportation.

I ask unanimous consent that the New York Times editorial be printed in the RECORD.

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

[From the New York Times, Aug. 8, 1969]

TRANSPORTATION WITHOUT TRUST

Nothing about President Nixon's long-awaited message on mass transportation is adequate but the concept. The President was entirely correct in reminding Congress that, while there is a magnificently generous program of Federal support for the highway system, a fourth of the population can't use it. He was equally right in warning that the cities would choke to death if public transportation were not made an attractive alternative to private cars.

Regrettably the Federal aid the President proposes to offer for the improvement of local mass transit lines—subway, bus and railroad—is far too meager to break the cycle of poor service, fewer riders, higher fares, still fewer riders and still worse service, a cycle that has made getting to and from work an extravagant, portal-to-portal misery in just about every great city. The President's rescue plan calls for an outlay of ten billion dollars, which is what the most ardent supporters of mass transit in Congress have been asking—but, where they want to see that sum spent in four years, the Administration program is for twelve.

The difference is crucial, because here is an instance, if ever there was one, where time is of the essence. The more present transit systems are allowed to deteriorate, the more grievously the cities will be damaged, some perhaps irreversibly, and the greater the ultimate cost of salvage.

The Metropolitan Transit Authority of this city alone estimates its regional needs at $2.1 billion for the next seven years. Chicago's Transit Authority has plans for a capital program of $1.5 billion in the next five years. And execution of Washington's plan will come to at least $2.5 billion. With the Administration picking up only one-third of the bill—as against the 90 per cent it pays toward Federal highway costs—the needs of just these three cities would be enough to absorb the lion's share of the $2.1 billion in Federal funds Congress is being asked to commit through 1974.

What is worse, the Administration's figures are no more than hopes and promises. Instead of establishing a trust fund, such as the highway system enjoys, the program calls for regular Congressional appropriations, sweetened a little with nonbinding commitments. Rejected in this approach is the pleading of Secretary of Transportation Volpe, the National League of Cities and the United Conference of Mayors—the authorities most directly involved in meeting the transportation crisis. Their contention is that without long-term assurance of Federal funds, rather than dependence on the changing temper of successive Congresses, it is often impossible to get bond issues approved for the local share needed to get a project under way.

This newspaper never has liked the trust fund approach in the case of Federal support for the highways. Our conviction has been that, with so assured a source of money derived from gasoline taxes, the road builders would complete their work of strangling the cities and despoiling the environment. Since they do have that guarantee, however, one that gives them some $4.5 billion a year, it is surely right to give comparable financial security to forms of transportation that are far more in the public interest.

As details of the Administration's plan are worked out, we hope that the champions of mass transit—in the Department of Transportation, in Congress and in City Halls and Chambers of Commerce throughout the country—will prevail on the President to overrule his budgetary advisers enough to answer the need so well set forth in his message.

SALUTATORY AND VALEDICTORY ADDRESSES DELIVERED AT MAPLE GROVE HIGH SCHOOL, BEMUS, N.Y.

Mr. GOODELL. Mr. President, the spring of 1969 will undoubtedly be recorded by historians as a period wracked by disorder and violence on college and university campuses across the United States. Then, as now, dialog and debate will be devoted to the violence which threatened to destroy our institutions while trying to reform them.

In this context, it is well to remember than only 13 percent of the student population favors revolutionary or radical methods of reform. The overwhelming majority of the college population disagrees with the tactics employed by the

minority. However, they do not disagree with, and in fact, they support many of the objectives of the movement.

Today, as never before, students are sharply critical of our economic, social, and political systems and the "Establishment" and authorities who run them. They are expressing discontent and dismay on a wide variety of subjects—war, the draft, civil rights, and civil disobedience, the military, big business, the political parties, the mass media, the distribution of wealth.

Acts of violence which have been used to dramatize this disillusion must be denounced. During the past academic year, I have visited many campuses in New York State and stated my view that violence in our academic institutions will not be tolerated.

However, we cannot afford to dismiss this clear message of discontent because of the use of violent tactics. We must ask ourselves painful questions. Why violence? Can reform be achieved by reason rather than riots? Have we failed our youth? Is the generation gap bridgeable?

We must search for answers to these questions.

On June 23, 1969, I spoke at the commencement exercises of the Maple Grove Junior-Senior High School, Bemus Point, N.Y. The occasion was a memorable one for all present because of the remarks of two students, Christopher Edmund Smith, the salutatorian, and Cheryl Ann Pembridge, the valedictorian. With eloquence, sensitivity, and insight, these young people addressed themselves to the painful questions raised by campus disorders.

Both students have excelled as leaders and scholars at Maple Grove and have benefited greatly from the institutions of our society. Both students, however, question these institutions and the premises upon which they rest. Very shortly, they will become members of a college population which seeks, through questioning, to make a better society.

For the benefit of Members of Congress, I ask unanimous consent that the remarks of these young people be printed in the RECORD. In questioning, they have courageously provided the environment for solution, and they urge an end of the "young people should be seen not heard" philosophy.

We must listen. We must respond.

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

VALEDICTORY ADDRESS, MAPLE GROVE HIGH SCHOOL, JUNE 23, 1969

(By Cheryl Pembridge)

Riots—demonstrations—violence—the generation gap—America and its heritage are splitting apart at the seams . . . and Maple Grove lives on.

At least today, the Grove is a relatively happy place. It has a qualified staff, a reasonably well-disciplined student body, an above-average number of courses offered for its size, and, an accreditation. Still, apathy, the forerunner of anger, is prevalent at Maple Grove, as at hundreds of other American schools across the country. Apathy has no right to exist in the schools of the affluent society—even if that society does pay its plumbers more to fix its toilets than it pays its teachers to shape the minds of its youth. All institutions of learning, be they high schools, vocational schools, colleges, or universities, should have one common goal: to make the student ecstatic, not apathetic, about the learning experience and life . . . thus inducing the student to remain a student—a person hungering for knowledge—throughout his life.

Boredom breeds apathy, and a boredom epidemic has already struck Maple Grove. I was a victim, and so were many of the other people seated on this stage. But neither the students nor the faculty were necessarily to blame. The blame should fall on American colleges and universities, and the State Board of Regents. Rather than allowing us to be prepared to lead our world, they insist on mandating the teaching of courses and facts that will be of little or no use to us after our high school and/or college years. For example, the first hostile shot of our Civil War was fired at Fort Sumter on April 14, 1861. But is this fact, and other similar facts which we are taught three different times during our elementary and high school careers, going to help us govern the United States in the 1980's? I think that the teaching of these same facts to elementary, eighth grade, and eleventh grade students is an over-emphasis of unnecessary details. But I do feel that students must be exposed to historical facts and concepts at some time, in order to better understand and appreciate our heritage, and the evolution of our world today.

The growing boredom at Maple Grove could be killed by keeping the students busy. The apathy resulting from this boredom could be killed by not not allowing, but also encouraging, the students to become involved in the world of today—their world of tomorrow.

Apathy and boredom lead to anger, but so does lack of communication between the generations. It is this lack of communication that has caused the mounting bitterness between the students and the administration of our school. Id like to cite an example for you. At a recent meeting, the high school Student Council was informed that a questionnaire would be distributed to the entire student body. The questionnaire was designed to determine the students' feelings on the establishment of a dress code at the school. However, the Council was also informed that regardless of the results of the questionnaire, a dress code would be established. Of course, under such circumstances, the entire incident was a waste of time for both the administration and the students. This was not a new occurrence at the Grove. The students have become accustomed to giving their opinions when asked, only to have them discounted or completely ignored. The reaction among the students is only natural: there is a growing lack of respect and a growing amount of indifference for the administration.

Think about it. Seated before you on this stage are 95 students. These students are human beings, like you: our parents, friends, teachers, and administration. We are not IBM computers sent to Maple Grove each day to be programmed. We are people here, some of us against our will, to learn what life is, and how to live it. We should be learning not only facts and concepts, but also ways of communicating these and other ideas to other people, be they younger or older than we are. This may sound terribly Freudian, but what are you doing to us and to our minds, if you ask us to talk to you, and then you don't hear us?

Several educators, including Huston Smith, an M.I.T. philosophy professor, and A. S. Neill, the founder of Summerhill, an experimental school in England, attribute many of the disturbances on high school and college campuses to the use of the "children should be seen and not heard theory" employed by many of their fellow educators. Neill, especially, believes that freedom of thought and expression are essential to the development of healthy, happy human beings. But Neill himself admits that these freedoms mean nothing if a child senses that his contributions are being completely ignored.

Without trying to be impudent, I ask you to consider this. Suppose your superior at work asked your opinion about some new product, a new wage standard, or a change in working procedure. You'd probably be very happy that the person had even considered your feelings. But how would you feel if you discovered that that was exactly what he wanted—he wanted you to be happy and content and he had no intention of using your ideas. The first time it happened, you might have felt flattered that he thought enough of you to want to make you feel good. But how would you feel after it happened 4 or 5 times? . . . a lot like we do at Maple Grove—skeptical and indifferent about even offering our opinions.

Ladies and gentlemen, you have raised us. You have taught us most of what we know. You have instilled a pride in us—a pride in our fellow students, in our school, in our community, in our country. To my knowledge, there is not one person on this stage tonight who would not be willing to serve our country in some capacity . . . and that's got to be some kind of record in the United States today. You have given us the knowledge and the pride, now let us make use of it. For, as poet Kahlil Gibran says:

Your children are not your children. They are the sons and daughters of life's longing for itself. They come through you but not from you. And though they are with you yet they belong not to you.

You may give them your love but not your thoughts. For they have their own thoughts. You may house their bodies but not their souls. For their souls dwell in the house of tomorrow, which you cannot visit, not even in your dreams. You may strive to be like them, but seek not to make them like you. For life goes not backward nor tarries with yesterday. You are the bows from which your children as living arrows are sent forth . . . Let your bending in the archer's hand be for gladness.

Thank you for many happy years. As we in the Class of 1969 look forward to tomorrow, idealistically seeking success in all we attempt, we will try to serve as a credit to you, and to the undying love and patience you have shown us throughout the years.

Thank you.

CHRISTOPHER EDMUND SMITH

Mr. Goodell, Mr. Hillenbrand, Mr. Gerber Mr. Sykes, Board Members, Faculty, Parents, Guests, Mom, Dad:

As a member of the Senior Class, I would like to welcome you to the Commencement Exercises of the Class of 1969. We are especially privileged to have Senator Goodell here, and appreciate his taking the time to speak tonight. Tradition would have me now proceed to thank one and all for the wonderful education that I have been given, and to express my gratitude for the chance of living in this land of opportunity, the home of the brave. Contemporary student philosophy, however, would tell me to wear a gas mask or helmet in protest of the whole affair, thanking one and all for twelve years of intellectual inhibition, and expressing my disgust at having to live in a land of subtle tyranny, the home of the hypocrite.

In deciding what to say tonight concerning my education over the past twelve years and its relationship with the rest of the world, I first had to ask myself, "What is education today?", and more importantly, "What should it be?" I found that it was impossible to answer these questions, because education is whatever each individual makes it to be, and should be whatever that individual wants it to be.

A recent Harris poll in Life magazine found that most parents feel that maintaining dis-

cipline is a more important job of the school than encouraging intellectual inquiry by students. I would not be so insulting as to imply that all the parents in this auditorium feel this way, but sometimes polls do show general trends.

Likewise, a high school education in the United States reflects this attitude. A Maple Grove High School education does place more emphasis on discipline than on intellectual inquiry. This is not a reflection, however, of the faculty of our school, only a reflection of the entire public school system. The quality of the teaching staff in this high school could probably not be matched by another public high school of its size. During my four years here, I felt that I was being offered as good a high school education as is available anywhere, and if I were running the show I'd be tempted to hire our faculty again for at least a few more years.

If formal education is to be continued after graduation, the discipline which we encountered in high school will disappear on the campus. This reliance entirely upon oneself for discipline provides the environment for dissent. As a result of all the controversy this past year, the only conclusion I could come to is that on this earth, the monopoly of truth rests in no one—not in students, not in parents, not in College Presidents, not in administrators, not in myself, not in you, not in whites, not in blacks, not in teachers, not in young, not in old, not in Supreme Court Justices, not in cops, and not in the law.

The only answer then is in oneself. If I could honestly say to myself that to kill someone else in combat was immoral, or that our entire economic system was unjust, I would be less of a man for not refusing induction into the service or not protesting against that system. However, if I were doing all this protesting without truly thinking or merely because everyone else was, I wouldn't be worth too much either. "Is today's mass communication and technology doing our thinking for us by showing us what everyone else is doing and making it the thing to do?" How many college riots and seizures of administration buildings would have occurred this past year if there was no awareness of similar happenings at other institutions? Would the blacks at one of New York State's smaller state colleges have demanded an allowance of 35 dollars a week extra for them, merely on their own motivation?

I would like now to read a quotation from Emerson which says in better words what I would like to say:

"It is easy, in the world, to live after the world's opinion; it is easy, in solitude, to live after your own; but the great man is he who, in the midst of the crowd, keeps with perfect sweetness the independence of solitude."

The greatest thing that we of the Class of 1969 can do in fashioning our lives is to weight the opinions of our parents, our teachers, our relatives, our friends, our enemies, our God, and our country—to examine our values, morals, and consciences, and then to act accordingly, independently. If this means doing something that is unacceptable to society and the law, then we have been failed by that society. Some of us will enter the service, find a job, or enter college following graduation. Whatever we do though, our lives should be a living monument to our consciences. If we do act according to our own unprejudiced, true beliefs, we will not have failed our parents or society in any way, and, most of all, we will not have failed ourselves.

Thank you.

BREZHNEV SETS THE CLOCK BACK

Mr. JACKSON. Mr. President, as I have stated in recent discussions on the Senate floor, a growing number of informed Western analysts of Soviet developments, right, left, and center, are assessing the Soviet leadership as limited, plodding, and insecure, presiding over a pronounced trend toward a domestic hard line, and evidencing no intent or capacity to move the Soviet Union out of the vicious circle of repression, fear, repression.

In this connection, I recommend to Senators the article entitled "Brezhnev Sets the Clock Back," written by Henry Kamm, and published in the New York Times magazine section on August 10, 1969. Henry Kamm recently returned from the Soviet Union after 2 years as chief of the Moscow bureau of the New York Times. He is now able to write freely about current trends in Russia.

I ask unanimous consent that his article be printed in the RECORD.

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

[From the New York Times magazine, Aug. 10, 1969]

BREZHNEV SETS THE CLOCK BACK

(By Henry Kamm)

Five years ago, Nikita S. Krushchev found himself swiftly transferred from supreme rule over the Soviet Union to tending flowers and cucumbers in exile in a V.I.P. cottage colony outside of Moscow. And five years ago hope faded once more for the oppressed human spirit in that unhappy land.

Somehow, this truth does not seem to have reached the West. A reporter, back after two years in the Soviet Union, finds himself constantly answering questions and replying to comments based on an appraisal of the Soviet Union that is now five years out of date and was from the outset rosier than reality. What do you mean there are no rebellious poets? Aren't there Voznesensky and Bella Akhmadulina? And how about Yevtushenko? Well, I explain, the first two are having trouble getting anything published, certainly nothing even vaguely unorthodox, and it's been a long time since Yevtushenko has felt rebellious at his typewriter, and still he has been fired from the editorial board of the literary monthly Yunost.

And the man named to succeed him, Anatoly Kuznetsov, a novelist, so despaired of the future of his country that he reached the heartrending decision to defect on a visit to Britain last month. Heartrending, because he knew that his choice of freedom—as a writer in a country whose language he does not speak—will make it unlikely for a long time to come for any Soviet artist suspected of liberal leanings to visit the West.

But isn't Igor Blashkov performing cycles of concerts of avant-garde music, including works of Soviet composers, in Leningrad? Mr. Blashkov has been fired, I say, and is now working in the Ukraine. And how about that daring film about the life of Rublyov, the ikon painter? Didn't it win a prize in Cannes? Yes, but more than two years after its completion it has not yet been shown to the Soviet public. And so on.

Not the series of political trials beginning with the writers Andrei Sinyavsky and Yuli Daniel nor even the invasion of Czechoslovakia has succeeded in dispelling the illusion that somehow the Soviet Union has overcome Stalin's legacy and is engaged on the road toward decency and liberalization, allowing for the occasional detour.

No one knows better how far the ruling group, headed by Leonid I. Brezhnev, has turned back the clock than those who had their hopes stirred during the erratic rule of Khrushchev. For reasons connected more with the infighting for power than a devotion to truth and freedom, Khrushchev raised the curtain on the carnage and incarceration of Russia's best by which Stalin had ruled. While incomplete and self-serving, Khrushchev's de-Stalinization marked the first time that the Soviet Communist party, the absolute and infallible guardian of the revealed truth by which 240 million Soviet citizens must pretend to live, confessed to the world that for three-quarters of the period of Soviet rule that rule had been exercised by a megalomaniac madman.

This first flickering of truth raised hopes in some Russian breasts, hopes that the truth might some day come to the Soviet Union and that a measure of freedom must follow. The present leaders have extinguished that hope. Khrushchev has become an unperson, while all public references to Stalin serve to restore to him a measure of his former glory. And not only in the public prints.

"The most despairing thing about my country is that if you ask any normal person what he thinks of Stalin and what of Khrushchev, Stalin will be talked of with respect and Khrushchev with disdain," a friend, a scholar of democratic convictions, said.

During my travels—to Siberia and the Soviet Far East, Central Asia and the Caucasus, to Minsk and Leningrad—I asked as many Russians as I could to make that comparison. Invariably, Stalin emerged as a revered father figure, a great man—"He had his faults, but so did Napoleon"—and a dignified leader of a nation that wants to be great. Khrushchev, by contrast, was depicted as a rustic buffoon, a braggart, a plotter of harebrained and wasteful schemes, uncultured and undignified to the point of banging his desk at the United Nations with his shoe. The people had no share in the removal of Khrushchev, but his barefoot outburst helped immeasurably in making his ouster popular. The Russian people forgive no breach of dignity by their rulers.

A high Soviet official told a French diplomat who had tried to explain why the French allowed General de Gaulle to resign. "I don't understand, when we have a good czar we keep him." To the average Russian, Stalin fulfilled the role of a good czar—distant, aloof and authoritarian—and Khrushchev did not. So Khrushchev's great accomplishment on behalf of truth and enlightenment counts only with the handful who think like my democratic scholar friend.

The plodding and insecure team that followed the reasonably benevolent dictator it toppled is not the pure evil that the Soviet Union endured for three decades in the person of Stalin. It is doubtful that Brezhnev and his associates possess the perverted greatness and the evil boldness of vision that enabled Stalin to rule his anarchic and amorphous realm by sheer terror. They are ruling, instead, by sheer weight, a concentrated bureaucratic mass of heavy specific gravity that presses down on the loose mass below but moves very little. They have made no bold departures, at home or abroad, except the negative initiatives of undoing some of Khrushchev's most disastrous agricultural errors immediately after they took power and invading Czechoslovakia last year. How then does the Soviet Union look after five years of such rule?

To see the country in meaningful perspective, a foreigner must try to view it through the eyes of Russians with whose way of looking at the world he can identify. They must be people who through a mysterious alchemy of their own have managed to shake off the never-ending pressures on all Soviet citizens to forget that Russia was once a part of the world in cultural and political tradition.

The foreigner's own vision during his stay in the inhospitable country is distorted by his being forced to live in compartments and passageways reserved to outsiders, rigidly screened off from the realities of life in the Soviet Union. It is possible for the for-

eigners to make friends with those few who, because of their hunger for contact with the life and culture of the world they are not allowed to visit and from no disloyalty to their own country, which they love, cast aside normal Soviet fears and asscoiate with foreigners. I never dared ask any of my Soviet friends to what harassment from the authorities this may have exposed them.

They were intelligent men and women of various arts and professions, some young, some not so. I love them not only because they dared to walk past the policeman posted at the entrance to the foreigners' ghetto in which I was required to live, but also because they were all that made my two years in the Soviet Union bearable. In the mass of homogenized homo Sovieticus—the "New Man" Pravada is so fond of boasting the Soviet system has created—they were the only human beings who retained the familiar virtues and vices of the world beyond, individuals with whom normal communication on any subject was possible. Their conversation did not have to be translated from the special Soviet vocabulary. They proved the resilience of the spirit under the most concentrated onslaught that has ever been mounted against it.

There is no letup ever in the process of converting men, women and children into homo Sovieticus and to prevent backsliding. It is hardly possible to leave one's home without being constantly confronted by banners, posters and billboards bearing slogans. Stepping into the street, he may be greeted by a poster declaring that the ever-present Lenin lived, lives and will live, or urging him to work for the victory of Communism. On the bus, he is likely to face a sign celebrating the glory of the Soviet people, or of labor, or of the army. Arriving at his job he may find the uniqueness of Marxism-Leninism proclaimed. The posters are alike in the repetitiveness of the slogans, low quality of design and draftsmanship, and hideous colors.

Soviet newspapers are made up in great part of sermonizing articles. Whether they deal with achievements of the petrochemical industry, relations with Afghanistan or the successes of amateur choral groups, the tone is heavily self-satisfied, calling on all concerned to continue the good work for the greater glory of Communism and the fatherland.

Radio and television news broadcasts are songs of praise to the Soviet Union and hymns of hatred to the other side, known collectively as the imperialists, and to Communist China. Announcements of Soviet achievements—the winning of an Olympic gold medal in weight lifting or a successful venture in space—are usually preceded by fanfares, and the announcer speaks in nobly solemn tones, reserved elsewhere for the death of kings. Programs abound in patriotic poems with interminable numbers of verses.

There are compulsory political education meetings at places of work and in schools, required courses in Marxism-Leninism, meetings of the party and its affiliates, obligatory participation in May Day parades, protest marches against the foes of the Soviet Union and similar festivities. (These activities have been stepped up since the plenary meeting of the party's Central Committee in April, 1968, when, in response to the liberalization then under way in Czechoslovakia, an intensification of the "ideological struggle" was called for.)

The result of this sustained cradle-to-grave barrage of stridently one-sided propaganda, unrelieved by the expression of differing views, has been an almost total deafening of political receptiveness on the part of the overwhelming majority of Russians. "We have to turn off our ear trumpets to be able to live," an establishment Russian said to me during the ballyhoo that preceded the 50th anniversary of the Bolshevik Revolution in 1967.

Thus, the never-ending wave of *agitprop* (agitation and propaganda) has produced the most nonpolitical large nation on earth. The contrast between the loudness of the propaganda and the sullenness of the response is astounding. There is more concern, for instance, among Americans for the plight of their long-suffering North Vietnamese foes than there is among their Soviet allies, who are exposed to ceaseless propaganda on behalf of their fighting comrades.

In a way, the present heavy-handed and unenterprising leadership looks like the most truly representative Government the Soviet people have had. Russians of independent mind say that the lethargic and unimaginative Brezhnev team is the Government the Russian people deserve. Just as their leaders, the overwhelming mass of the people seem possessed by feelings of inferiority, blinded by ignorance of the world outside, fearful of taking initiative and unwilling to accept responsibility for their fate.

"But what can we do? We have no power and no rights," the bright and beautiful wife of a friend said with a sigh when the parallel between the leaders and the lead was discussed.

"And we will continue to deserve what we get as long as we look at it like this," her husband turned on her angrily. "This is the way we stand before authority," he said, lowering his head in mock submissiveness and holding out his arms, crossed at the wrists, like a prisoner's. "That's the great Russian people."

"It takes courage to demand freedom openly, as you do," I said.

"No," he replied, still angry. "Courage comes from here or here," he continued, pointing to his head and heart. "With me it's here," he said, jabbing his stomach with the same finger. "I just can't live with it."

This unwillingness to co-exist with the system is exceedingly rare, even among intellectuals. The Soviet people don't seem to object to things done to them nor things done to others in their name. The throttling of hope for internal freedom has aroused no more open discontent than the aggression against Czechoslovakia. There was almost no spontaneous public reaction to the invasion of last August. Even months after the event, it appeared as though it was a visitor's questions that first prompted people to define their own reactions. The answers revealed two prevalent attitudes, indicative of how Russians view the world.

One was inferiority feelings expressed in remarks like, "Why were the Czechs shouting so much anyway? We know they already have a great deal more than we do, so what else do they want? Serves them right. We have to pay the bill one way or the other."

Most Russians are convinced that their allies sponge mercilessly on the Soviet budget. They consider this an act of particular ingratitude because they feel that the Soviet Union has already made enormous sacrifices for them by liberating them in World War II. The number of Soviet soldiers buried in Czechoslovakia was frequently cited as an argument against liberalization in that country.

Cynicism about all political statements, from any government, was equally prevalent. The average Russian believes that all governments lie most of the time. They may not believe their own Government's explanation of the invasion, but they also believe that all major powers are rapacious. "It was either us or you together with the West Germans," was a frequent comment on the fate of Czechoslovakia.

Russians explain that the blend of political apathy and cynicism derives from a Russian attitude toward government that is far older than the Soviet system. Government is considered by the average Russian to be an unavoidable evil with which he feels no sense of identification. His optimum expectation from government is that it will stay far away in Moscow, and not pay too close attention to what he is doing. Then he will continue to get away with as much shirking on the job, petty theft of government property and general cutting of corners as he can.

In this respect, the Soviet dictatorship is far removed from Hitler's Germany. The Kremlin rules over an anarchic people, keeping them non-mutinous but failing to instill in them the fanatic discipline and unquestioning obedience that distinguished the Nazi regime.

Although the Soviet Union makes a cult of labor and claims to have created a New Man who rejects the greed and cupidity of the capitalist societies and forsakes personal gain for the benefit of the *kollektiv,* the actual work-dodging and inefficiency of labor and the single-minded concentration on the acquisition of material possessions are one of the great initial surprises to foreigners.

Western businessmen and visitors are struck by such things as the overstaffing and absurdly intricate bureaucracy of business organizations, the amount of time workers spend sitting at their work sites without actually working, the frequency with which construction equipment stands idle at one site while its absence is obviously making workers idle at another and the amount of building material stacked away at construction projects, often deteriorating from exposure, while no work is done.

"I bought more than 50 rubles worth of groceries the other day at the supermarket because my wife and the children are going to spend the summer in a *dacha* far from any store," a friend reported. "I imagine in America the shopkeeper would be very happy with such a big customer. But look what has happened to such normal instincts in Russia.

"First, the old woman with the abacus who adds up the bill complained because I bought so much. Then the people waiting behind me joined in, and other women working in the store. There was a whole group around me. 'Why should you buy so much?' they asked, or 'He must be profiteering on a black market somewhere,' or 'Where did you get so much money, comrade?' They refused to let me buy it."

My friend is a mild-mannered man with a firm belief that the Soviet Constitution and laws allow more individual rights than Soviet citizens have the spirit to claim. Nothing will change for the better in the Soviet Union, he believes, until this spirit is aroused. He insisted on his right to buy all the groceries he wanted and demanded to see the manager. He came, not because my friend asked for him, but because others had complained to him about my friend.

"The manager asked me the same questions as the others, but I told him it was none of his business and asked him on what grounds he refused to sell me what I wanted to buy. He said he didn't have to tell me but finally, because he realized that I was in the right and would not give in, he gave in. He said that this time he would let me buy all that but don't do it again, comrade.

"What happened next would also not happen in America, I think. The woman adds up on her abacus what you bought and you take the slip to the cash register to pay. But nobody trusts anybody in this country, so no slip can be for more than three rubles. Otherwise, I guess, somebody could put a one before the three and collect 13 rubbles' worth of goods and pay only three. So the limit is three. My 50 rubles' worth had to be divided in groups worth no more than three rubles each and separate slips written for each. And the people behind me started to argue all over again because they had to wait while the woman did this.

"If you understand all the tragedy and all the comedy of trying to buy 50 rubles' worth of groceries it the most modern store

in the capital of this great country, you Westerners will understand what it means to be a Russian," my friend said. "And the greatest irony is that the only ideal of most Russians is to live like you Americans do. But their ideal is limited to your material life. The ideals of this country are the ideals of your *bourgeoisie*."

How does the spirit of an intelligent and sensitive man survive in so hostile an atmosphere? "By blotting out your sensitivity as early as you can and using your intelligence to get the most out of the system," a Russian, who has never tried either, said. But many have followed that pattern, giving rise to a class of intellectuals of extraordinary cynicism.

On a recent visit to the Academy of Science of the Soviet Republic of Georgia, a dozen academicians talked with me over glasses of the sweet local champagne. They were distinguished men from various academic disciplines, sure of their value and high station. Their ease of bearing, the cut and cloth of their suits, the fact that they had traveled abroad, set them apart from Soviet Man, even of high rank. They would have looked at home at the Union League; they were the most worldly group I met in the Soviet Union.

But what these extraordinary men said on any subject—the moral problems of scientists, youth questioning established values, the role of the modern university, Czechoslovakia, China—was Soviet-ordinary. Soviet intellectuals who have made it speak about the great issues in the same terms as politically well-drilled farmers or mechanics. The language is that of Pravda.

The problems I raised, they said, were strictly the problems of the West, did not exist in the Soviet Union and could never arise. Soviet scientists are not bothered by the knowledge that much of their research might some day be used to blow up the world because they know their country would never make aggressive war. Soviet youth is joyous and happy in the knowledge that it is living in the best of all possible worlds and knows that it will get even better. Problems in the university? What problems? Not here. There was never a wink or the redeeming shadow of a doubt.

The few who have not sold out suffer, mostly in silence. To possess a sense of truth and beauty when one must live surrounded by lies and ugliness is painful. When I told a friend that a mutual friend, a Westerner, had fallen ill from the bitterness of living in the Soviet Union, the Russian asked, "How long has he been here?"

"Three years."

"And I've been here for 43," the 43-year-old Russian said dryly.

An artist whose work is not exhibited and who drives a taxi because he says he cannot bear to work in a Soviet organization said, "You may not believe me, but I spend 80 per cent of my vital energy just on remaining human." It takes that much energy, he explained, actively resisting the influence of the ceaseless propaganda, resisting getting depressed by the ugliness of so much of material life and objects, studying English, French, and German to be able to listen to Western news broadcasts and trying to find at least moderately attractive things with which to decorate the one room he and his wife have in an old apartment, in which they share kitchen and bath with five other tenants.

Most Russian consumer goods—clothes, furniture, utensils—are ugly. Former Western residents who return to Moscow these days are struck by the improvement they see in this respect, and Russians say that that is true, but things are still far from beautiful—only less ugly. Houses being built now, for example, are no longer the richly ugly confections of the Stalinist period—like the All-Union Exhibition of Economic Achievements in Moscow, or the entire city of Minsk—but resemble the drabbest of modern Western buildings. And the same buildings are going up from one end of the country to the other. Arriving in Khabarovsk from Moscow, after eight hours of flight and 3,800 miles further east, one has the sensation of never having gotten off the ground. The scene is the same.

Because of the ugliness of Soviet cities, those who respond to beauty like to visit regions that have not yet been Soviet for a long time and retain a European aspect—like the Baltic countries, or the Carpathian region annexed from Czechoslovakia after World War II—or undeveloped and exotic parts of Central Asia, Siberia or the Caucasus. For similar reasons, household objects and clothes of peasant origin are greatly prized by people of taste. But there is no relief for such people from the pervasive barrenness of cultural life.

The major novels of Alexander Solzhenitsyn circulate in Moscow only in typescript or in Russian-language editions brought in from the West. Most works of originality and imagination do not even have underground circulation. They are written "for the drawer" of the writer's desk in the feeble hope of a better day. Room for innovation in theater, music and dance is infinitesimal. Yuri Lyubimov, director of the Taganka Theater, the most adventurous in Moscow, is proudest of his production of "Ten Days That Shook the World," after John Reed's book. His daring has consisted in staging a rhetorical and clumsily propagandistic play in the manner of the German expressionist theater of the twenties. Even such a deviation from the prevailing Socialist realism is considered daring modernism.

The Bolshoi Opera and Ballet are dusty museums outdated styles, with repertories that, with few exceptions, leap directly from the Romantic to the Soviet period. A conductor, asked whether he saw any possibility of mounting Berg's "Wozzek" at the Bolshoi, replied sadly, "We haven't even reached Wagner and Strauss yet." Concert and recital programs are equally unadventurous, and, because of the infrequency of performance, those works of the later repertoire that turn up tend to be badly and unidiomatically played. The plight of the composer of genuinely modern music—not of the spurious, folk-derived, approved style—is even sadder than that of the writer, poet or painter who works for his desk drawer. The composer's work is incomplete without performance.

The museums of the Soviet Union are filled with acres of academic and bigger-than-life paintings of the approved school. It is ironic and sad that on this level of creation the ideal communication between the creator and the public seems to exist far more fully than in the West, where works of originality and imagination often go unnoticed. I have seen groups of eager people seriously discussing and appreciating the works of nonart that face them. Equally sad is the fact that very few of the "underground" painters whose work is seen only in their houses or at friends', show enough talent to be taken seriously.

Alcohol is the great substitute for printing, performance or exhibition for people with creative talent. Haunted by the absence of the essential public for the works they have created or feel stirring within them, they drown their gifts in vodka. It destroys the talent first and the man later.

People of artistic and intellectual predilections look for ivory towers in which they can lead satisfying lives without having to prostitute themselves. They may find their havens in mathematical linguistics, or musicology, or pre-Columbian art. A woman, replying seriously to the joking question what her year-and-a-half-old son would be when he grew up, said, "A classicist, it's safe." But for every Solzhenitsyn or Voznesensky, or those who write in the hope of some day being published, for every painter and musician who lives as an artist only in the stillness of his room, there are thousands whose integrity as men and artists is tempered by the all too human wish to live well and raise their children in tranquility.

And for every Sinyavsky or Daniel, or Larisa Daniel, or Pavel Litvinov, or Aleksandr Ginzburg, or Yuri Galanskov, or Pyotr Grigorenko, or Pyotr a Yakir, or Natasha Gorbanevskaya—the heroic and lonely few who, like my friend, cannot coexist with the system and must say so—there are hundreds of others who see the same wrongs but have not found the tongue and the heart to say so, and thousands who also see them but pretend that they don't, and hundreds of thousands who hate those that say so, because to say so is rocking the boat and the rulers reward a peaceful, well-behaved citizenry with more bread, and it is bread most Russians want and not freedom.

The hopeful image of the Soviet Union still common in the West is so wrong that even some strongly anti-Soviet groups are basing their protests on unduly positive ideas. The Jewish groups that protest, justifiably, against the deprivation of full cultural and religious rights from Soviet Jews raise the impression that the 3,000,000 Soviet Jews are asking such rights and are heartened by such demands from beyond the borders. The truth is blacker.

The typical Soviet Jew feels, like other Soviet citizens, deprived of his human right, only more so. He knows he lives in a country that is as anti-Semitic as the rest of Eastern Europe. But he is not outraged. He knows his place. He hopes that he will be left alone, if he keeps quiet, and his brothers abroad do the same. And who knows perhaps, if he is allowed to live in peace, some day a leader will come along who will not require a Jew to be twice as good as all the other candidates to get the job.

The doubtful image of the Soviet Union as a country that, while somewhat behind the West in standards of living and freedom, is heading in the same direction is due, I believe, to the unswerving commitment of the United States and the rest of the West to the unproved idea that the peace of the world can be assured only by assuring the Soviet Union of our wide span of tolerance. To a Czechoslovak, it would be difficult to see the difference between this policy and what was once known derisively as "appeasement," an idea that proved notably unsuccessful in dealing with Hitler.

Why should the average citizen of the West think too badly of the Soviet Union when the total American riposte to the rape of Czechoslovakia by broad daylight was a brief delay both in the negotiations about arms-reduction negotiations and the tour of the Soviet Union by the University of Minnesota Band? (The belated arrival of the Midwestern pipers and drummers in April came, fittingly, at the time Moscow finished the Prague job with the removal of the liberal Czechoslovak party leaders.)

The Soviet Union has also been remarkably successful in creating conditions in which Western news media find it difficult to present a true and complete image of the country. The methods are crude pressure or gentle persuasion and they work.

By crude pressure, the authorities have frightened the bulk of the 100 or so Western correspondents into thinking twice before writing an article that might expose them to warning, retaliation or expulsion. The threat of being expelled hangs over Western newsmen, and those who think twice almost always conclude that expulsion is a greater evil than silence.

The Western news agencies have minimized their coverage of Soviet dissidents for example, because their bureaus might be closed and they would find it difficult to sell their service if it did not include the vital Mos-

cow dateline. As a result, their junior correspondents, some of the brightest journalists in town, find it impossible to write the stories they have gathered.

Among the senior resident correspondents, there are representatives of important newspapers whose chief stock-in-trade is *expertise* on the Soviet Union. For them, expulsion might mean the end of their journalistic careers or, at least, recall to less profitable assignments at the home office. It proves an effective deterrent to full coverage. Similarly, visiting scholars tend to pull their punches when writing because their careers will be enhanced by being allowed to visit the country in which they specialize.

Because of the physical and professional discomforts of working in Moscow, there are newspapers who find their Moscow bureaus a staffing problem. They tend to send journalists who are easily persuaded that, news being difficult to come by and social life in the artificially self-enclosed foreign community free and easy, there is no great point in trying. This attitude endears them to the authorities, who reward them with the things that in most other countries are free to all journalists: the right to travel, to see innocuous public figures in pursuit of nonpolitical stories and to attend public events.

Radio-television correspondents know that if they say unfriendly things on radio they are likely to find their next request to do a television shot turned down or their film held up from shipping until it has lost its news value. Since the glory is in television rather than radio, some correspondents tend to keep themselves in check in their radio news and commentaries. This is particularly true for correspondents from Western countries that control their broadcasting networks and cultivate good relations with the Soviet Union.

The Soviet Union's power to intimidate correspondents derives from the extraordinary controls it puts on their activities. The press department of the Foreign Ministry insists that all contacts journalists have with Russians for the purpose of gathering news must be cleared through it, as well as all travel beyond the suburbs of Moscow. In effect, this means that a correspondent who is considered less than friendly will not be allowed to leave Moscow or to write even about such noncontroversial subjects as plans for the Moscow musical season or electric shock therapy. Dozens of such requests that I made must still be in the files of the ministry. They went unanswered because Soviet authorities do not like to say no.

In return, there are rewards for well-behaved correspondents. An agency reporter who derisively refers to political dissenters as professional protesters may find himself getting news of a Soviet space shot an hour before his competitors, an important *coup*.

Because the Soviet Union has made it so difficult for journalists to gather news, it has been able to create a source of foreign-currency earnings by selling news it refuses to give. This part of foreign trade is conducted through Novosti, a news agency believed to be controlled by the K.B.G., the secret police. Its agents, posing as fellow journalists, put newsmen or authors of books in contact with Russians who can be relied upon to present the glossiest facade of the Soviet Union. The fee for the service averages $50 a day.

Because of the dearth of real news from the Soviet Union, a great part of the material published in the West is speculative. There may have been a time when the science of Kremlinology—the divining of what may be going on within the Soviet leadership—had its uses. During reign of Khrushchev, when the leader himself spoke publicly not only to his people but also to journalists, and when various Soviet newspapers were known to represent different centers of power, a study of the minutiae could yield bits of information. But even in the heyday of Kremlinology it must be observed that none of the practitioners, in Moscow, in editorial offices or in foreign ministries, perceived any signs that Khrushchev's hold was slipping.

Perhaps to avoid being caught out once again, Kremlinologists are feverishly active now, picking over the scantiest of material. Brezhnev and his colleagues rarely speak, and when they do it is hard to tell their last speech from their previous one, which may have been two years ago. The closest readers of the press find nothing but leaden uniformity. The wisest of the diplomats are the first to admit their ignorance of whether there is a struggle for power in the Kremlin and who is on whose side.

When I arrived in July, 1967, Aleksandr N. Shelepin had just been assigned to head the trade union organization. All experts were agreed that for a member of the ruling Politburo this was a serious demotion. He was down but not quite out. Since then, all that has happened to Shelepin is that he has also been removed from his Central Committee secretaryship. Yet as I left Moscow, the same experts were convinced, without further knowledge, that Shelepin was now the major threat to Brezhnev's power.

With the total absence of reliable Soviet sources, and the secrecy in which the leaders of the Soviet Union conduct their affairs, newspaper readers should have the right to demand that Moscow correspondents take a pauper's oath, confessing that they do not and cannot know what goes on inside the Kremlin. If tomorrow's newspapers brought news that the new leader of the Soviet Communist party is Ivan V. Gusev, until yesterday a regional chief in the boondocks, I would be no more or no less surprised than if five years from now the leader were still Leonid I. Brezhnev.

Soviet democrats refuse to build hopes on the possibility of a leadership change. No known political personality is presently suspected of liberal tendencies, but so little is known about anybody that there seems no more ground for pessimism than for optimism—only ignorance.

"We live in a perfect vacuum," a world-weary, aging painter, who long ago despaired of being allowed to be an artist, said. "Except for fear. It is the only freedom left to us, the freedom to fear."

SENATOR HRUSKA SPEAKS TO KIWANIS INTERNATIONAL

Mr. BOGGS. Mr. President, on June 30, 1969, the distinguished and able senior Senator from Nebraska (Mr. HRUSKA) delivered the feature address before the 54th Annual Convention of Kiwanis International in Miami Beach, Fla. The Senator, a Kiwanian himself, called upon Kiwanis International, an organization with an active membership of 275,000 business and civic leaders, to join the efforts of the President and the Congress to purge crime from our society.

Senator HRUSKA's concern and vast experience in curbing crime makes him peculiarly competent to speak on this topic. As the ranking Republican member of the Judiciary Subcommittee on Criminal Laws and Procedures since its inception, he has had the unique opportunity to acquire a deep insight into the best methods of eradicating crime.

Being a member of Kiwanis myself, I know that his remarks fell on receptive ears. Kiwanis responded enthusiastically and adopted a series of resolutions highlighting the responsibility of all Kiwanians to work toward a better society.

I ask unanimous consent that the text of Senator HRUSKA's speech and the resolutions adopted by Kiwanis International be printed in the RECORD.

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

REMARKS OF THE HONORABLE ROMAN L. HRUSKA—THE PRICE OF A FREE SOCIETY, JUNE 30, 1969

President Heimbaugh, my fellow Kiwanians and your guests, my one regret is that Mrs. Hruska is not here to enjoy this moment. There was a time when I used to say that I wished I could only be seen now by the girl who turned me down twenty-five years ago. Since she and I have been together for thirty-nine years, however, such a comment would no longer be in order.

I congratulate Kiwanis International on the selection of this convention site. It also happens to be the launching pad for another great journey which took someone to the White House some eleven months ago. If Kiwanis can anticipate the same future success our President does, then great things lie in store for this organization.

Last year was the year of a Presidential campaign. A campaign has a way of raising many, and answering some, of the great questions before us. More searching inquiry was pursued last year than perhaps any other time in our history. The strength and weaknesses of our society were never before so dramatically brought to our attention. The very values which our nation has prized dearly since the birth of the Republic were being challenged.

The depth and extent of our self-appraisal has led some thoughtful persons to wonder if America had not seen her finest hour. Some people even now wonder whether America's finest hour is not now behind her. Is America's greatness a quality of a foregone era? Must America's citizens now live by the law of the jungle? Is America's moral strength in the world community now bankrupt?

These are but a few of the serious questions posed by both the thoughtful and the irresponsible in this last election year. The questions were raised during the campaign, now we in Washington must set about answering them.

Despite the doubts of a few, I think we, as a nation, have our finest hours ahead. We have the best nation in the world. We have the best schools in the world. We have the strongest economy in the world. In fact, we will soon lead the rest of mankind to the outer limits of our very imagination when our astronauts set foot on the moon.

Of course, we have shortcomings. When will there be no shortcomings in the affairs of mankind? Only when the millennium comes, and of course, that will be many centuries from now. Human betterment, however, is an enterprise we can never neglect. We must try to understand our ills. We must continuously search for the remedies to our problems.

But when we sit down and think it through, we should all reach an inescapable conclusion. Though we have so much for which to fight, we have so very much with which to fight.

I was quite taken with the June issue of *Kiwanis Magazine* and particularly the story concerning our crusade against crime. The pursuit of crime as put forth by the magazine addresses itself to several truths upon which I'd like to comment.

There is a recognition in this article that crime is a local problem—a national concern—but basically a local proposition. The Federal Government does not have police power. I feel it is to our eternal credit that we do not have a national police force. One easily recalls the legacies of national police forces—the storm troopers, the Gestapo, Beria's Soviet secret police, and the Red

Guards. Our founding premise embodies a notion that people endowed with liberty can and should assume the responsibility of self-reliance. Citizenship calls each individual to an accounting of how dearly he prizes his hard-earned liberties in this nation.

Secondly, the efforts of Kiwanis point to the role public-spirited organizations must play to fight crime. One extreme approach in the solution of our crime problem leaves us vulnerable to the horror envisioned in George Orwell's 1984. The other leaves our citizenry defenseless. Since our federal efforts must, by its very nature be limited, our local and private effort must be determined. The private sector must join the effort of law enforcement to keep America on the side of those who abide by the law.

President Nixon spoke to this point when he said upon assuming responsibility as President:

"We are approaching the limits of what government alone can do. We must reach beyond government and enlist the legions of the concerned and the committed."

Government has not made this country great. If one operates according to this fallacious assumption, the Soviet Union stands tallest among the nations of the world. I say people make this country great and people had best rely on themselves, and not the government, to solve their problems.

Thirdly, Kiwanis is an organization devoted to playing a meaningful and constructive role in our society. The Kiwanis Club is more than a luncheon club, a service club, a social club, a knitting circle or a sports association. The motto "We Build" suggests an objective of a much higher nature. The fight against crime goes far beyond the mere protection of life and limb. The fight against crime is a fight for our basic values. Can the equitable society tolerate intimidation and fear as opposed to the free interchange to which we have been traditionally accustomed in this country? Can the moral society justifiably reward her greatest benefits to the devious, the violent, and the dishonest? This is the challenge one faces when he ascribes to the dictum "We Build."

We have an Administration in Washington which is committed to the fight against crime. The President has an abiding interest in this problem, and an acute awareness of what will happen if we do not face up to it.

But the federal government cannot do the job alone. We in Washington need the help and cooperation of a concerned and aroused citizenry. The President has begun by reviewing police training procedures, by an upgrading of the federal bench and the entire court system, by a review of our panel and probationary system, by a concentrated effort directed against purveyors of narcotics and filth, and by striking at the heart of organized crime. Of all these efforts, the one I consider essential is the fight against organized crime. I say this because organized crime alone has the resources to sustain the drain on our economy, spirit, health and freedom.

Today I would like to tell you a little more about this threat. Organized crime is a closed, totalitarian society, operating within and against an open and democratic society. It is illegitimate, corrupt, violent, and ruthless. It is dedicated and greedy, grasping for money and power through every illegal channel known to man. It is prepared to use, and has used with deadly efficiency, whatever means necessary to achieve its objective. It is a super-government of its own with its disciples committed to carry out its pernicious deeds, or else. "Or else" can include being dumped in the bay with a cement block tied to each foot, or having your skull bashed with a baseball bat. Organized crime is a shocking parasite in our modern society.

We must fight its loan sharking, its gambling, its acts of extortion and its narcotics trade. We must fight its inroads into our governmental process and the corruption and the terror it brings to bear on our citizenry.

It is of small comfort to acknowledge our laws against corruption because many of our officials sitting in judgment of the mob are themselves influenced by them.

Organized crime thrives in our society because it is a lucrative and profitable business. The "take" from the illegal activities of organized crime is upward of fifty billion dollars a year. That is an amount that even in Washington we respectfully salute—a billion bucks a week!

What does the mob do with all this money? They can't eat it. They have to invest the profits somewhere. Herein lies a new threat. The new threat to your business operations is the ownership of legitimate businesses by those who possess the means to obtain that ownership through illegal operations.

Normally, we do not pay much attention to the business of acquiring a legitimate company as long as the purchaser pays good American money for it. But we know from experience—and it is becoming increasingly clear—that when the illegitimate entrepreneuer, using illegitimate profits, from an illegitimate business, moves into an insurance company, or into a bank, or a trust company, of a textile industry, he continues to use illegitimate means in the open market. That means unfair competition for business owners obeying the law, staying within the law and trying to be law abiding citizens.

We must give no mercy to the soldiers of organized crime. If it takes an anti-trust provision, or a concentrated effort to strangle the narcotics traffic, or a raid on the cartels of gambling; all of us, and citizens everywhere must be prepared to go forward with the programs which will make organized crime unprofitable, unacceptable, unattractive, and vulnerable to criminal prosecution on a wider scale.

The tone and the effectiveness of any government is set at the top. Though our government must depend on the resources of its citizens, the example and the efficiency at the top level of government can pattern the degree and the morale of our individual commitments to society's goals. I think we have a Chief Executive and an Attorney General who are thoughtful advocates of a persistent effort in the fight against crime. One good example of this was the recent appointment of our new Chief Justice.

The morning after that appointment, a reporter called me and asked, "Mr. Senator, don't you foresee trouble in this area of the Supreme Court because of the possibility, the likelihood that during the next few years we are going to have appointments like Mr. Burger? The first thing you know, we are going to have a conservative court—that won't be good for America, do you think?"

Well, at first I thought I would try sort of a facetious reply, and I said, "Well, any country that has been able to survive a highly liberal court, I think it can survive a conservative court."

In all seriousness, I don't think the Court as an institution is a simple matter of liberal versus conservative. The President is interested in men who know and value the Constitution which has served us so well. In my view, the Court has lacked balance. There has been undue emphasis on the theoretical constitutional rights of those accused of crimes, and a failure to consider the overriding right of society to survive. To put it simply, the Court has neglected the right of the non-offender to enjoy the full measure of his civil liberties.

A Justice of the Supreme Court once said, "Nice people have constitutional rights too."

What is the Constitution for? It is to provide against excess, excessive taxation on the energies of individuals living in society, and excessive control by government over its constituency. The Constitution was not designed to place undue emphasis on any one of its provisions. The writers anticipated full well the precarious balance of liberty. This balance has been tipped ever so slightly in a direction I am confident Mr. Burger can correct. I heard the President once say "If only I knew another man like Warren Burger, I would appoint him tomorrow."

And finally, I hope that in the course of time we can regain a perspective on the blessings we enjoy in this country. Our cause is served by a candid consideration of our faults. Our cause is not served by a pathological and singular off-hand rejection of everything which has brought our society to the forefront of the free world.

When our astronauts again demonstrate that "we are truly riders on the earth together" I urge you and all Americans to consider our collective role in America. We have a great stake in America, not as individuals pitted against one another. We have a great stake in the role our nation has been destined to play, as defender of the free world, as an example to the underdeveloped nations, and as a land dedicated to the pursuit of happiness for all people who choose to live here. As John Gardner once put it,

"Our trouble today is that we have too many uncritical lovers, and too many unloving critics. Our society would be best served if we had more critical lovers and loving critics."

I pray we shall never lose the perspective vital to our understanding of what it means to live in this country. I trust we never will. I pray that our efforts to meet the challenges confronting America will never falter.

I think America is answering some of those questions posed in 1968. We will decide that an order of liberty makes a moral distinction between right and wrong, honesty and dishonesty, truth and fiction, order and suppression, liberty and license, and most importantly, government and people.

The world will be thankful when America proves that even the barrier of imagination can be met on its own terms as our men set foot on the moon. The obligation to remain worthy of this gratitude will fall on people like you, your devotion to your motto, "We Build," and our unfailing efforts to sustain our commitment to the noble cause outlined in our Constitution.

RESOLUTIONS

WE BUILD WITH GOD

Whereas our first Object charges Kiwanians "To give primacy to the human and spiritual, rather than to the material values of life," and

Whereas our nations were founded, are presently sustained, and anticipate the future through the providence of God, and

Whereas His strength supports us in proportion to our faith in Him,

Therefore be it resolved by the delegates to the 54th Convention of Kiwanis International that in response to our stewardship of God's many gifts, we Kiwanians pledge to place spiritual values first in all matters of judgment, and

Be it further resolved that as we build with God we renew our determination to remain at all times humble and subservient to His will.

DRUG ABUSE

Whereas enlightened leadership throughout the world decries the illicit drug traffic which exists at the expense of millions of people and leads to their ruination, and

Whereas Kiwanis International has recognized the evils of drug abuse and its increasing prevalence in our communities, sapping our moral fibre and destroying the human being, and

Whereas drug addiction and dependence in their inception and continuance have spread from the areas of undesirable association with a criminal environment to a growing segment of our society at all economic levels, and

Whereas the lack of knowledge of the effects of drugs has combined with the permissiveness of our affluent society to stimulate an increasing trend toward drug abuse among our youth,

Therefore be it resolved that Kiwanis International, through its member clubs, combat drug abuse through the adoption of a major emphasis program wherein Kiwanis attention and activity will be focused world wide on exposing the social, mental, physical, and financial hazards of such abuse, and

That all Kiwanians and Kiwanis clubs actively support regularly constituted authority in the enforcing of existing laws and the creation of appropriate new legislation designed to combat and eliminate the drug menace, and

That Kiwanis clubs initiate and support programs designed to educate and alert their own members and their fellow citizens, with particular concern for the youth of their communities, to the harmful effects of illicit drug traffic and use.

THE RULE OF LAW

Whereas the second Object of Kiwanis International is "To encourage the daily living of the Golden Rule in all human relationships," and

Whereas all Kiwanians should respect the laws of their lands and the rights of their citizens, and

Whereas all Kiwanians should realize that crime is a growing menace to a free society, and

Whereas all Kiwanians should recognize the periodic need for change in existing laws of their lands to provide for an expanding and inquiring citizenship, and

Whereas all Kiwanians should encourage those who seek change to do so peacefully and within the framework of the law,

Therefore be it resolved, That Kiwanians everywhere pledge themselves to observe the rule of law in their society, reserving to themselves and to others the right of lawful dissent without infringing upon the rights or dignities of their fellowmen, and

That Kiwanians everywhere be urged as responsible citizens to provide individual leadership in upholding the existing laws, making necessary changes in them, or initiating new laws as the situation demands, and

That Kiwanians everywhere emphasize the inherent danger of all forms of crime to their people, to the economy, and to the future progress of their nations and implement action programs by the local Kiwanis clubs to dispel general apathy, to make the public more knowledgeable and their members more effective against this menace, and

That Kiwanians everywhere support and voice their appreciation of deserving public officials and law enforcement officers for their dedicated service.

KEY CLUBS AND CIRCLE K CLUBS

Whereas Kiwanians recognize that our complex society demands increasing responsibilities of our youth and requires earlier leadership experience, and

Whereas sponsorship of Key Clubs and Circle K Clubs broadens the scope of opportunities for service, and

Whereas the basic concepts of the Objects of Kiwanis International can be furthered through meaningful guidance of young men in high schools and colleges,

Now therefore be it resolved, That every Kiwanian pledge himself to accept his responsibilities to Key Clubs and Circle K Clubs in order that young men of high school and college age may have the opportunity to perform service to their schools and communities, and

That every Kiwanian, recognizing the benefits of education for leadership, provide this training by personal participation and example to the end that every Circle K and Key Club member shall be a responsible citizen and carry throughout his life the inspiration of Kiwanis devotion to freedom and individual enterprise.

DIALOGUE WITH YOUTH

Whereas highly knowledgeable, well educated, idealistic and morally sensitive young people represent our best hope for the future, and

Whereas it is recognized that there are legitimate student protests and that changes are inevitable in an ever-moving society, and

Whereas, recognizing that all that is necessary for evil to prevail is for good men to remain silent, it is basic to good government that Kiwanians and Kiwanis clubs be encouraged to use all lawful means at their command to oppose those public officials and school administrators who are unwilling through their own volition to act and work to suppress illegal protests and demonstrations, sit-ins, riots, and other acts of violence, and

Whereas illegal protests and demonstrations, sit-ins, riots and other acts of violence interfere with the rights of the large majority of students, enrolled with the serious purpose of furthering their education.

Now therefore be it resolved, That Kiwanians foster opportunities for a more effective dialogue between youth and adults, and

That every Kiwanian and Kiwanis club actively support school administrators, parents, and students who are working out their problems in a lawful and orderly manner, and

That Kiwanians again express their confidence in youth by appropriate recognition of their achievements.

PORNOGRAPHY

Whereas standing up for decency in literature and entertainment is expected of those who accept the Objects of Kiwanis International, and

Whereas many bookstores, newsstands, and some distributors traffic in magazines and books which even from their covers are obviously objectionable, and

Whereas in many films, stage productions, and other forms of public entertainment every traditional code of decency has been violated,

Now therefore be it resolved that every Kiwanian as an individual citizen make known his concern for decency in literature and entertainment and show by example in his home and in public life his adherence to a personal code of decency, and

That, in cooperation with others of like mind, he make known to sponsors, producers, distributors, and retailers his opposition to that which he finds objectionable, and

That Kiwanians everywhere support and voice their appreciation to those who adhere to a code of decency in literature and entertainment.

VOCATIONAL AND TECHNICAL CAREERS

Whereas the education and training of our youth is paramount to their proper growth and development into productive citizens, and

Whereas there are many students who should be oriented toward vocational and technical careers,

Now therefore be it resolved that increased emphasis be placed upon vocational-technical studies so necessary to our modern economy and that Kiwanians promote greater public encouragement of those who work in the trades, and

That Kiwanians actively involve themselves through financial support and personal service in providing improved methods and facilities for vocational-technical education in their local communities.

CONSERVATION AND POLLUTION CONTROL

Whereas in no other age has man been blessed with a greater abundance of available natural resources or so great a capacity for creatively shaping his natural world to the benefit of all mankind, and

Whereas through the waste and misuse of such resources as air, water, land, and forest and through the accelerating demands upon such resources by an affluent and rapidly expanding population, modern man has reason to be deeply concerned as to the exhaustibility and pollution of such resources, and

Whereas man's abuse of nature has extended to his abuse of life itself, as evidenced in the tragic annual increase in crippling injuries and death from accidents, and

Whereas the full cooperation of our citizenry is essential to the preservation and wise use of our natural resources and to life itself,

Therefore be it resolved that each Kiwanian and each Kiwanis club be dedicated to positive action within the community to identify the greatest needs and opportunities for conservation and wise use of life and resources and apply, personally and collectively, intensive effort toward the satisfaction of such needs and the seizure of such opportunities.

APOLLO 11

Mr. ERVIN. Mr. President, one of North Carolina's finest citizens, Asa T. Spaulding, of Durham, who witnessed the launching of Apollo, 11, made some eloquent comments concerning the launching, the landing of the astronauts on the moon, and their safe return to our world. I ask unanimous consent that they be printed in the RECORD.

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

PREGNANT HISTORY DELIVERS

(By Asa T. Spaulding)

Wednesday, July 16, 1969, was a day for Delivery by Pregnant History! It began for me with a 3:15 AM "wake-up call", a 4:00 AM breakfast, and a 5:00 AM boarding of the lead bus of what was to be a ten bus convoy, with police escort, for the NASA guests from my motel to the John F. Kennedy Space Center.

We were to depart for the Center not later than 6 AM. Our eight buses were loaded but the plane from Paris was forty-five minutes late. It was about 6:15 AM when the two buses arrived from the airport with the French visitors. They became the lead buses and the convoy started. The pace was reasonably good. As we neared the Space Center, we were given a special routing to avoid the already bumper to bumper traffic.

At 9:32 AM at the Space Center, I saw what happens when Time, God, and Man cooperate. Within an instant, they delivered with precision and perfection a Child of History. And within another moment, this Infant was on its journey to the moon accelerating the merging of time, space, and history, and the dawning of a new era.

Conceived in the mind of man; nourished by all Americans while in gestation,—the affluent and the deprived; and in the fullness of time, there stood on launching pad 39A, a thirty six story Apollo 11. It had not only been formed out of "steel and metals dredged from the heart of America and refined by workers in hundreds of towns", but it also encased the spirit, dreams, and scientific progress of mankind.

The lift-off of the shining thirty six story rocket from its launching pad by a 7½ million pound thrust, and with a tail of flame a thousand feet long, with staccato thundering sound waves pounding against the ear drums, and the earth trembling as if with fear, was a brilliant, spectacular and unforgettable experience, and a time for sober reflections. Man had just embarked for his virgin landing on the moon, and for taking the STEP that would "divide history".

As I watched Apollo 11 being swallowed up by the heavens, I could say with a depth of

feeling: "What hath God and man wrought?" It was as though I had lived a million years of man's history and progress within a few compressed seconds.

Prior to the launching, I stood for more than an hour, with nearly ten thousand others, anxiously listening to the count down with both admiration and *awe*.

When the count down reached minus ten, and I realized that man was at that moment standing on the threshold of his most daring conscious adventure, I shared the feeling of Robert S. Boyd of The Miami Herald that: "the hopes and prayers of the human race—(were somehow)—squeezed into Apollo 11 spaceship 'Columbia,' along with astronauts Neil Armstrong, Edwin Aldrin, and Mike Collins."

Werhner von Braun had described the day as a day "ranking in history with primitive aquatic life crawling on land for the first time" several million years ago.

I left the Space Center wondering what it will take to bring about a comparable national commitment to the overcoming of our human problems on earth, and to give birth to another new and even more glorious day in human history. This thought-question has been haunting me ever since, and will never permit me to have peace of mind short of seeing a similar mastery over our problems on earth!

It is now 11:15 a.m., I am back in my room No. 133 at the Host of America Motel, Melbourne, Florida. While the surroundings are pleasant and comfortable, I am more or less oblivious to them.

Though my physical body is hemmed in by four walls, there is no ceiling over my mind. It is soaring on the wings of thought with Neil Armstrong, Edwin Aldrin, and Michael Collins on their journey to make the unknown, known; the uncertain, certain; and, in the words of Neil Armstrong later, "one small step for man, one giant leap for mankind."

I am more convinced than ever that what man can conceive he can achieve; and that where there is a will, a way can be found!

If our space programs and our human programs are not kept in proper balance, our future as a nation will be in great peril! What shall it profit a nation to gain the whole world and lose its soul?

AFTER THE NEW TRANSFIGURATION, WHAT?

(By Asa T. Spaulding)

July 20, 1969, produced a new transfiguration. Man was transformed from an earth creature to a moon-man who took a STEP that divided history.

Four days earlier, Neil Armstrong, Edwin Aldrin and Michael Collins had shed the restraining shrouds of earth contained creatures, adorned pioneering garments for a liberating environment; climbed aboard Freedom's Spacecraft; broke the shackles of earth's gravity; gained a new freedom; made "a giant leap for mankind"; and caught a glimpse of "a new heaven."

The experiences of this new day of transfiguration were not only the most momentous feats in man's history, they also placed upon him his most *awesome* responsibilities, that of meeting the crying needs on earth with comparable achievements. Man has now irrefutably demonstrated that where there is a will, a way can be found!

The aftermath of the success of Apollo 11 will be either a rouse to the nation or a blessing to mankind; which, will depend upon how we respond to our human needs! I do not consider it an either or matter. I believe we can carry on a rational space program and take care of our human needs also.

There are already untold and immeasurable benefits and by-products from our space program, but our space programs and our human programs must be kept in proper balance or our future will be in great peril!

A FOOTNOTE TO HISTORY: THE IMMORTAL ASTRONAUTS!

(By Asa T. Spaulding)

Thursday, July 24, 1969, our lunar-walking astronauts completed their historic cycle to the moon and back by splashing down in the South Pacific approximately 950 miles from Honolulu.

Their re-entry of the earth's atmosphere was with such a velocity that they became wrapped in a 5000 degree flame, and at 12:50 p.m. (EDT), they drowned Inferno in the Pacific Ocean, and the Chisel of History began carving deeply and permanently the names of Neil Armstrong, Edwin Aldrin, and Michael Collins in the Monument of Immortality!

A SUPERIOR STUDENT

Mr. STEVENS. Mr. President, I invite attention to an outstanding young woman who, I feel, does great credit to the educational system in Alaska.

Cynthia Warbelow, a young lady who had never been to school before she enrolled at the University of Alaska, has graduated with high honors, magna cum laude.

Cynthia received her elementary and secondary education by correspondence through the Alaska Department of Education. Courses were mailed from the department directly to Cynthia's home on the Alaska Highway near Tok, Alaska. For 12 years Cynthia's mother was her "home teacher." Cynthia went on to the University of Alaska directly from these home study courses.

She completed the requirements for her bachelor's degree in seven semesters at the university, receiving A's in every course except one. Her grade point average was 3.97 out of a possible 4.00.

Cynthia, majoring in biology, was this year's winner of the Marion Boswell Memorial Award as the outstanding senior woman at the University of Alaska.

She was also named top student in the college of biological sciences and renewable resources, the winner of the Woman-of-the-Year Award by the Soroptomist Club of Fairbanks and the Associated Women Students Class Award for a senior.

Miss Warbelow was one among 11 students at the university selected for recognition in "Who's Who Among Students in American Universities and Colleges" and had the opportunity to give the senior response to the university president's "charge to the senior class" that is a custom at the university.

This fall she will attend the University of Michigan at Ann Arbor for a year of graduate work in biology for which she received a scholarship at graduation this spring.

THE 1970 WHEAT PROGRAM

Mr. PEARSON. Mr. President, the wheat program for 1970 just announced by the Secretary of Agriculture is sound and is based on a realistic assessment of present and expected supply and price conditions. Farmers had hoped that a 12-percent cut in the acreage allotment would not have been necessary. At the same time, however, they fully understand the relationship between today's low prices and our excess supplies and they recognize that there is no hope of restoring favorable prices until the surplus carryover of surplus stocks is reduced.

The decision by the Department to continue the voluntary diversion provision and to authorize the farmer to substitute the planting of wheat for feed grains or feed grains for wheat will give the farmer considerable flexibility in adjusting the overall program to the particular needs of his operation.

The 1970 program in conjunction with the Agriculture Department recently announced steps to expand wheat exports should have the effect of substantially reducing present excess supplies and strengthening market prices.

ADMINISTRATIVE DISCHARGES: UNFINISHED BUSINESS IN MILITARY JUSTICE REFORM

Mr. ERVIN. Mr. President, on July 16, 1969, I had the privilege of speaking before the Judge Advocate General's Conference at Charlottesville, Va. On that occasion, I made some remarks upon the subject of "Administrative Discharges—Unfinished Business in Military Justice Reform." I ask unanimous consent that my remarks be printed in the RECORD.

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

SPEECH BY MR. ERVIN

I wish to thank General Hodson and Colonel Crawford for the honor and the opportunity to speak to The Judge Advocate General's Conference. For many years I have been interested in the court-martial system, the judge advocates who make it work, and the men for whom it must do justice.

Since the early 1960's I have had the honor to be Chairman of the Constitutional Rights Subcommittee, a Subcommittee of the Senate Judiciary Committee, and for the past decade the Subcommittee has studied military justice and sought to make it a model criminal system for the country. America has a special obligation to make certain that the men who bear arms in defense of her freedom are given the best and most enlightened justice possible.

This is not an easy task, for in addition to the normal obstacles that stand in the way of criminal law reform, in military life there is the added factor of the need for discipline. There are many in the service who feel that military justice is incompatible with the command system and military discipline. It was this view which for centuries predominated in military legal thought not only here but in Europe as well. Not until after World War II did this country undertake any major reform of a system it had inherited from Europe two centuries ago. And by this time "military justice" was a scandal and a mockery.

The reforms after World War II brought military justice out of the dark ages and well ahead of federal and state criminal law. In strong contrast to the medieval Articles of War, the new Uniform Code of Military Justice anticipated the next decade's revolutionary changes in criminal law. Let me cite just a few areas where the 1950 Code anticipated recent reforms:

Illegal evidence obtained through wiretapping or unreasonable searches was excluded long before *Mapp* v. *Ohio* in 1961 applied the exclusionary rule to the states.

In military trials of major crimes, free legal counsel was provided long before the *Gideon* case in 1963 required appointment of counsel for indigent defendants. And, of

course, free counsel have long been provided throughout the entire military system of appeals.

Article 31 warnings were the rule long before *Miranda* in 1966 made this national constitutional policy. In fact, the military rule was relied upon in the Supreme Court's decision to adopt a warning procedure.

Pretrial discovery by defense is considerably more advanced in a military trial than under Rule 16 of the Federal Rules of Criminal Procedure or under most state procedures.

Verbatim transcripts of trial, furnished free as a matter of ordinary procedure, was a feature of military justice long before the Supreme Court in 1956, in *Griffin* v. *Illinois*, applied the rule to the states.

Finally, the Uniform Code of Military Justice provides for review of sentences at three separate appellate levels. This is as yet not the rule in the federal system although legislation has been introduced to this end. And, of course, sentence review is unknown in most states.

The post-World War II military justice system, for these and many other reasons, was a source of considerable and justifiable pride to the armed services. But, unfortunately, the advances of the late 1940's were not matched by further reforms in the 1950's or 1960's. The studies of the Constitutional Rights Subcommittee beginning in 1961, and particularly its hearings in 1962 and 1966, demonstrated that court-martial procedures, and especially the administrative discharge system, were in urgent need of improvement.

Over the course of the past seven years the Subcommittee developed legislation to achieve these reforms. In this effort we had the invaluable assistance of a small group of civilian lawyers who practice military law, a few organizations, and many persons in uniform—from First Lieutenants in the Judge Advocate General's Corps to Generals. But I am frank to say that the services, as a matter of official policy, were, until very recently, interested primarily in changes which would make military justice more efficient. They were not particularly interested in extending the amount of due process in courts-martials.

It was not until last year, when a bill incorporating certain Department-advocated reforms passed the House of Representatives, that the opportunity arose for meaningful reform. To the House bill, which I considered entirely inadequate, I sought and obtained a series of amendments which substantially increased the amount of due process in military trials. With the invaluable assistance of General Hodson, a compromise was worked out between the omnibus reform bill I had sought and the Defense Department package passed by the House. The legislation—called the Military Justice Act of 1968—becomes effective this August in most of its provisions.

I do not mean to belittle these reforms. They are the culmination of many years work. But it is instructive to compare the 1968 reforms with those instituted by the Code of twenty years ago.

Appointed legal counsel is now required for all bad conduct discharge cases, and authorized for other special court-martial trials. The equivalent has been the rule for a number of years in federal and state trials of serious offenses;

An independent judiciary composed of military judges now presides over criminal trials with the full authority of civilian judges. An independent judiciary is the *sine qua non* of a system of justice, and this should have been legislatively required in all services years ago;

Outmoded trial procedures have been discarded, and the trial is patterned more closely on the federal criminal procedure. Also, defendants can now waive trial by jury—a right they have long had in civilian trials;

Trial by summary court—which should be eliminated entirely—now at least cannot be held over defendant's objection;

The intermediate appellate bodies—the Boards of Review—are now transformed in full appellate tribunals manned by independent military judges;

Release pending appeal is now available;

And, finally, defense counsel and defendant are better protected against command influence and control.

These are all important reforms, but military justice has by no means forged ahead of civilian justice as it did 20 years ago. It has just kept pace.

This is significant because bad reputations are easily made and slowly lost—as both fallen ladies and military justice have learned to their regret.

In my judgment the overriding influence in the *O'Callahan* case, decided by the Supreme Court just a few weeks ago, was the reputation military justice earned in the years up to 1950 and which the Code and last year's reforms have not succeeded in erasing.

The *O'Callahan* case is worth discussing at length, both for what it means for the concept of military jurisdiction, and for what it may portend for future federal judicial oversight of military law.

In *O'Callahan* the Supreme Court, by a five-to-three vote, ruled that courts-martial have no jurisdiction to try offenses committed by service personnel if those offenses are not "service-connected." While I am anxious to protect the constitutional rights of servicemen—and have sponsored legislation to that end—I find that there are several disquieting features to the opinion of the Court, written by Mr. Justice Douglas.

In the first place, it is clear that in most quarters the assumption prior to *O'Callahan* was that the status of persons in the military permitted Congress to subject them to trial by court-martial, regardless of the nature of the crime, where committed, and whether in peacetime or in wartime. Certainly the Uniform Code of Military Justice is predicated on this assumption, and many service personnel have been tried for civil type offenses of the very kind that were allegedly committed by Sergeant O'Callahan. If military jurisdiction is no longer based on status there is no foretelling what effect this will have on the entire military justice structure. While I recognize that over the years there have been those scholars who questioned military jurisdiction over civil type offenses, such as murder, rape, larceny, burglary, and housebreaking, it does appear to me that here again the Supreme Court has changed the Constitution, rather than interpreted it.

Second, if the *O'Callahan* case is given retroactive effect, which would seem logical if prior trials by courts-martial lacked jurisdiction over the offense, then it is clear that the Federal courts will soon be flooded with petitions for habeas corpus and suits for back pay or other relief. It will be a long time before the legal past is rewritten to conform to the new rules.

Third, if the Constitution is to be modified, I am reluctant to see it modified by a five-to-three decision of the Supreme Court when one member of the majority, the Chief Justice, was on the verge of retirement. The composition of the Court is now in transition and the rule established in *O'Callahan* will be shrouded in uncertainty. The obvious question is how much weight will the new members of the Supreme Court give to a fundamental constitutional decision rendered on the eve of change in membership in the Court. Will they feel free to overrule the case as soon as an occasion presents itself, or will its effect be gradually whittled away in the future by distinctions based on the particular facts? Frankly, I think it unfortunate that in these circumstances a divided Court chose to decide the issue in the first instance, rather than setting it for re-argument.

The element of uncertainty that now exists is heightened by Justice Douglas' failure to provide meaningful guidelines for the future exercise of military jurisdiction. The basic criterion employed is whether the offense was "service-connected". It is interesting that the concept of service-connection has not played any part in military justice. I am informed that a computer search reveals the word "service-connected" appears only one time in thirty-seven volumes of the opinions of the Court of Military Appeals and the military Boards of Review, and in that solitary instance the factor of service-connection was not material to any issue in the case.

In the United States Code the concept of "service-connection" has been used chiefly in determining availability of veterans' benefits and disability retirement pay. In this context, the concept has been given a very broad scope. In fact, under these statutes service personnel are deemed to be acting in line of duty—and injuries under such circumstances are service-connected—even when they are on authorized leave. Certainly, a broad concept of service-connection is appropriate in deciding who is entitled to the benefits which Congress has intended for military personnel. But it seems clear that Justice Douglas would not accept a broad interpretation in deciding the scope of court-martial jurisdiction. To do so would be to whittle *O'Callahan* down to almost nothing. Under the circumstances, there is considerable ambiguity in the touchstone which the Court proposes to utilize in determining military jurisdiction.

Fifth, I am concerned about some of the practical consequences that may flow from the decision. I have already mentioned some of these consequences if the decision is held to be retroactive. Let me note that some equally unpalatable consequences will result if the *O'Callahan* case is determined to have extraterritorial effect to servicemen stationed overseas. In terms of its logic, such a result would be perfectly consistent with the majority opinion, although it is not necessitated by that opinion. In any event, if courts-martial cannot try military personnel for civil type offenses committed overseas, the consequence will either be that they will be tried in the foreign courts of the country where the offenses are committed or else will go unpunished. The former alternative is hardly conducive to protection of the constitutional rights with which the majority opinion is concerned. The latter alternative is not consistent with justice.

Up to the present time the United States has been successful in obtaining from foreign governments a significant percentage of waivers of their jurisdiction over American service personnel, even when those Governments possessed primary jurisdiction under the terms of the NATO Status of Forces Agreement or other treaties. However, the United States cannot request a waiver of jurisdiction by a foreign government when it lacks jurisdiction to try the service personnel for the offenses involved.

An extension of *O'Callahan* to the overseas situation would aggravate the problems involved with civilian personnel overseas. Under *Reid* v. *Covert* and *Kinsella* v. *Singleton*, those persons cannot be tried by military courts. Thus they are either tried by foreign courts—which neither we nor the host country likes—or they go unwhipped of justice.

For years the Constitutional Rights Subcommittee and the Defense Department have been searching for a solution to the problem of overseas civilians. As of yet there seem to be no good solutions, and it is not likely that the problems created by *O'Callahan* applied overseas will be solved any easier.

In a 1950 case, *Feres* v. *United States*, the Supreme Court noted that it would be ironic to have the rights of service personnel to sue under the Tort Claims Act hinge on the law of the place where they happen to be located when a tort occurs, since of course they have no choice as to where they must serve. The *O'Callahan* case signifies that in a substantial number of criminal cases, servicemen will be tried according to the substantive and procedural law of the state where they happen to be stationed, generally without their choice, rather than be tried by a court-martial, pursuant to a Uniform Code of Military Justice. Admittedly, the state courts already have concurrent jurisdiction in many instances and so even prior to *O'Callahan* military personnel were not insulated against state court-trial. Also there has been increasing standardization of state court-trials, as the Supreme Court has turned the Bill of Rights into a Code of Criminal Procedure.

Even so, I am concerned about the consequences of a decision which removes the possibility of a trial by court-martial pursuant to uniform standards prescribed by the Congress for military personnel. On the one hand, servicemen often serve in the midst of a hostile community. Both state and military officials have always been pleased to be able to avoid the threat of miscarriages of justice that highly inflamed conflicts between military and civilian can produce. This threat will now be real to commanders and men, and can no longer be avoided. It is bound to make relations more difficult between military and civilian communities.

On the other hand, the presence of large military communities put an unusual burden on many local facilities. This had led to special federal educational aid to "impacted" communities. With the alternative of military jurisdiction removed, these localities will have to enlarge their judicial systems. Otherwise neither society nor the defendant will get justice.

Beyond these consequences of *O'Callahan*, there is yet another which, as I mentioned earlier, is most significant, because it demonstrates how the Supreme Court and many other quarters regard military justice. Justice Douglas' opinion contains many disparaging remarks about military justice. But the system he talks about is the Articles of War, not modern military criminal law. The Uniform Code of Military Justice of 1950, the Military Justice Act of 1968, the decisions of an independent civilian Court of Military Appeals—all these were ignored by the Justice. The system is not flawless—many of the reforms I have sought for a decade have not been instituted—but the Uniform Code of Military Justice is considerably better than military band music. Nevertheless, it is evident that Justice Douglas and his colleagues still look upon military justice as second-class justice.

There have been two other recent decisions of the federal courts which, together with *O'Callahan*, illustrate the suspicious regard in which federal courts hold military law. On June 26, the Court of Appeals of the District of Columbia in the *Kauffman* case held that federal court review of court-martials is broad, and military law must conform to Supreme Court standards unless military conditions can be shown to require a different result. A few days later the same court in the *Latney* case narrowed the wartime jurisdiction over civilians serving with or accompanying the armed forces in the field. The Court of Appeals emphasized the "principle that a system of specialized military courts and discipline may be maintained consistently with our constitutional liberty only if restricted to its 'proper domain', one that 'rests on the special needs of the military.'"

It is apparent that civilian courts are increasing their scrutiny of military courts and discipline, and in doing so they have turned a jaundiced eye to the system you administer and for which you are responsible. This makes it essential that the Army and her sister services redouble their efforts to improve military justice. There are many areas where military justice can be improved, not only legislatively, but in its administration. Nothing can do more harm to the common conception of military justice and wipe out the ten years work towards the Military Justice Act than, for instance, excessive punishment and a conviction for mutiny in circumstances where emotion and politics have overcome justice and common sense. A few San Francisco cases can bring down the public wrath and produce more *O'Callahan* cases. Such gross errors of judgment erase the effort of the past twenty years to convince America that military law is a first-class system of justice.

One area of military justice which has not received any significant attention in years and which is in urgent need of reform is the military discharge system. If military justice is to true justice what military music is to Bach—then the discharge system is nothing more than beating on an empty can.

Imagine if you will a system of justice with the burden of proving innocence imposed on the defendant, secret informants, no right to trial, no right to see the evidence, no right of cross-examination, no rule against double jeopardy, no protection against punishment even when found innocent, no right to legally qualified counsel, no independent judge, no independent judicial review, and no clearly defined rules of what is and is not against the law.

This, in harsh terms, and with very little exaggeration, is the system which can brand a man as "undesirable," "unfit," or "unsuitable," deprive him of his serviceman's rights, his accruing pension and retirement, his employability, and his honor.

It has been strenuously argued through the years that the administrative discharge system is not part of military justice. Indeed, apparently one of the most objected to features of legislation I first introduced a few years ago was that I proposed to place administrative discharge law under Chapter 47 of Title 10 of the United States Code as a part of the Uniform Code.

But to my mind, the discharge system is part of military justice if the services propose to award a discharge less than honorable—and by that I also include the General Discharge—for wrongful acts or omissions. A good portion of the discharge substantive law overlaps the Uniform Code of Military Justice. Often the discharge process is used to avoid the procedures of the Uniform Code of Military Justice when evidence is weak or the commander's impatience or wrath is strong. Many years ago it was conceded that the discharge system is used to bypass the protections of the Code.

The reforms which the Constitutional Rights Subcommittee began seeking in 1961 cover administrative discharges as well as the court-martial structure. But the services have been reluctant to change. Only once, in 1966, was there any move toward improvement. And that was clearly prompted by the fear that imminent Congressional hearings would dramatize defects and lead to legislative reforms. But this regulation struck the least common denominator among the three military branches. It was little more than window-dressing and it was less than adequate.

One of the greatest impediments to reform is the fact that the legal services and their traditions of due process have largely been excluded from the "administrative" or personnel system. If reform is to occur within the services—and not be imposed by the Supreme Court—then the Judge Advocate Corps must work its influence on the discharge and personnel systems.

After many long years, I can discern some movement toward reform. The American Bar Association adopted a resolution last year which sets forth minimum standards for the award of undesirable discharges. More important than the substance of their proposals is the fact that the American Bar Association has now recognized the need to impose legal requirements on discharges.

Congressman Bennett, who introduced the Department's proposals on military justice, has introduced the American Bar Association proposals in legislative form. On the Senate side, the proposals developed by the Constitutional Rights Subcommittee were incorporated in Title I of the Omnibus Military Justice Act I introduced in 1967. This title has been reintroduced as a separate bill, S. 1266.

General Hodson, like the American Bar Association, and Congressman Bennett, joins me in recognizing that the next reform in military justice must be in the procedures for awarding less than fully honorable discharges. The American serviceman is no longer a second-class citizen before the criminal law. He must soon become a first-class citizen—officer as well as enlisted—in this aspect of military law as well. As a minimum, he is at least entitled to the right to legally qualified counsel, the same right of confrontation and cross-examination to which he is entitled in a court-martial, the right to subpena witnesses and documents, the right to have the board which considers his case be free from command influence and render a decision which is binding upon the commander, the right to an impartial judicial officer presiding over the hearings, and the right to appeal his case to a legally qualified independent appellate tribune with final appeal to the Court of Military Appeals.

The *O'Callahan* case, the *Kauffman* case, and the *Latney* case are clear signals to Congress and to the military services that the federal courts are taking a close look at military justice. It will not be long before they turn their attention to the discharge system. Before they do we must bring the system into the 20th century and afford the individual soldier that basic due process to which he is entitled as an American citizen. If Justice Douglas' views cannot be educated by good example, we can confidently anticipate a series of decisions which will emasculate administrative discharge procedures. For that reason I urge all of you to support and encourage a major overhaul in this area. I am confident that if the Army Judge Advocate Corps, under the leadership of General Hodson, takes the lead, the reforms long sought by the Constitutional Rights Subcommittee can become law in a very short time.

STUDENT DISSENT

Mr. PERCY. Mr. President, recent House debate on the Health, Education, and Welfare appropriations and ongoing hearings in the Senate continue to focus attention on student dissent at our colleges and universities. During the past few weeks, the Permanent Investigations Subcommittee has heard the testimony of college administrators who have encountered and handled what was at times very violent student unrest on their campuses.

On August 4, Dr. Morris Abram appeared before the subcommittee. As president of Brandeis University he effectively maintained the operation of the school during a 10-day peaceful takeover of the campus communications center by dissenting students. His policies during this period won for him wide support from faculty and students.

Dr. Abram's testimony is a well-reasoned analysis of the causes, meaning, and prevention of future student outbreaks. He views student unrest in this country from a global perspective, citing corresponding disenchantment which seems to characterize students across the globe. In addition, he rightly reminds us that the behavior of our students must be considered not only in an academic context but in a broader context. Student grievances go beyond the administration of their schools to the very social problems with which we as Members must grapple—Vietnam, poverty, inadequate housing to mention a few.

While the problems that Dr. Abram mentions cannot be immediately solved, he does have something constructive to say to the Congress about the elimination of disruptions on our campuses. I ask unanimous consent that his testimony be printed in the RECORD.

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

TESTIMONY BY MORRIS B. ABRAM, PRESIDENT, BRANDEIS UNIVERSITY, BEFORE THE MCCLELLAN COMMITTEE ON STUDENT UNREST, MONDAY, AUGUST 4, 1969

I wish to be practical and helpful to the committee in this testimony. I shall divide my remarks into:

1. A diagnosis of the causes of student unrest
2. The dynamics of turbulence once it begins
3. Suggestions of what can be done by the universities, public bodies and the general public.

THE CAUSES

Ours is the age of anxiety and disenchantment, and for good reason. Two men, in a moment of panic or paranoia, can cause the destruction of our planet. Our own country, whose gross national product jumps some weeks by $1 billion, is choked with pollution, strangled by traffic, and faced with the fact that millions of its citizens remain ill-housed, ill-fed and poorly educated. The increase in the national output for 26 weeks, if applied to heatlh facilities, could wipe out that capital deficit. The same situation applies to education; and if the increase were set aside for such purposes for two years, our slums could really be the alabaster cities proclaimed in the anthem.

The anxiety and the feeling of disenchantment affect people of all ages. It is youth, however, which is in revolt—although not all young people are involved. The focus of the turmoil is in the best colleges and universities, and amongst the brightest students. It is Harvard, Dartmouth, Berkeley, CUNY, Brandeis, Duke, Columbia and Wisconsin that have felt the impact and the students involved on those campuses have very high performance scores. In fact the one necessary ingredient for trouble is a critical mass of very bright students.

You may ask, what's wrong with these youths? Is the problem that they have been raised permissively, on Dr. Spock's book? But the University of Tokyo was so disrupted this year that not one single doctor of medicine was graduated—and these students are not Spock-raised babies. Why the student turmoil in France, in Germany, in Italy—and even in Czechoslovakia?

Is there a Communist conspiracy operating through secret couriers? Then why did the Communists denounce the French student rebellion—and who stimulated the Czech rebellion against the Communist university? And why, except for a minuscule Progressive Labor Party core of clean-shaven, crew-cut types, is there no adult political movement to which the student radicals relate as the young Communist leagues did to the old Communist Party. And what need is there for secret couriers when television flashes freely and without risk the message of revolt across the country every evening in prime time?

I am afraid that simplistic or even simple answers will not do. Of course some Progressive Labor Party people are involved. They proclaim both their role and their philosophy—which is destructive and nihilistic. But then, many members of S.D.S. are not only not members of P.L.P., they are anti-P.L.P., as the recent Chicago convention split proved. Nor was the entire student revolutionary movement embraced within SDS even before the Chicago convention. The plain fact is that in 1969, 2 to 3% of the student population are revolutionaries—potential destroyers. The percentage is small, but applied to a student population of 8 million, the absolute numbers are 160,000 to 240,000 people.

They see society and the university as one, and they proclaim a total disenchantment with both.

If the 97% of other students totally rejected the perceptions, causes and tactics of the revolutionaries, universities would not be wracked by turbulence. This is not the case, and this fact brings me to speak of some of your sons, daughters and grandchildren . . . who comprise the non-revolutionary youth generation.

The size of the population included in the ten-year span of 14 to 24 years of age is almost 28 million, about 19% of the nation's total.

This age group differs in very fundamental respects from its elders, in ways which are plainly discernible. It always did. This age group dresses differently, feels less inhibited, acts impulsively—and it always did.

Students in the United States have always been high-spirited. We all surely remember the drugstore cowboys, the raccoon coats, the goldfish swallowers, the panty-raiders. Sometimes students have been rebellious, too. As early as 1675, there were student riots at Harvard. Yale had one in 1765, and the University of Virginia in 1825. But I am not suggesting that today's generation of youth is a carbon of the past, for it is not. This generation is not moved to action and violence by fraternal frolics, though the psychic energy discharged by sit-ins and by manning the barricades may come from some of the same emotional batteries.

This generation is marching, however, to drumbeats they approve, the lyrics—as they quickly point out—were written by us. They claim we have ceased to march to our own moral tunes.

As a whole, the students now in college are social critics. A recent poll by the Daniel Yankelovich organization found that 83% of them believe that our foreign policy is based on narrow economic and power interests; that 94% believe businesses to be overly concerned with profits; that 63% think what is taught in the universities is not relevant. Almost 6 out of 10 college students believe the war in Vietnam is pure imperialism.

Only a third of college students believe that their personal values and points of view are shared by most other Americans.

On the personal and non-political level, youth has some other deeply held views. Ninety-three percent of all youth want more emphasis on friendliness and neighborliness; 54% consider service to others to be "very important;" 71% want work which is more than a job; 89% consider love to be "very important." These are not bad values. However, in interpreting some of these values, college youth, in particular, diverge sharply from what was at least preached in our youth.

Sixty-four percent believe that pre-marital sexual relations are not a moral issue. Included within this percentage are the conservative college group of whom 45% maintain this view.

Youth—college and non-college—is strikingly independent. Sixty-one percent say that "doing your own thing" is very important in their lives; and only 31% easily accept outward conformity for the sake of career advancement.

Our youth have been badly traumatized by the violent deaths of John F. Kennedy, Martin Luther King, and Robert F. Kennedy; and the violence of Vietnam. An overwhelming majority, in and out of college, agree strongly or partially with the statement that our society now is characterized by injustice, insensitivity, lack of candor, and inhumanity, and that morally and spirtually our country has lost its way. Yet, as of now, 89% of the total believe that our system is capable of responding to the needs of the people.

Gentlemen, this generation was not sired nor raised by college administrators nor faculties, but by your friends and constituents. They were educated in your home communities and under laws and conditions we either created or permitted to stand. The universities now are the habitations of your youth, inclined as they are for good or ill as they matriculate.

When the student enters the university—which is usually his first residence after home—he brings with him his ideals, his frustrations. If he is black, he may also bring a considerable, though understandable, rage.

The university, quite properly, gives the student much latitude for protest because a good university is a yeasty place, full of debate and intellectual turmoil. The university takes student viewpoints seriously even as it attempts to refine them in the contest of ideas. Indeed, the university may be the first place which ever treated some students seriously and with that sense of dignity which is essential to the educational process. The good university, however, resists ideology and imposes standards. It is sensitive to feelings, but it is essentially a place devoted to reason and structured learning. The process of education is slow and hard. To many students who have a definite plan, be it medicine, law or some other clear objective, the curriculum and grades are seen not as barriers but as goals to be achieved.

On the other hand, to many students who come to the university for the legitimate purpose of uncovering their talents and interests through a liberal education the conventional curriculum and teaching methods appear irrelevant and oppressive. Thousands of such students are impatient to put their reforming zeal to work in the ghettos and in the other pockets of sickness in society. They equate good works with education. From the best possible motives, they want to use the university as a staging area for the reform of the world, and desire a degree that validates their good deeds as an education. Resisted by faculties which know the difference between activism and education—experience and conceptualized learning—such students feel thwarted, frustrated, outraged.

I do not deny—rather I assert—that much curricula is ill-planned, and that many professors are uninspired or worse. The universities have not kept pace with the psychology of learning. Some have been immune to the vital and healthy inputs of students in curriculum formation and in professorial evaluation. Faculties, administrators and trustees should not be held blameless in any examination of campus unrest.

However, none of the deficiencies of higher education constitutes an excuse for coercion and riot. There is a difference between a grievance and a cause for revolution.

Why, then, do we have rebellions on the campus?

THE DYNAMICS

Clearly, every good university is a combustible mix. It is crammed with bright kinetic youth, quite disenchanted with society. They are impatient to do their "thing," which frequently includes societal reform. The university is the first institution they encounter—outside the family. Most concerned students are fond of their parents and enjoy their company. Many of the parents are proud of their children's idealized goals and, sad to say, some parents are even titillated and amused by their children's participation in disruptive tactics. The university thus often bears alone the burden of resistance to the impulse of some students to use it as a political staging area to reform society, and to reshape it into an ideological tool.

The university whose faculties and administrators generally share the students criticisms of society, becomes the victim of a misplaced wrath. It is hit because it is there and near, tolerant and vulnerable. Generally, the disruption is initiated by a small number—either of revolutionaries or extreme radicals or of blacks. The objectives of the former are not to be confused with those of the latter. The common question is, how can extremists, white or black, always a small number, gain the support of a sizeable number of others?

Here we face a crucial fact: In the best universities, some 25% to 40% of the student body can be co-opted by a radical cause under certain circumstances. This relatively large group—I call them "the concerned"—are not destroyers. Sometimes misguided, they are generally sincere, idealistic students. And although their behavior presently underlines a grave national concern, they are our nation's hope of tomorrow.

At the outset of a campus disruption these young people—"the concerned"—will approve of some of the carefully chosen and frequently contrived issues announced by the extremists, although they say they disapprove of the forceful and coercive tactics employed. Their approval of some of the announced demands, however, makes them very vulnerable to radical action. If the university handles the problem clumsily, this large segment of students can be brought over to the extremist camp. In a tribal sense, there is an almost instant indentification of youth with youth, particularly if the university's reaction is perceived to be unjust or excessive. If force is employed to end the disruption and if it is thought brutal—and this is a flexible adjective—invariably polarization results and the 25% to 40% can expand to a majority in a few hours.

The problem is delicate, complicated, almost impossible, particularly as there are usually faculty members who, for a variety of reasons, mistake interest in student causes for interest in student welfare. And once the faculty is badly polarized, the disturbance bears resemblance to civil war.

IS THERE A REMEDY—WHAT?

Many Americans find it difficult to believe—and subconsciously unacceptable—that there are some problems without instant solutions. In this way, those of our young people who demand instant reform of social ills are exhibiting characteristically American responses.

However, youth is not going to change America overnight, though America will never again be quite the same because of this generation of young people. Nor are university administrators, with or without your assistance, going to be able to quiet the turbulence by a snap of the finger, a shake of the fist or—as some may advocate—transplants of new spines.

The campus—and the country—are passing through an era of tension produced by the opposing ideas of members of several generations who must live in the same community. I would go so far as to suggest that we are in the midst of a revolution, somewhat obscured because it has been relatively bloodless. Part of this revolution should and will be accepted and absorbed; part must be rejected if we are to remain a liberal society governed by law.

There is not the slightest doubt in my mind that violence, as an instrument for change, must be rejected on the campus and off the campus.

Violence negates reason, and elevates force. If decisions are taken on the quantification of brutish over human qualities, every tradition which the university represents is imperiled.

Universities have generally been self-governing communities. This is certainly the preferable tradition; moreover, it has worked because university communities have customarily enforced their internal rules in order that the exciting and independent life within them might proceed with differences not only allowed but encouraged, and without the infringement of the vital rights of any group, as, for example, the right of students to learn, teachers to teach, and the university to function. Without the yeast and ferment of the clash of ideas, the university would be a sterile environment.

On the other hand, if the university is a cockpit for obstruction, coercion, and violence, it is a fearful place . . . and can never be a community with a unique and indispensable contribution to make to society. It will certainly not be a residence of scholars, upon whom it depends for its very sustenance, who abhor violence and who have today, many attractive options outside its gates.

How, then, does the university deal with violence? There are perhaps three alternatives:

(1) Ignore it—and let the community be ruled by violence

(2) Permit vigilantes—and await the outcome of violence and counter-violence

(3) Use the societal instrument for controlling violence—which is, in most cases, the police.

But unfortunately, we have seen many instances in which the use of police has further polarized the community and multiplied the problems than it was intended to resolve.

Now I understand what often occurs when the police are called in to handle a situation—whether it be at Columbia or at Chicago during a political convention. I have been connected with this field for some time, and I served as Chairman of the Atlanta Citizens Crime Committee for several years. I know what happens. The police are taunted. They are provoked. They too often vent their own feelings. And they are human beings.

On the other hand, while we seldom think of calling in the fire department for a minor home or office fire, it is reassuring to us to know that in the event of a dreadful fire, we can call upon an organ of society for help. So too, when we call upon the police, they should respond responsibly, as the servants of American society. The risk that police may lose their cool complicates university crisis management and restricts, as a practical matter, the legal option to use societal force when violence overtakes the campus.

When police are perfectly disciplined, their use does not inflame the university. You will recall that at Dartmouth last May a force of New Hampshire state patrolmen, aided by troopers from Vermont, smashed their way into an administration building through nailed doors, and escorted the demonstrators out. The Vermont troopers had no clubs; although some of the New Hampshire men did, no clubs were used. No one was injured. The patrolmen were shoved and jeered, but they had been cautioned by Governor Peterson of New Hampshire to use restraint and they did. They acted with circumspection and with decency, and the problem was defused and not exacerbated.

For more than a century, thanks to Sir Robert Peel, England has been a well-policed country. The policeman's lot may not always be a happy one, but in England he seems to be happy with it—and the people are happy with him. I think Peel's twin tests of police efficiency proposed in 1830 when he first created the London "Bobbies," are as relevant today as they were one hundred and thirty years ago; effectiveness in preventing crime, and a "civil and attentive" attitude in their relations with the populace. As the regulations and orders set down under Peel's supervision stated:

"The constable must remember that there is no qualification more indispensable to a police officer than a perfect command of temper, never suffering himself to be moved in the slightest degree by any language or threats that may be used; if he do his duty in a quiet and determined manner, such conduct will probably induce well-disposed bystanders to assist him should he require it."

Today, this policy characterizes not only the conduct of the British Bobby, but also that of the police forces of most of Western Europe. But police do not create a political climate; they mirror it. Unfortunately, this says something very disturbing about American society. I believe that one of the most needed long-range reforms to reduce the level of violence in this country is the upgrading of the selection, pay, training, and status of American police. If reciprocal respect between populace and police were to replace fear and the hostility which this induces, we would have a more peaceful social order on campus and off.

The Omnibus Crime Control Act of 1968 expresses the Congressional concern with the quality of our local police. (Certainly American training is not up to European standards. Police recruits receive 3 to 4 years of training in Germany; 2 years, 9 months in Italy; one full year in Sweden, but only 8 weeks are required in New York State.) Yet funds under the 1968 Act are scarce, are being used in many cases to upgrade police hardware rather than to train officers, and are being funneled through the States which siphon off funds badly needed in the urban districts. A "civil and attentive" public attitude by police is indispensable for an advanced society. It comes from good selection, rigorous training, good pay, and a status conferred proportionate to the great responsibility of the police officer. We do not want a national police, but we must have local force of a nationally accepted standard. Only Congress can insure this, and it is long overdue.

The purpose of a campus take-over is to shut down the university or to disrupt some of its operations. The action inevitably affects the rights, guaranteed under the First Amendment, of those who teach or learn. Takeovers are usually also trespasses under State Statutes for which an injunction is a remedy. State laws differ, and the boundaries between civil and criminal contempt are sometimes murky. In any case, state court orders must be enforced by state and local police.

Some, including the Eisenhower National Commission on the Causes and Prevention of Violence, have suggested that Congress could enact an Amendment to the existing Civil Rights Acts, providing injunctive relief for those whose First Amendment rights are violated by violence and coercion. This would provide universities and others the option to use Federal or State remedies. If the Federal court were available for such relief, Federal Marshals, operating under the strict orders of Federal judges would have the initial responsibility of enforcement.

While I have no specific statute to present, nor do I categorically endorse such legisla-

tion, I think this suggestion deserves careful study. Injunctions have become commonplace to enforce 14th Amendment rights and have been the chief legal instrument for desegregating public society.

First Amendment rights also deserve protection and if not on the university campus—where? It may be a very sobering experience for radical extremists to face a Federal judge and try to explain why they think they have the right to deprive others of Constitutional guarantees. This would place the disruption in the context of what it actually is rather than allowing it to be considered a mere trespass on property.

I do not want to dwell further on outside legal assistance.

This is to be turned to as a *last* resort and it is *never* an instrument of choice. The strength of the university and its defenses should reside within its own community—before, during and after a disruption occurs.

At all times, the administration has the responsibility and the duty of leading the dialogue on nettlesome university issues. The extremists will not be convinced; they have no intention of being. Still, so far as truth and communication can do it, they must be deprived of the magnetic attraction of their hand-picked causes. Each element in the university which wishes to preserve it and reform it has a role to play. If the recent turbulence has had one single good result, it is that we have been forced to define the nature of this curious organism, the university. I see it composed of Five Estates: Alumni, Administration, Faculty, Students and trustees. Each has a vital role and stake, but their power and responsibility are not matched. In crisis this shows, and the fragility of the university is exposed. This is the reason I have asked representatives of the Five Estates of Brandeis to meet together later this month for a four-day conference. The call stated the purpose:

"The meeting is in accordance with an attempt to define the University not in terms of what the President thinks nor by the views held of it by any one element or constituency, nor by an averaging of what each constituency thinks in isolation from the other. We are bringing together participants who are representatives of each constituency to discuss Brandeis' great opportunities as well as its serious problems.

"The legislative power to act in any area reposes within various elements and has not been delegated and cannot be delegated to the Five Estates. Yet, when this four-day conference is over, I sincerely hope that each constituency meeting and expressing views in the presence of the others would experience in this atmosphere a human chemical reaction which will give each a vision of some common purposes as well as the inevitable differences.

"Four days is very little time for such an achievement, but I hope that it will suffice to increase the empathy and sensitivity of each group—and of each individual—for the other's position."

Even at Brandeis, which is only 21 years old, innovation and change are desirable and needed—but the changes must be based on reason, not on who can assemble the most force.

This conference may not produce the understanding and *movement* we hope for, but certainly it has a better chance than any imposed intervention from outside. Congressional or state legislation designed to deal with the delicate balances in institutions whose life styles and independence have been developed gradually from the Middle Ages is bound to create more disturbance—while quelling none. Legislative tinkering with university self-governance is like repairing a watch with a carpenter's drill.

But there are several other things the Congress can do to help:

Congress can help extricate the country from Vietnam and redirect the budgetary savings to the glaring needs of America which occupy the minds and thoughts of our youth, filling them with guilt and rage at their presumed impotence to correct these.

Universities and Congress could work together in one program, so badly needed as to cause wonder that it has been overlooked. With proper funding, university faculties and students could supply a skilled, supervised, committed crops of manpower to work off-campus on the great societal ills which require direct human service, such as skills training, and other desperate community needs. Without government assistance, largely on their own and under great handicaps, 300 Brandeis students are doing this now in Waltham, Massachusetts. Many are so involved that they continue their work in vacation time. For very little money, the people of the United States could put to work—at least part-time—millions of youth who see the need clearly, and want to help to fill it, but who require organization, direction and services.

Given at least 6 million restless, kinetic, able, responsible, young men and women who want to help; understanding that 83% still believe the system can work; knowing that the percentage with this faith is dwindling because of dissatisfaction with niggardly or backward progress; having been told repeatedly that they want to be involved responsibly in coping with society's ills—why don't we count this for what it surely is—a great national resource and blessing—and put it to the service of the country?

Mr. Chairman and Senators—

Our universities are irreplaceable institutions in our society. Ask yourselves what would be the result if all their faculties were wiped out? Certainly, our vaunted science and technology would crumble and decades would pass before the holes in humanistic, artistic and social learning would be repaired.

Yet these institutions are being assaulted by screaming mobs, shouting: "Shut it down!" The universities can stave off this threat by a combination of reason, reform, involvement of all elements, determination to enforce its own rules and, if required, outside legal assistance.

However, these radical enemies of the university within its gates have unwitting allies outside. These are reacting to the violence on the campus by responses which amount to starving the university of support, public and private. "Shut it down!" or "Starve it down!"—these policies lead to the same end. And, as usual, the enemies of the right and left, while throwing bricks at each other, seldom hit anything but those in between—the liberals and moderates.

The radicals will not close the University and, if the public, including the Congress, gives the university needed support, they will not undermine its standards and worthy traditions. However, the cutback of funds, especially at the Federal level, has placed the better institutions in a grave financial crisis.

Moreover as part of a move for tax reform—which I certainly do not oppose—Congress has been considering changes in the laws relating to philanthropy, particularly the deductibility of appreciated securities. Such legislation would undermine vital private support on which higher education depends.

I realize that much of the loss of support for Universities in the Congress has been the result of a different perception as to priorities. However, I worry lest the cause of education be lost in Congress in a backlash produced by campus extremists. Please, gentlemen, let us not fall into the SDS trap. Higher education is the cornerstone of the best structures in our society. It is not the cause of the turbulence, but the victim. Do not put the university in double jeopardy!

DEATH OF JUDGE CHARLES E. MOYLAN

Mr. TYDINGS. Mr. President, on July 23, Judge Charles E. Moylan died at the age of 72.

Judge Moylan served for 24 years as judge of the Juvenile Court of the Supreme Bench of Baltimore City. Under his leadership, that court became a standard of excellence for the country. Moreover, Judge Moylan earned national acclaim for his leadership in activities to prevent delinquency and to improve the programs of correctional institutions. As Chief Judge Foster of the Supreme Bench of Baltimore City said of his former colleague:

[H]e leaves a living memorial in the hundreds of young people whose lives he touched, not only as a judge, but as a guide and mentor.

He will be deeply missed.

I ask that newspaper articles and editorials that I am submitting be printed in the RECORD.

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

[From the Baltimore Sun, July 25, 1969]

JUDGE MOYLAN

No judge in Maryland's long judicial history could have a record as a judge parallel to that of Charles E. Moylan, Sr. The facts speak for themselves. The city's Juvenile Court or, to be more precise, the Division for Juvenile Causes of the Supreme Bench, in which he served, was created in 1943. Within a few months Judge Moylan took over in that special tribunal. He served there until his retirement two years ago. Over that long period the court was Judge Moylan and Judge Moylan was the court.

Unlike the other courts under the Supreme Bench or the lower courts in the city, what happens in the Juvenile Court is "off the record"—there are sharp limitations on its coverage in newspapers, other publications and other news media.

But that to the contrary, Judge Moylan left a public record of high order. Under him Baltimore's Juvenile Court won recognition throughout the country. Judge Moylan's service to the city and state were not confined to judicial duties, but it was that service which has left a permanent mark in the public interest—a mark for his successors to keep in sight.

[From the Baltimore Sun, July 24, 1969]

JUDGE MOYLAN, ACCLAIMED FOR JUVENILE WORK, IS DEAD

Judge Charles E. Moylan, Sr., who won national acclaim for his work in the Baltimore Juvenile Court before his retirement in March, 1967, died yesterday at Union Memorial Hospital after an illness lasting about five weeks.

Judge Moylan, father of Charles E. Moylan, Jr., the state's attorney for Baltimore city, was 72. Death was attributed to an embolism in the lung.

Funeral services will be held at 1 P.M. Saturday in the Grace United Methodist Church, Charles street and Belvedere avenue. Burial will be in the Woodlawn Cemetery.

TRIBUTE BY JUDGE FOSTER

When Judge Moylan reached the constitutional retirement age of 70, he proudly declared he "never had a doctor in my life and I can still read a newspaper without glasses."

Before entering the hospital five weeks ago, he remained active in retirement, and was occasionally seen downtown at social gather-

ings and lunches, including meetings of the Round Table Luncheon Group.

Chief Judge Dulaney Foster, of the Supreme Bench, speaking personally and on behalf of his colleagues, asserted that "we have lost a dear friend who served the Supreme Bench and the Baltimore community ably for many years."

"He was one of the most articulate members of the bench. He always expressed his profound thoughts with great clarity and emphasis. He was dedicated to the work of the Juvenile Court where he presided for virtually his entire career on the bench.

FARMHAND TO PLANE PILOT

"But at the same time, Judge Moylan was very interested in and contributed to the general activities of the bench."

Judge Moylan's interests extended in many directions beyond the law. In his early life, he had worked as a farmhand, book agent, baseball player and coach, school teacher, clerk, reporter and airplane pilot.

In his only attempt to be elected to political office, Judge Moylan ran unsuccessfully against the late Mayor Howard W. Jackson, the incumbent, in the 1935 Democratic campaign for nomination for the mayoral post.

Shortly after his appointment to the bench in 1943, Judge Moylan began presiding over the Juvenile Court and his work there won him plaudits in the former *Woman's Home Companion* magazine, from the National Probation Association and in a book entitled, "Kids, Crime and Chaos."

That book described his court as "one of the best juvenile courts in the country."

COLLECTOR OF ANTIQUES

For many years, Judge Moylan played for and later coached a baseball team in his home town of Ijamsville, in Frederick county, and he tutored players who later found professional careers.

The retired judge was a member of the National Rush Light Club of Boston and the Society of Antique Light Collectors, and he gathered a sizable collection of antique lighting devices, including a rare group of candlesticks.

The judge also was a collector of antique furniture.

Because his clergyman father and mother were deaf mutes, Judge Moylan had an interest in the Maryland School for the Deaf, which he served as a trustee. He was an expert in the use of sign language and an ardent churchman.

COLLEGE DEGREE IN 2 YEARS

He was a trustee of Western Maryland College, where as a student he completed the four-year course of study in two years and was valedictorian of his class. He did graduate work at the Johns Hopkins University and received a law degree at the University of Maryland in 1924.

He previously taught French and mathematics at Brunswick High School, and English at the Frederick High School. Later, he was an instructor in English at Poly.

Before his elevation to the bench, Judge Moylan served as a judge of the Appeals Tax Industrial Accident Fund.

He was chairman of the Baltimore Youth Commission for ten years and in 1948, the Boy Scouts of America presented him with an award for distinguished service to youth. Similar awards were given him by the Jewish Big Brother League and the Young Men's Christian Association.

In World War I, Judge Moylan was a pilot in the United States Naval Flying Corps.

During his days in law practice, Judge Moylan was associated with former Gov. Theodore R. McKeldin.

A cottage at Boys Village was named in his honor in 1958. Several years later the Charles E. Moylan Building for Adolescents was dedicated at Spring Grove State Hospital as tribute to the judge's long-time activity and promotion of such a facility.

In addition to his son Charles E. Moylan, Jr., the judge is survived by his wife, Mrs. Mildred Wheeler Moylan; another son, Daniel E. Moylan, member of a Hagerstown law firm; a sister, Mrs. Mabel Moylan Elliott, of Baltimore, and four grandchildren.

[From the News American, July 25, 1969]

CHARLES E. MOYLAN

Judge Charles E. Moylan, who died Wednesday at the age of 72, was an ornament of his profession.

In the 24 years he served as judge of the juvenile court of the Supreme Bench, until his retirement two years ago, he made that court a model for the nation.

He earned national acclaim not only for the intense interest he took in the problems of the children brought before the court, but also for his leadership in the prevention of delinquency and in improving the programs of correctional institutions.

Judge Moylan was a man of many parts. For many years he played for, and later coached, a baseball team in his home town of Ijamsville, in Frederick County. In his early days, he was a farmhand, school teacher, clerk, newspaper reporter, and a Navy pilot during World War One. He was an active churchman all his life.

Among his many honors was an honorary degree from Western Maryland College, where he served as a member of the board of trustees and, as a student, streaked through the four-year course of study in two years and was valedictorian of his class.

But above all, he will be remembered for his contribution as the judge of a juvenile court which set a standard for excellence for the entire nation. He will be sorely missed.

[From the Evening Star, July 24, 1969]

JUDGE MOYLAN

The Juvenile Court of Baltimore city reached maturity under the steady guidance of Charles E. Moylan. It could not have been in better hands. Judge Moylan, who had a life-long concern for youth, took an active interest not only in the problems of the children who came to his court, but also in the overall problems of juvenile delinquency and in the programs for youths in correctional institutions. During his 24 years on the Supreme Bench, Judge Moylan earned for the Baltimore Juvenile Court a national reputation as one of the best in the country. His interest and concern led him into active participation in the Boy Scouts, the Jewish Big Brother League and the Young Men's Christian Association. For ten years he was chairman of the Baltimore Youth Commission.

Judge Moylan died yesterday at the age of 72. Chief Judge Foster of the Supreme Bench said of his former colleague, "He was one of the most articulate members of the bench. He always expressed his profound thoughts with great clarity and emphasis. He was dedicated to the work of the Juvenile Court . . . but at the same time was very interested in and contributed to the general activities of the bench." Judge Moylan's work on the bench, however, was only a part of his life. The city as a whole will also miss the judge's participation and counsel in community affairs. And he leaves a living memorial in the hundreds of young people whose lives he touched, not only as a judge, but as guide and mentor.

THE PESTICIDE PERIL—XLII

Mr. NELSON. Mr. President, one of the major arguments against placing a ban on the use of DDT and other persistent, toxic pesticides comes from the agricultural community which claims that denied this miracle pest-killer, the entire agricultural industry of the United States will suffer irreparable economic losses. This contention is based on the assumption that there are no effective alternatives to DDT—an assumption which is rapidly being disproved.

An editorial appearing in the Janesville, Wis., Gazette, last week describes just a few of the alternative means of pest control, including an attempt to control DDT itself by making it safer.

The column cites work being done by chemists in California to develop a catalyst that will decompose DDT so that it will be harmless soon after application. In addition, various biological controls are being experimented with, such as the introduction of natural predators and large-scale sterilization of adult insects.

I ask unanimous consent that the Janesville Gazette editorial be printed in the RECORD.

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

FINDING SUBSTITUTES FOR DDT

Now that DDT has come under increasingly heavy fire because of its widespread and long-lasting effect on wildlife, science and industry have bestirred themselves to make DDT safer or find a less-damaging substitute for it.

Chemists at Aerojet-General Corp. in El Monte, Calif., hope in a few years to have a catalyst that will decompose DDT, which has an afterlife of 10 to 15 years once it is applied. The catalyst idea arose from an earlier discovery that some forms of iron weaken DDT.

This would remove the chief objection to DDT, a persistent pesticide that accumulates in the fatty tissues of fish and birds until it reaches lethal proportions. If the scientists find a way to render DDT harmless soon after its application, its effects could be confined to the insects it is intended to destroy.

Even more interesting is the work being done by U.S. entomologists in biological control of insects as opposed to chemical control such as DDT. This effort includes massive deployment of bugs that are harmless to man but prey on crop-destroying pests, large-scale sterilization of adult insects to disrupt their reproductive cycle and use of synthetic copies of the natural scents secreted by insects to lure bugs to their destruction.

The sterilization method is being tested in Southern California's Coachella Valley. Most mornings before dawn, an Agriculture Dept. airplane sweeps above the valley floor, spewing out thousands of sterilized male and female pink bollworm moths through a tube projecting from the cabin. The insects, chilled immobile at 38 degrees, revive in the warm air and mate with normal insects in the fields below. This frustrates the pairing of fertile moths and produces no eggs or destructive larvae.

In another test area in Missouri, scientists have introduced a tiny parasitic wasp that preys on the cabbageworm, which is desrtuctive to a variety of vegetables. The wasp injects its eggs into the cabbageworm eggs on plant leaves. When the wasp grubs emerge, they devour the cabbageworm eggs. Using this and other biological technqiues—and no insecticides—more than 99 per cent of the cabbageworms have been eliminated from the test plot.

Despite skepticism of farmers and legislators, the entomologists are pushing ahead and can point to some definite progress. In recent years, massive releases of sterilized screwworms have reduced the population of this Southern and Western cattle pest at an estimated $120 million saving to livestock producers. And the Japanese beetle, once widespread in the U.S. has largely suc-

cumbed to a dusting program that spread a disease that attacked the Japanese invader.

It is heartening that such progress is being made in finding substitutes for DDT. One wonders, however, if much progress would have been made if public opinion had not been mobilized against the pesticide.

ADDRESS BY CHIEF JUSTICE BURGER BEFORE AMERICAN BAR ASSOCIATION

Mr. MATHIAS. Mr. President, earlier today, the Chief Justice of the United States delivered an address at the annual meeting of the American Bar Association, in Dallas, in which he proposed that the ABA undertake a comprehensive examination into all aspects of our penal system.

I feel that the suggestion merits wide dissemination and consideration and ask unanimous consent that the text of the comments of the Chief Justice be printed in the RECORD.

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

A PROPOSAL: A NATIONAL CONFERENCE ON CORRECTIONAL PROBLEMS

(Remarks of Warren E. Burger, Chief Justice of the United States)

For many years we neglected the entire spectrum of criminal justice. Slowly but with increasing pace we have corrected most of the procedural inequities. Our emphasis on this has led us to commit large public resources to the fact-finding process—the litigation of criminal charges and issues. In time we must take stock of what we have done and see whether all of it is wise and useful and constructive.

Meanwhile we must turn an increasing attention plus increasing resources to the disposition of the guilty once the fact-finding process is over. Without effective correctional systems an increasing proportion of our population will become chronic criminals with no other way of life except the revolving door of crime, prison and more crime.

There are some problems of American life relating to the law and a fair administration of justice which judges in their decisional function cannot properly do anything about. But the fact that judges cannot *solve* a problem by judicial decision is not a reason for judges to remain silent, or to be passive spectators of life around us. Judges can help in the sense that all lawyers can help with certain problems by contributing leadership and ideas and programs based on the unique experience our work provides, and we have a duty to do so.

I speak of the problem of what we should do with those who are found to be guilty of criminal acts. This is one of Mankind's large unsolved and largely neglected problems.

I do not mean everyone everywhere has neglected the correctional phase of criminal justice. Many important improvements have been made in the Federal system over the past 30 years or more. Some of the states have correctional systems which are far better than the generality of systems in most of the states. We have many dedicated and skilled men and women in the correctional field drawn from the social and behavioral disciplines and many whose skills derive from long experience. Indeed, it is in this corps of dedicated people that much of the hope for the future rests.

I need not say, in mid-1969, that the problem of securing an orderly society in a system of ordered liberty, guided by fair concepts of justice, is one of the great priorities of our time. And the disposition of convicted persons is a large priority. The day when lawyers and judges could confine themselves sedately to deeds, will, trusts and matters of commerce is gone.

A friend of mine expressed some surprise 8 or 10 years ago that I had become so deeply concerned with criminal law and asked why. I answered with a question, in the common fashion of lawyers everywhere:

"If we do not solve what you call the problems of criminal justice, will anything else matter very much?"

It helps very little to make the obvious comment that a society which can spend billions and place three men into a flawless moon landing ought to be able to enforce its laws, protect its people, and deal with its delinquents both before and after conviction.

But as lawyers we know that the human animal is much more complex than the exploration of space. There the mathematician gives us a degree of predictability which can never be possible in dealing with the human being. If Man can ever be programed our race will have really been lost.

Let us look for just a moment at how we are dealing with the delinquent offenders. Increasingly over a period of 30 years, with a sharp acceleration in recent years, we have afforded the accused offender the most elaborate procedures, and the most comprehensive system of trials, retrials, appeals and post conviction reviews of any society in the world. None can match us in these manifestations of concern for the accused.

If I were sure—and I am not sure either way—that all this was good for the accused in the large and long range sense that it helps him, I would be enthusiastically in favor of all of it. I have often put the question of "What is the social utility of what is proposed?" By "social utility" we must mean simply that a process is useful *to all of us*—in short, that it strikes the fair balance between Society and the individual. We tell ourselves that this is the keystone of a fair and decent system of justice. Without it no society can survive.

Every lawyer is dedicated to the principle that an accused must have fair procedures and an advocate in processes to determine his guilt or innocence. Indeed the American Bar Association has committed itself to a standard providing defense services for every person charged with a serious offense. The important question yet to be settled among lawyers is whether providing defense counsel for everyone really means that it is the function of the lawyer to insist on the exciting panoply of a trial in all circumstances. Perhaps our future consideration and study will suggest that lawyers in criminal justice may discover what we have known for centuries on the civil side—that lawyers can contribute more outside the forensic contest than within it.

I do not suggest we diminish in the slightest our efforts to see to it that in every criminal proceeding—trial or not—we have three competent and trained professionals: a skilled judge, a skilled prosecutor and a skilled defense advocate. This tripod must have three legs to stand. Indeed, we must insist on this. What I do suggest is that we cannot stop there.

The American Bar Association Criminal Justice Project which I have had the honor to chair, succeeding Judge Lumbard, will soon be drawing to a close. All but two of its 15 or 16 reports are printed or ready for the printer. I believe this undertaking will in due time take its place as one of the great enterprises of the organized bar. If the bulk of these standards becomes part of the state and Federal administration of criminal justice we will have vastly better results. Parenthetically it will reduce the work of the Supreme Court—a matter in which I now have an acute interest.

But splendid as these efforts are, they are not enough. No progress and no accomplishment should ever really satisfy Man. No accomplishments should ever be regarded as completing any task. Each becomes a platform for the next step, and the Criminal Justice Project is surely no exception. I hope events will soon render it obsolete.

But we cannot content ourselves with lavishing great concern and expense and manpower simply to engage in the fascinating and exciting process of criminal trials. We must take a fresh look at our responsibility to society with respect to the guilty who are convicted. By that I do not mean to expand or enlarge or refine his post-conviction remedies—let that be clear—except as to state which fall short. Some improvements need to be made in processing post conviction claims but that is another story for another day.

At this point you might reasonably expect that I would suggest at least the outlines of a solution or a hint of how to solve this problem. I do not because I have none. I can identify the problem from more than 13 years of daily observation of criminal justice but I have no answers and few suggestions.

What I propose—and here is the point of my spear—is that the American Bar Association take the leadership of a comprehensive and profound examination into our penal system, from beginning to end—parole, probation, the prisons and related institutions, their staffs, their programs, their educational and vocational training programs, the standards and procedures for release. By this I mean a study at least as careful and comprehensive as the Criminal Justice Project. We must explore the field of separating the sentencing from the fact-finding function of courts. We must explore more fully a limited confinement and work release. We must explore teaching methods adapted to the abnormal psychology of the habitual offender. We must search for new incentive programs to permit reduction of sentences for those who will educate and train themselves in skills which give a man pride and identity.

I said I have no program or plan or indeed all I have is the profound conviction, which I believe most judges of this country share, that there must be a better way to do it. There must be some way to make our correctional system better than the revolving door process which has made "recidivist" almost a household word in America.

Such an effort will cost a great deal in time of busy lawyers and judges and others. It will surely require that the social and behavioral disciplines, prison administrators, parole and probation officials, both state and Federal, be part of the study. It will take considerable money but, when I observe what has been done in the Bail Studies, the National Defender Project, the American Bar Association Criminal Justice Project, I have no doubt the manpower will be a far greater problem than the money.

Obviously lawyers and judges are not the experts—if there are any such. We have demonstrated that. For this reason the American Bar Association should enlist every organization in America and every discipline which has something to contribute.

This great Convention of the American Bar Association opened appropriately with a Prayer Breakfast yesterday morning so that we could seek Divine guidance in all matters relating to our responsibilities as members of the Bar. Let us never forget that in His teaching the redemption of sinful men has a high place. If we accept this in our daily lives outside the framework of criminal justice, we surely cannot fail to apply it to criminal justice and to our correctional system.

HEAT STANDARDS

Mr. NELSON. Mr. President, commendations are in order for the New York

State Water Resources Commission for establishing comprehensive regulations on thermal heating of that State's waters. In view of the dramatic increase in the use of rivers and lakes across the country by industry for cooling purposes, especially by power-generating plants, such regulations are urgently needed. I would hope that the Federal Water Pollution Control Administration and the other 49 States will quickly proceed to establish standards similar to those of New York.

I ask unanimous consent that the New York Times article reporting the New York action be printed in the RECORD.

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

THERMAL POLLUTION STANDARDS ESTABLISHED FOR STATE WATERS

ALBANY, Aug. 5.—The state's Water Resources Commission has established comprehensive regulations governing the discharge of heated liquid into state waters.

The criteria which will become effective this week, were announced today by Governor Rockefeller.

The standards will prohibit the discharge of heated liquids at temperatures injurious to fish or which adversely affect the waters "best usage" classification. Under this "best usage" concept, all waters in the state have been assigned various classifications based upon specific quality standards.

In announcing the new regulations, Governor Rockefeller termed them "a landmark achievement in the area of water-pollution control."

He noted that although several states and the Federal Water Pollution Control Administration were considering such criteria, New York State was the first to establish detailed standards for thermal pollution control.

CRITERIA ARE LISTED

The basic criteria include:

Non-trout Streams—a maximum permissible surface temperature of 90 degrees at any single point. At least 50 per cent of the volume of the stream, including one-third of the surface waters, may not be raised more than 5 degrees or beyond a maximum of 86 degrees, except on periods of the year when stream temperatures are below 39 degrees.

Trout Streams—No discharge beyond 70 degrees. During June through September no discharge permitted that will raise stream temperatures more than 2 degrees. During October through May no discharge that would raise temperatures more than 5 degrees or to a maximum of 50 degrees, whichever is less.

Lakes—No discharge that will raise surface temperatures more than 3 degrees beyond a radius of 300 feet or equivalent areas.

Coastal Waters—No increase of more than 4 degrees in surface temperatures over the monthly high average during October through June, nor more than 1.5 degrees during July through September beyond a radius of 300 feet or equivalent area.

Estuaries—No increase beyond 90 degrees surface temperature at any single point. At least 50 per cent of the volume of flow of the estuary, including at least one-third of the surface water may not be raised more than 4 degrees or a maximum of 83 degrees, whichever is less. During July through September, if surface temperatures exceed 83 degrees, an increase of not more than 1.5 degrees will be permitted at any given point.

SOUND WATERS CONSIDERED

Because the waters of Long Island Sound and its bays can be considered either coast or estuarine waters, the criteria for discharges into them will be established on the basis of site and the "best usage" classification already assigned to them.

The criteria will be filed this week with the Secretary of State and will become effective upon filing.

MILITARY SPENDING

Mr. GOLDWATER. Mr. President, on July 2, 1969, a report entitled "Report on Military Spending," prepared by Members of Congress for Peace through Law Committee on Military Spending, was put into the hands of the Members of the Senate. Because a number of our most distinguished Members are also members of this committee, I approached the Senator from Oregon (Mr. HATFIELD), who is the chairman of this particular committee, telling him that I had found in the publication statements that I considered to be inaccurate. I suggested that at some time when we could obtain the floor, I would go through them, item by item, and he could respond as he desired. With recess only 2 days away, and, having failed rather miserably to obtain the floor during the protracted and prolonged discussion on the ABM, the tank, and other matters, and, wanting to get these corrections in the RECORD before the recess, I am taking this means of introducing them, together with this introductory statement.

I would want to make it abundantly clear at the outset that I find no fault with any group assembling themselves for the purpose of studying expenditures in the military field, or any field, and I sincerely hope that when we get into the vast and seemingly uncontrolled expenditures of Health, Education and Welfare, Agriculture, and other bureaus, committees will be formed to investigate that spending thoroughly.

The areas of this report that I feel to be inconsistent with facts are in the fields of AMSA, the F–14 program, the main battle tank M–70, on which we have already concluded action on the floor, continental air defense, attack aircraft carriers, and, of course, Safeguard ABM which we have already disposed of. There are other rather minor areas, but because we will not be going into these during the discussion of the bill now before us, I will do away with any comments on them.

I ask unanimous consent that the papers which I have had prepared answering these discrepancies be printed in the RECORD.

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

COMMENTS ON DISCUSSION OF AMSA IN THE REPORT ON MILITARY SPENDING

SUMMARY

"The number planned for order is 263, at per unit costs estimated by the Air Force at between $20 and $30 million, plus a total of $2 billion for research and development. Senator Proxmire has received estimates as high as $80 million per plane. . . ."

The number planned for order is not 263. We have made no commitment, nor do we now have any plans to buy a specific force size of AMSA airplanes. How many aircraft will actually be procured will be based on future information regarding the threat, costs, etc. The Air Force estimates the production airplanes (including initial spares, tech data, and support equipment) will cost about $25M to $30M when bought in quantities in excess of 200 airplanes. Sen. Proxmire's figure of $80M unit cost is not substantiated by any estimates made by DOD or knowledgeable civilian companies.

RECOMMENDATIONS

"Because of the lack of a demonstrated need for a new manned bomber, funding for AMSA should be reduced to $20 million in fiscal 1970, a level approximating amounts spent in prior years. . . ."

For obvious reasons, the demonstration of need must consist of evaluation of the enemy threat and U.S. capabilities and judgments arising therefrom rather than a tangible demonstration. To the extent that such an approach permits, the DOD has demonstrated the need to undertake the development of a new bomber. To conclude that there is no need now to start development of an advanced bomber, one would have to believe the following: (1) The Soviets will cease to improve their air defenses, thereby making our present penetration aids sufficient. (2) The Soviets will not degrade through offensive or defensive action our missile capability. (3) We will not want to use a bomber in conventional conflicts where the enemy has deployed air defenses. (4) It will be economical to prolong the operational and structural life of the B–52 into the 1980's.

All indications today oppose acceptance of the foregoing points. The most significant area of uncertainty is not in the need to start development, but in the number of bombers that may eventually be needed. Fortunately, this latter decision need not and should not be made now.

A level of expenditure of $20M per year will not reduce the development lead time of this system. If we maintain this expenditure level until the need becomes reality (i.e., a discovered ineffectiveness in our strategic forces) we will still be about 8 years away from having the system in operationally significant numbers. In that case we would have two alternatives: (1) Attempt to adapt "off-the-shelf" systems to fill the gap or (2) Accept the added risk that our reduced effectiveness will continue to deter.

RATIONALE AND DISCUSSION

A. The case for AMSA

"The Air Force has been pressing for a new strategic aircraft throughout the 1960's, particularly since Secretary McNamara's decision against production of the B–70. . . ."

The Air Force has actually been examining replacements for the B–52 since 1956. WS–125A (the nuclear powered bomber) and WS–110A (later the B–70) were active then. In 1959, an argument voiced against WS–125A was that its low level speed of Mach 0.9 would not be militarily useful in the 1970s. Likewise, one of the reasons for cancelling the B–70 was its alleged inability to penetrate effectively at Mach 3.0 at high altitude. In spite of this, it is now argued by bomber opponents that the B–52 which flies at Mach 0.55 at low altitude and Mach 0.8 at high altitude will be adequate for the foreseeable future.

We believe modernization of our forces is essential if strategic forces are to portray a credible deterrent to an enemy who continues to devote a large portion of his total resources in both offensive and defensive weapons systems.

Initiation of the development of the AMSA at this time will place us in a better position to modernize our aging bomber forces in order to maintain our deterrent posture.

If the AMSA were started in FY 1970 the *earliest* date that we would have operationally significant numbers in the inventory would be FY 1977. At that time the newest B–52 would be 14 years old.

B. The case against a new bomber

"The strategic role of bombers is for the most part being fulfilled by other weapons which are more cost effective."

It is important to maintain a deterrent posture with a mixture of all three elements of our strategic force—bombers, land based missiles and sea based missiles.

In general, we are not trading off bombers versus missiles to arrive at a single system for our strategic deterrent. To do so is a high risk approach allowing an enemy to focus his resources against that system.

The forces are considered to complement each other in providing us with both an effective deterrent force and a war fighting capability across a broad range of possible conflict situations.

While the pre-launch survivability of missiles appears to be high today, the absence of a bomber in our forces would allow the enemy to concentrate his efforts on attaining good missile accuracy and effective Anti Submarine Warfare (ASW). There is no reason to think that he isn't working hard on these items at present. If successful, and without bombers, the U.S. deterrence would be severely weakened.

To say without qualification that AMSA costs are higher than B–52 and FB–111 costs is misleading. On a single aircraft basis the proposed AMSA is calculated to be several times more effective than the B–52 and would be even more effective relative to the FB–111. In other words, a much smaller AMSA force could do the same job as a larger force of B–52's and/or FB–111's. AMSA development and investment costs would be amortized about 8–10 years after deployment of the first wing. Beyond that, the operating and maintenance (O&M) costs of the smaller equal effectiveness AMSA force would be less.

The statement that MIRV increases the relative cost-effectiveness of missiles over bombers is valid only if the enemy does not also employ MIRV. If the enemy is given credit for a reasonaby accurate MIRV he can substantially reduce the pre-launch survivability of U.S. land based missiles or cause increased expenditures to harden them, thereby reducing their cost-effectiveness.

Bombers and missiles are not considered nor proposed as alternative to one another. While it is true that we should not allow our missiles to become unreliable, neither should we permit our bombers to become so. If the enemy is even partially successful in his efforts to offensively or defensively counter our missiles, it would very well be more cost-effective for us to place more reliance on bombers. Just because the reverse is true today is not adequate reason for stating it will always be so. In view of this, the case for the bomber rests on the fact that because of the great differences between missiles and bombers, the two types of systems complement each other. It should be noted that if the enemy believed bombers were not effective he would not be significantly improving his air defenses.

"The so-called flexibility of bombers is largely illusory."

The rationale expressed presupposes that the enemy has a counter to bombers and no counter to missiles. We should not base our future deterrence on such an assumption. We should insure, to the best of our ability, that he cannot effectively counter either weapon system. In attempting to evaluate the best way to convey our intentions to an enemy during a time of crisis there are probably as many opinions as there are "experts". Certainly, however, visible preparation for combat has proven to be effective. In past crises we have, at various times, called up reserves, deployed naval, air and ground forces, generated our bombers, and in the Cuban crisis, placed a significant number of bombers in the air. Why did we do these things if the "show of force" concept is not valid?

With satellite communications a bomber weapon can be retargeted or withheld up to the point of weapon release which may not be only seconds away from detonation.

It is implied that we need only a capability to hit soft targets, i.e., urban-industrial complexes. This is synonomous with the "deterrent only" concept which ignores the question of war outcome if deterrence should fail. This concept, if adhered to, simultaneously increases the risk of the failure of our deterrent by prejudging that the enemy leader will never accept the loss of a certain percent of his population in order to attain his goal of world domination.

The conclusion that bomber flexibility has "little practical meaning", is based on a narrow understanding of what is meant by flexibility. By way of illustration, the B–29 in its lifetime was used for delivering high explosives, nuclear weapons, fire bombs, aerial mines, and psychological warfare materials. It attacked cities, industry, troops, airfields and bridges. It was used for weather and photographic reconnaissance. Such utility, while not readily amenable to cost-effectiveness analyses, is real non-the-less, and is not possessed by ballistic missiles. The manned aircraft still remains the most versatile system yet devised for delivering munitions. The fact that the aircraft has long range and carries large payloads does not negate this truism.

"Existing aircraft require the enemy to mix his defenses as much as would be the case if AMSA were added."

To mention in the same sentence the FB–111 speed of Mach 2.2 and range to reach 70% of the targets leaves the impression that it can do both simultaneously. The fact is that the supersonic range of the FB–111 is much less than the AMSA supersonic range and would not complicate the enemies defense problem against supersonic penetration nearly as much. What is not mentioned is that it is entirely within the enemy capability to reduce FB–111 target coverage by a factor of 4 or to force the FB–111 to slow down to B–52 speeds to maintain 70% coverage.

Although the data given for the B–52G&H is essentially correct, it fails to mention that the B–52 maximum low-level speed is less than ⅔ that of the AMSA's low-level cruise speed and that the B–52 radar signature is on the order of 100 times that estimated for the AMSA.

The technique used here is to argue that the combination of good points of two different systems results in the same effectiveness as a single system having all the same attributes. This is fallacious for the simple reason that the FB–111 and the B–52 both have certain shortcomings which AMSA would not have and which can be exploited by the enemy to degrade individual effectiveness of the FB–111 and B–52. The high speed of the FB–111 does not reduce the vulnerability of the slower, larger radar signature B–52 nor does the long range and large payload of the B–52 permit the FB–111 to attack deep targets at high speed while carrying adequate penetration aids against advanced defenses.

The conclusion is false for the reasons stated above. AMSA does, in fact, combine the best features of the FB–111 and B–52, but equally important, it avoids the shortcomings of both. Such a system obviously imposes a greater strain on defenses than the FB–111/B–52 combination.

"Changing mission and penetration aids further enhance utility of existing strategic bombers."

It is agreed that new penetration aids will enhance the effectiveness of existing bombers. However, as defenses improve, a greater portion of the effective payload must be devoted to such aids. The AMSA with its higher speed would be exposed to the defenses for a shorter time; for a given level of protection its EMC requirements are less than the B–52 because of smaller radar signature; its lower penetration altitude reduces detectability by ground radars; and its greater payload capability means more targets killed per aircraft for any given level of defense.

The latest model B–52, the "H" model, represents about the maximum growth attainable within the constraints of the basic B–52 design. While we would be able to use new weapons or penetration aids on the aircraft against an improving threat, we have reached the point where a sounder investment is to acquire a new bomber rather than to keep modifying the old. Additionally, certain improvements such as to provide for B–52 self-sufficiency for wide dispersal to improve pre-launch survivability involve large costs and excessive fleet downtime.

"Conventional warfare roles of bombers do not require elaborate, high performance aircraft."

It is incorrectly assumed that aircraft designed for the strategic mission should not or could not have high performance and are, therefore, not effective in conventional conflict. Using current technology, there is no basis for this assumption. The proposed AMSA would have high performance and this performance would pay off in lower attrition than the B–52 in all types of conflicts The argument contained herein contradicts, in fact, a point made earlier about the value of the FB–111's speed. This combination of speed and very low altitude capability makes the F–111 our best conventional fighter bomber.

The assertion made regarding losses and effectiveness in conventional conflicts is refuted by careful analysis. First, with 10 times the payload of our fighter-bombers the AMSA would, with all other things being equal, have to fly only one-tenth as many sorties for a given level of damage. However, other things are not equal—in fact they tend to favor the high performance bomber. An advanced bomber can bomb more accurately and does not have to dive down the defensive gun barrels. A single large bomber is adequate for most targets and gains the element of surprise that multiple smaller aircraft do not have. The bomber's capability for better night and poor weather navigation and bombing is more readily attainable since it can carry the better avionics required. The AMSA could fly supersoncially to deep interdiction targets with its large payload—something our current fighters cannot do. SAMs and interceptors equipped with nonnuclear armament can be countered with the combination of supersonic speed and ECM and SCRAM. The relative effectiveness of larger bombers can be further improved by the ability to carry larger conventional munitions. The greatest advantage would be a stand-off capability that permits the bomber to avoid defenses in the target area while accurately delivering large conventional warheads as Walleye and Condor there is a weapon size limitation imposed by the size of the aircraft itself.

In short, studies, plus our experience in Southeast Asia, have demonstrated that large, high performance bombers can provide cost effective augmentation of our general purpose forces in nonnuclear conflicts.

"The B–52 age problem can be solved through steps much more simple and much less expensive than AMSA."

It is true that the B–52 structure can be reinforced or replaced as it wears out. To say that this is more economical than acquiring a new aircraft is conjecture. First, we still cannot predict, as well as we would like, how aircraft structure will respond to usage. The problem here is that by the time we detect a structural fatigue it may be too late to acquire a replacement aircraft on a timely basis. Therefore, to avoid catastrophic failure we replace or "beef up" the affected structure. The problem is compounded by the fact that the uncertainties in forecasting the type and extent of wear out are accompanied by large uncertainties in the mag-

nitude of the costs that may be required to keep old systems viable. We do know, however, that as age increases so does the risk of incurring large modification costs.

Second, regardless of B–52 structural life, the fact that AMSA carries a larger offensive payload and would suffer less attrition than the B–52 means that considerably fewer AMSAs can do the same job as the B–52s. It is expected that after about 8 to 10 years of operating this smaller size, but equally effective, AMSA force the savings in O&M costs will equal the development and production costs of the new bomber.

The question of reopening the B–52 production line is academic in the face of the above economical replacement argument for a newer, more efficient bomber. Nevertheless, today's production costs of the B–52 would not necessarily be substantially less than the AMSA taking advantage of technology advances since the B–52 was developed. The reasons for this are as follows: (a) B–52 production tooling is non-existent, (b) new production would start at the top of the learning curve, (c) B–52 and AMSA avionics weights are similar, so avionics production costs would also be similar, (d) the eight engines on the B–52 would cost approximately the same as the four engines on AMSA. If the B–52 were equipped with four of the larger C–5 type engines, the engine costs would favor the AMSA, (e) airframe costs are based on empty airframe weight and since the B–52 airframe weight is approximately twice that of AMSA and since both are made of essentially the same materials, AMSA airframe costs should be no higher than B–52 airframe costs. In view of the foregoing it can be concluded that new B–52s could not be produced substantially cheaper than a new, smaller bomber, as is alleged in the report.

F–14 PROGRAM

(Extract from the "Report on Military Spending" by the "Members of Congress for Peace Through Law/Committee on Military Spending")

[Annotated]

Summary

The F–14 is a new multi-mission carrier-based fighter currently under development for the Navy by Grumman. It is to replace the Navy's present F–4 Phantom as a general air superiority fighter/escort in the mid-1970's. Carrying the Phoenix missile, it is to perform the fleet air defense mission of the now defunct F–111B against Soviet bombers and cruise missiles. It is also to have an air to ground attack capability.

The A model of the F–14, using engines, avionics and Phoenix developed for the F–111B, is planned to be operational in 1973. The B model, using advanced technology engines, is planned to be operational in 1975. The C model, using advanced avionics, is planned to be operational in the late 1970's.

Comment

The F–14 will provide air superiority for the fleet and for friendly land forces. It is designed, of course, for fleet air defense carrying 6 Phoenix missiles and for air-to-surface attack carrying conventional ordnance, both without degradation of fighter performance. This is accomplished by palletizing Phoenix and other ordnance equipment which is carried only when desired. The F–14A and F–14B will have an air-to-ground capability with accuracies comparable to the A–7E.

When the F–14 is performing in either the fleet air defense or the air-to-surface attack configuration, it can return to its primary air superiority role immediately upon release of ordnance not required.

The F–14 will fill the fleet air defense need for which the F–111B was designed. It will replace the F–4 as an air superiority fighter and in escort roles.

A low risk development program was conceived for the F–14 to provide improved air-to-air capabilities in the earliest time frame. Improved versions of the existing Phoenix/AWG–9 missile control system and TF–30–P412 engines will be installed in the F–14A, to be operational in April 1973. The F–14A will meet the fleet air defense need and provide fighter performance considerably superior to the F–4 Phantom. An advanced technology engine under development in a Joint Navy/Air Force program will have 40% more thrust and weigh 25% less than the TF–30–P412. This advanced engine will be incorporated in the F–14 for operational use in December 1973. Designated F–14B, it will have maneuverability and weapon system performance superior to the threat expected through the 1970's.

Summary

The F–14 as presently conceived, is an enormously complex and expensive weapons system. The Navy presently estimates the "unit flyaway cost" of the plane at less than $8 million. A conservative estimate of the total "system cost" of the F–14 over a ten year period would be $15 billion.

Comment

The F–14 will be a versatile and effective weapons system designed specifically to counter the projected threat. The most recent F–14 price-out, using carefully detailed component costs, places unit flyaway cost at $8.06M. Escalation at 4% per annum, compounded, has been applied in arriving at the F–14 price-out.

Total "system costs" are not valid unless the aircraft, the quantities and the support costs are specified. Navy estimates of the cost of production and support of 716 F–14A/B aircraft is $7,634M (escalated dollars).

Recommendation

Congress should not authorize $275 million in procurement funds requested for the F–14A in the FY 1970 budget pending Congressional review of attack aircraft carriers and the requirement for a new carrier based aircraft and the Phoenix Missile System.

Comment

The recommendation with respect to the F–14 program does not constitute a savings. The effect of the recommendation would be deferral of the cost of replacing existing aircraft.

A new fighter is required. The replacement of the F–4 for fleet air defense has already been deferred too long.

The PHOENIX missile is essential for shooting down or diverting missile carrying aircraft before they reach missile launch range. The PHOENIX missile system is also essential in the antimissile role.

False economies can be realized from disapproving programed systems and their associated funding. The Defense Department requests money for military equipment only because the equipment is judged essential to protect the U.S. and to deter aggression as directed by the President.

The recommendation states that the F–14 program should be deferred pending Congressional review of the attack carrier construction program. Should a decision be made not to construct a new carrier, it is unlikely that the carriers already in the force would be discarded. Of the carriers in the force today, 12 are scheduled to have F–14s in their air wings. The rationale supporting the F–14 on capability grounds applies, of course, to these 12 carriers as well as to new carriers.

Congress should authorize $175M in RDT&E funds and $275M in procurement funds requested for the F–14A in the FY 1970 budget so that the Navy can proceed with the orderly fighter development program it now has, devoid of overruns caused by deferrals, stretchouts, more study, schedule changes and all other delays.

RATIONALE AND DISCUSSION

A. Current status of program

1. *From F–111B to F–14.* In 1968, Congress decreed the demise of the Navy F–111B and authorized instead development of a new multi-mission Navy fighter, the F–14. The principal mission of the F–111B was to be fleet air defense (FAD). It was to carry six long-range air-to-air Phoenix missiles and sophisticated avionics. Loitering at some distances from the fleet, the F–111B was to counter supersonic enemy bombers armed with long-range air-to-surface missiles, and hopefully, to defend against surface-launched cruise missile as well. The F–111B program encountered numerous delays and rapid cost increases. Weight and size problems arose in connection with heavy components such as engines, sophisticated avionics and the Phoenix, as well as with the airframe, which was designed also to meet Air Force requirements for the F–111A. There were also difficulties in mating engine to air frame.

The F–14 is the outgrowth of an "unsolicited Grumman proposal" of late 1967, together with an extensive Navy Fighter Study of early 1968, a pending Navy proposal for a new mid-1970's fighter (VFAX) and the demise of the F–111B. The F–14 is to have several possible missions. It is to replace the Navy's F–4 Phantoms as a mid–1970's and 80's air superiority fighter and escort—a role which seems to have superseded the fleet air defense role in importance since 1968 Navy testimony before Congressional committees; it is to perform the fleet air defense mission of the F–111B; and it is to have an air-to-ground attack capability.

Comment

The F–111B was to be a fleet air defense (FAD) interceptor carrying 6 long-range PHOENIX missiles. It was to have been a partial replacement of the F–4 inventory. To complete the F–4 replacement, a new fighter was required for the air superiority and escort roles. In 1968, the Congress canceled further funding of the F–111B and authorized development of a new Navy fighter, the F–14. Increasing weight and size spelled the demise of the F–111B. The engines and the fire control system (AWG–9/PHOENIX) have been reduced in weight during the development cycle. The F–14A version of the AWG–9 will weigh 580 pounds less than the original F–111B AWG–9 specification weight (a reduction of 29%).

The F–14 is the result of a Navy competition among five contractors. From inception, the F–14 was designed as an air superiority fighter around four SPARROW missiles and a 20mm gun. The F–14 is an optimized combination of speed, acceleration, maneuverability and radius of action; it includes a weapons control system with multiple weapon options.

The F–14 will have three missions: air superiority, task force/area defense, and air-to-surface attack. It will replace the F–4 in the air superiority and escort role in the mid-1970's. Possessing a carefully designed overload capability to carry six long-range PHOENIX missiles, it will provide far better fleet and area defense than the F–111B would have provided. The versatile AWG–9 in the F–14 also will generate solutions to provide a very accurate air-to-surface attack capability.

2. *The F–14A.* Grumman received the contract for development of the first version of the F–14, the F–14A, in February 1969. The F–14A is to be a swing wing, supersonic aircraft using the F–111B's engines and AWG–9 avionics (airborne missile control system, including radars and computers). The avionics are to be redesigned for tandem seat-

ing, and for fire control of the existing SPARROW and SIDEWINDER air-to-air missiles as well as the Phoenix (still in development). The F–14A airframe will use titanium for weight saving, and will be optimized, to the extent other missions permit, for maneuverability in "dogfight" situations. The F–14A is to have the capability of carrying one or more weapons systems in varying mixes—internal cannon, Phoenix, Sparrow, Sidewinder, conventional air-to-ground ordnance—depending on which threats materialize and which missions seem most important in any given situation.

Present plans reportedly call for procurement of fewer than 100 F–14A's, for test, evaluation, training, and deployment. The target date for initial deployment with the fleet is mid-1973.

Comment

The F–14A is a low risk development utilizing the already proven TF–30–P412 engine and AWG–9 weapons control system.

The AWG–9 has been reconfigured for compatibility with the F–14 airframe. It will include provisions for SPARROW, an advanced short range missile (AGILE), SIDEWINDER and a 20mm gun. Although PHOENIX has not yet been used operationally, 19 of 26 planned R&D missiles have been fired with unprecedented success. These include hits by one missile fired at a range of 78 miles, two missiles fired simultaneously at two targets with 10 miles separation and one missile fired in the active mode for the close-in situation.

The F–14A airframe uses 22% titanium for weight saving; it is optimized for maneuverability in "dogfight" situations. The F–14A will have the capability of carrying one or more weapons systems in varying mixes—internal 20mm cannon, PHOENIX, SPARROW, SIDEWINDER, AGILE, and conventional air-to-ground ordnance.

Not more than sixty-seven F–14As will be procured. Initial deployment with the fleet will take place in April 1973.

3. *The F–14B and C.* Both the F–14B and C are to use the airframe developed for the F–14A. Both are to use advanced technology engines (higher thrust and lower weight than F–111/F–14A engines) which are under joint development with the Air Force for possible use in AMSA and a proposed F–15 fighter. Target date for operational "B" engines is sometime in 1975. F–14A's are to be retrofitted with "B" engines, supposedly at minimum cost since the F–14A airframe has been designed with the new engines in mind. The late 1970's F–14C is to incorporate advanced avionics.

Comment

The F–14B, in addition to using the F–14A airframe unchanged, will have the high thrust version of the advanced technology engine under joint development with the Air Force for the F–14/F–15. The same engine duct will be used for both the F–14A and F–14B. The F–14B is expected to be operational in December 1973.

4. *Costs.* At present, unit "flyaway costs" of the F–14 are being estimated by Navy officials at something under $8 million. This estimate assumes a production run of some 460 aircraft in the A and B versions of the F–14, and the absence of unexpected technical problems and delays. Other estimates within the Administration are reportedly $2 to $3 million higher. The cost of procuring the PHOENIX missile (currently estimated at some $219,000 per missile) as well as the cost of other missiles and ordnance, and probably, part of the cost of the avionics for the PHOENIX (current cost for each PHOENIX avionics unit: about $2.0 million) are not included in the "flyaway cost."

If the F–14 program goes according to plan, the Navy plans to replace most of its F–4s (Phantoms) with the plane, which means that the eventual "buy" of the F–14 could go as high as 1000. Estimates of the ten-year "systems" cost for the F–14 (R&D, procurement, spare parts, support, training, and maintenance) are classified, but are reportedly below unofficial estimates ranging from $20 billion to over $30 billion.

Comment

Present F–14 unit flyaway cost based upon a recent piece-by-piece priceout is $8.06M. The $8.06M takes into account inflationary factors estimated at 4% per year compounded. This estimate is based upon production of 716 aircraft and includes production costs of both the F–14A and F–14B. Other cost estimates must have used pricing techniques based upon incorrect weights, erroneous titanium content for the F–14, as well as a "dollars per pound" approach to electronics costs. The results are seriously in error.

The PHOENIX Missile Control System (AN/AWG–9) *is* included in flyaway costs. Expendable weapons are not in flyaway costs.

The current cost for each PHOENIX avionics unit is about $1.3M vice the $2M stated. Also, it is important to note that 91% of planned PHOENIX RDT&E funding has already been expended.

It is not possible to comment on the estimate of ten year systems cost without knowing how and on what basis the computation was made.

B. The argument for a new carrier-based aircraft: Mid-70's role

Because an essential role of the plane is air defense for carriers, the case for the F–14 begins with the case for carrier task forces. The Navy contends that carriers can play a vital role in a sustained conventional war with the Soviet Union or Communist China, in limited wars such as the Korean War or the current conflict in Vietnam, in show-of-force or deterrence situations in various areas of tension and confrontation, and perhaps even in tactical nuclear engagements. It is assumed that carrier forces can be effectively defended in these situations now, but that by the mid-1970's, present carrier-based airborne weapon systems and aircraft will be outclassed in both fleet defense and in fighter and attack roles by sophisticated Soviet capabilities.

Comment

Aircraft carriers can and do perform essential functions for the United States. Defense Department planning includes aircraft carriers in roles ranging from a show-of-force through all levels of conventional warfare to nuclear war, if that is ever needed. The effectiveness of carriers in many diverse roles is a matter of record. For this effectiveness to continue, carriers must be equipped with aircraft adequate to the tasks.

The projected threat that will confront the U.S. in the 1970–80's currently includes four new Soviet fighter aircraft each with performance greater than that of the F–4J. A new U.S. fighter to meet this threat is already very late.

The F–14 is designed and will have growth potential to provide adequate carrier fighter capability through the 1970–80 time period. The F–14 PHOENIX system in addition to its fighter capabilities, will provide a significant capability to counter the Soviet cruise missile threat.

C. Critique of argument: The Soviet contingency is unlikely

1. A full-scale, sustained conventional war with the Soviet Union seems an unlikely contingency today and for the foreseeable future.

Comment

A full-scale conventional war with the Soviets may seem improbable to many people. But this belief, to be valid, rests on continuing U.S. strength.

2. If, however, we assume that such a contingency is possible, that it will not rapidly escalate to nuclear war or will not be stopped short of the brink after a few days; if we also assume that the Soviet Union will have the full range of sophisticated capabilities predicted for the 1970's—a large fleet of sophisticated attack submarines, a large force of long-range and medium-range supersonic bombers armed with stand-off missiles, a fleet of surface vessels armed with cruise missiles and following the U.S. fleet around—then carrier task forces appear exceedingly vulnerable with or without the F–14. Even if the fleet is provided with the widest range of defense capabilities, it is probable that a full-scale Soviet attack on a carrier task force would be successful and not prohibitively costly.

Comment

The attack carrier is and has been a tough target. No attack carrier built during or after World War II has been lost to enemy action or to any cause. Some of these carriers, still in service, fought through the air and kamikaze attacks of World War II. The newer attack carriers have extensive protection above and below the waterline. Armored flight decks, honey-comb internal structure, and many protective features have made our attack carriers the toughest ships on the seas.

The result of a Soviet attack on a carrier task force is primarily a function of the combat capability of the task force. The inherent capabilities of the long-range, multi-shot F–14/PHOENIX system is superior by an order of magnitude to the F–4J/SPARROW system. The F–14 PHOENIX system augmented by the new technology surface-to-air missile systems will seriously attrite any Soviet attack.

3. If, on the other hand, we assume a full-scale encounter with the Soviet Union but *less* than the full range of Soviet capabilities that have been predicted for the 70's, the need for the F–14 is still open to doubt. In particular, some critics have questioned the need for a new fighter to meet a future Soviet bomber threat.

Chairman Mahon of the House Appropriations Committee commented thus during the 1968 hearings:

"The bomber threat against the fleet, as you know, has been predicted by Navy officials for some time. It has not, of course, developed to date."

In a late 1968 report on the U.S. tactical air power program by the Senate Armed Services Preparedness Investigating Subcommittee, the following points on the bomber threat are made:

"The F–111B was designed primarily for fleet air defense against Soviet supersonic bombers. But that threat is either limited or does not exist; and therefore, we believe the Navy should re-examine the prime requirements for the VFX–1 (F–14A) as to its most important role, in the light of the most predictable threat to the fleet. We are concerned about the assignment of four missions to this single aircraft with potential degradation in its capacity to perform the primary mission."

Comment

From time to time, missile carrying Soviet bombers fly over or near units of the U.S. fleet. Although detected early and intercepted, these overflights make clear this threat does exist. New FOXBAT, FIDDLER and FLAGON fighters have long-range escort capabilities with advanced avionics and missiles, adding to the threat.

The F–14, designed for air superiority, is the weapon system that can shoot down long-range multiple-raid targets, aircraft and missiles, and can engage enemy escort fighters in close-in combat. Computer technology and weight reducing microminiaturization of avionics, properly balanced with airframe and engine design, have removed performance degradation in this multi-mission fighter. In the F–14, one percent of the aircraft's weight

makes it possible to use PHOENIX, SPARROW, SIDEWINDER, AGILE, a gun and air-to-surface weapons. A significant amount of that weight is in removable pallets not carried in the "dogfight" configuration.

D. Present capabilities suffice for show of force and deterrence contingencies

1. For show-of-force and deterrence in tension spots—the roles carrier task forces may be best suited for in the future—the Navy's existing defensive capabilities and aircraft can probably do the job. The alternative to building any new Navy fighter is to rely on the presently deployed advanced Phantom F–4 J's for the missions assigned to the F–14, and to produce more as necessary (the production line is scheduled now to close in 1972) with very substantial savings. Also, there are electronic countermeasures and point defense systems presently deployed or planned for the fleet for additional deterrence of potential threats to the fleet.

Comment

The mobility of sea-based tactical air makes it a valuable instrument of U.S. policy. Navy mobile striking power can be effectively applied at all levels of warfare—from deterrence to nuclear attack. A strong Navy in control at sea will deter the enemy. The F–14 is essential to effective deterrence.

The F–4 designed 1954 became operational in 1961. Since that date the Soviets have built and flown 8 new fighters. The F–4 cannot be improved further without major redesign amounting to a new airplane and costing many millions of dollars. It still would be inferior to operational Soviet fighter aircraft.

Credible deterrence requires balanced offensive and defensive capabilities.

2. The Navy argues that maximum deterrent effect should be sought through a mix of several of the most advanced defensive capabilities—airborne, surface-based missile defense, and electronic countermeasures. But it is probable, that as far as the Soviet Union is concerned, deterrence will be achieved as much by Soviet reluctance to directly engage U.S. armed forces, as by the deployment of the most advanced fleet air defense capabilities. The possibility of escalation to nuclear war is what counts most.

Comment

Continuing reluctance of the Soviet Union to engage U.S. armed forces rests on respect for U.S. military power.

Escalation to nuclear war becomes far more probable if effective general purpose forces are not maintained. Naval forces are essential to effective general purpose forces. Since no one in the U.S. wants to use nuclear weapons, the choice really is stay strong militarily or let the initiative and course of history pass to the Communists.

3. For show-of-force roles which do not directly involve the Soviet Union, it is also questionable whether the F–14 is necessary. The F–4 Phantom has been described as the "best fighter in the free world today." The F–4 J model is equipped with Sparrow and Sidewinder air-to-air missiles. Its range and the capabilities of its avionics are not as great as those planned for the F–14. But in dogfights in the exceptionally hostile air environment over North Vietnam, the Phantoms have proved a match for high performance Soviet MIG–21's.

Comment

The F–4 is our best U.S. fighter employed in Southeast Asia. Its performance in aerial combat has been marginal. Designed as an interceptor, and equipped with an avionics/weapons system to destroy high altitude bombers, the F–4 has been used as an air superiority fighter. It was not designed for this role.

The ratio of MIG–21s downed by F–4s to F–4s downed by MIG–21s diminished from April 1966 to August 1967. Since August 1967 the F–4 has a 1:1 kill ratio against the older MIG–21's. In a confrontation with late model MIG–21s and particularly with the newer USSR fighters, the F–4J would be totally inadequate.

F. Other contingencies also are problematical

(1) Other contingencies in which it is contended that new advanced carrier-based aircraft may be essential include a full-scale conventional war with Red China; initial "surge operations" at the outbreak of a limited war; prolonged operations during a limited war; skirmishes off the coasts of small hostile countries; and show of force situations against Soviet allies, given aircraft more advanced than the MIG–21.

Comment

Regardless of the intensity of conflict or how alliances or military aid programs may work out, having the air combat superior F–14 will make U.S. posture more viable.

(2) The contingency of a full-scaled conventional war with Red China seems almost as improbable as the comparable Soviet contingency. And even against Red China, carrier task forces—with or without the F–14—might be vulnerable, particularly when sailing near any part of the Asian land mass under Red Chinese control.

Comment

That *any* full-scale war continues to remain improbable is due mainly to this nation's deterrent capabilities. If we unilaterally reduce our military effectiveness, the options and prospects of our adversaries increase while ours diminish.

Our carrier task forces are not now vulnerable to Red China forces. The F–14 with a 500 mile escort radius of action would significantly add to our ability to deal with a Red China confrontation.

(3) In most foreseeable sustained limited war operations, land-based aircraft can or should be relied upon. In limited war operations which might require carrier based aircraft and in "surge operations" and skirmishes, the argument for the F–14 rests on the assumption that prospective new Soviet missiles, aircraft, and other capabilities may be made available in quantity to smaller hostile countries. But this possibility, comparable to the Red China contingency, does not justify proceeding now with the F–14 program in all its present complexity and expense.

Comments

Assuming a limited war, (U.S. and USSR not in direct conflict) 85% of the land area of the world and 95% of its population are within 600 miles of sea-based tactical air. This 85% portion contains 56.5 million square miles. A single carrier task force could respond to a contingency in any one of the 56.5 million square miles. In addition, the carrier covers 100% of the sea area. There is no way to estimate the number of air bases required to equal the carrier's capability, even if local governments would allow air bases to be constructed and maintained during peacetime. Carrier task forces can be gathered and applied promptly. Land bases take time to construct and get into effective operation. Carrier task forces buy time for this process and frequently provide the umbrella which makes it possible.

Experience indicates that it requires the best weapon systems to counter the enemy even in "limited war operations."

That the Soviets operate an active program to provide arms assistance to potentially hostile countries further justifies proceeding with the F–14 program as presently conceived.

G. The F–14 program can be delayed for 1 year while it is reviewed by Congress

On the basis of the discussion above, any risks incurred by a delay of one year in the F–14 program appear fully acceptable.

Comments

Delaying one year would increase costs in the F–14 program by $100M, besides delaying the availability of an advanced fighter capable of countering Soviet fighters now entering operational service. Foregoing the F–14A to await the F–14B, would increase costs $340M. Fleet introduction of an advanced fighter would be delayed two years.

The F–14 design and construction are far along. First flight will take place in 17 months. The requested FY–70 funds are necessary to produce the aircraft required for an efficient, economical program.

APPENDIX

A. Questions concerning the F–14 program with Phoenix missile as now envisioned

1. *Why a multi-mission plane?*

(a) By building the F–14 as presently designed the Navy may be spending large sums for the latest in engines, avionics, weaponry and airframe all in one plane that will perform its two principal missions—fleet air defense and air superiority—satisfactorily but at the expense of the highest possible performance of either one. For example, in order to get a better all-around air superiority fighter, the F–14's fleet air defense capabilities will be less than those of the F–111B. It will not be able to loiter for as great a period of time or as far from the fleet as the F–111B; nor will it carry as many as six Phoenix missiles. Nevertheless, for a reduced fleet air defense capability, deployment of the Phoenix is still being planned.

Comment

The F–14 is designed as an air superiority fighter. The engines and airframe have been selected for optimum maneuvering performance. The versatile AWG–9 weapons control system will control PHOENIX, SPARROW, SIDEWINDER or AGILE air-to-air missiles, generate sighting data for the 20mm gun, and provide air-to-surface weapons delivery solutions. Such a wide variety of ordnance makes it possible to readily adapt the F–14 to air superiority, to fleet air defense or to air-to-surface missions.

The F–14A at combat weight (gun and four SPARROWs) will have a thrust-to-weight ratio of .84. The F–14 with the advanced technology engines will have a thrust-to-weight ratio of 1.16. Acceleration from .8M to 1.8M will take 1.27 minutes. Aircraft weight penalties are avoided by palletizing equipment for fleet air defense and air-to-surface missions. The added weight is carried only on these missions. PHOENIX and air-to-surface ordnance are carried as an overload. An insignificant penalty in maneuvering performance (.5 to 1.0g) is accepted while the ordnance is aboard the aircraft. However, the full F–14 maneuvering performance returns when the missiles or ordnance are fired. This design approach enables an F–14 loaded with 6 PHOENIX to remain on combat air patrol longer than the F–111B; yet it does not carry the airframe weight penalty that was in the F–111B design.

(b) The Phoenix missile is an enormously complicated and expensive weapons system which is still under development. Even though equipped with the latest in devices to ensure that it will reach its targets, there is the possibility that the technology of effective countermeasures may render it obsolete shortly after deployment. Moreover, each Phoenix weighs approximately 1000 pounds. Even though the F–14 need not carry a full complement of Phoenix, or any at all in the performance of certain missions, the airframe has to be designed to carry it and gains in weight thereby. Similarly, the sophisticated avionics for the Phoenix and other weapons systems adds weight.

Comment

The PHOENIX missile is designed to operate in an electronic countermeasures (ECM)

environment. Its multiple guidance phases and multiple control frequencies make it effective against all predicated ECM techniques. The meaneuvering performance of the F–14 with six PHOENIX is degraded by 0.5 g. Full maneuvering performance, however, is regained as the missiles are fired at their targets.

(c) The Navy argues that the F–14 airframe has been designed for high maneuverability in "dogfight" situations when the plane is not carrying the Phoenix, and that the capabilities of the Sparrow and Sidewinder are significantly increased by the F–14's avionics, It also argues that for an acceptable increase in costs and in degradation of the "dogfighter" capability, it gets a plane capable of meeting a wide spectrum of possible threats.

Comment

The capability to control SPARROW and SIDEWINDER is being added to the AWG–9 missile control system. The digital computer in the system significantly improves the prospect of successful attacks by clearly defining the missile envelope and providing accurate "in-range" data to the pilot.

(d) Taking into account the most likely contingencies for the fleet and alternative defense systems, however, the argument for a multi-mission fighter—particularly one designed to carry the Phoenix for fleet air defense—loses much of its force.

Comment

Surface-to-surface and air-to-surface missile threats already exist. They will certainly become more advanced. Advanced Soviet fighters will be equipped with missiles capable of ranges greater than U.S. missiles with the exception of PHOENIX. We must be able to counter the total threat, *not* the easier contingencies chosen mainly to avoid coming to grips with very unpleasant realities. Over the past ten years, Soviet weapons progress has been startling.

(e) Navy pilots have reportedly expressed reservations about the complexity and weight of the weapons systems and avionics planned for the F–14. If, after Congressional review, a decision to go ahead with the F–14 is made, consideration should be given to building a smaller, less costly fighter. Such an aircraft could be less laden with heavy avionics—giving a premium to high maneuverability for "dogfights" and other air superiority missions.

Comment

Analysis of a smaller, less costly fighter proved that in order to achieve desired design parameters, either the thrust required would be beyond the level attainable or the gross weight of the aircraft would far exceed that of the F–14A. This lightweight fighter would be capable of air maneuvering combat only. It would not have adequate range to escort attack aircraft to their maximum mission ranges, provide fleet air defense in all-weather conditions or to deliver air-to-surface ordnance.

(f) As for the Phoenix, if it is decided that the system is sufficiently reliable, and that plausible threats justify costs for deployment, consideration should be given to adapting an existing aircraft to carry the system. Navy officials say they have studied this alternative, particularly in connection with the A–6 and that substantial modifications of the aircraft and costs would be involved, as well as problems of compatibility in performance of the aircraft and the missile. These conclusions should be re-examined if the case for dropping the Phoenix capability from the F–14 is accepted.

Comment

The alternative of adapting the AWG–9 weapon control system to the A–6 airframe was re-examined. Total procurement costs, both recurring and nonrecurring, for a minimal 232 aircraft buy would be $1.7B, of which the recurring costs including support would amount to $1.5B. The resulting average flyaway cost would approximately equal the F–14A cost. In comparison to the F–14A, the A–6, a subsonic system, could not meet the deck launched intercept mission requirements, would be less effective when on CAP station, and could not be used in the strike escort role against high performance enemy fighters.

2. *Why build any F–14A's? Why not wait for the F–14B?*

Some critics of the F–14 program, both within and outside the Administration argue strongly that the F–14A will be only marginally superior to the fleet's present Phantom's because it will use the heavy engines, avionics, and PHOENIX missile from the F–111B. They suggest that the F–14 airframe development should be stretched out until the advanced technology "B" engines become available eighteen months to two years from now for development with the airframe, and that plans to procure any F–14's with present engines should be cancelled. The higher-thrust and lighter-weight engines being developed for the F–14B appear to promise significantly higher performance for this model even if it carries the PHOENIX and presently planned avionics.

Navy officials argue that the F–14A is needed as a hedge against possible threats and any slippage in "B" engine development and that a two year stretch-out in the program will be costly and entail delays in necessary R & D for the whole F–14 program.

The desirability of proceeding with development and procurement of the F–14A as presently planned should be explored in the Congressional review recommended in this paper. This review itself will entail some stretch-out in the A program, and might entail a postponement in the present target date of mid-1973 for deployment of F–14A's. But the F–14B, the model the Navy is most anxious to acquire as the air superiority fighter of the future, will become operational in 1975.

Comment

Threat analysis dictates introducing a better fighter capability at the earliest possible date. The F–14 is scheduled for operations in early 1973 and is substantially better than the F–4. A decision to stop the F–14A and wait for the F–14B would delay the operational introduction of a superior fighter at least two years.

Proceeding with a Navy fighter development by means of evolution from the F–14A to the F–14B reduces the risk and provides distinct and substantial savings in cost and time. It also provides increased flexibility to satisfy other military objectives.

Stopping the F–14A program and proceeding only with the F–14B will result in additional program costs of $340M. These cost increases do not include TF–30–P412 engine termination. They do reflect sustaining adequate manpower over a longer development period, adding flight testing, changing GFE requirements and timing, and adjusting for inflation due to the time lag.

The development process must be slowed when the number of major items to be developed is increased. In this case at least two years are lost at a time when greater fighter capability is urgently needed.

Analysis of the threat in the mid-1970's reveals that present fighters cannot successfully counter the threat. A low risk orderly development program was initiated to introduce in the earliest time frame an advanced fighter capable of countering the threat. Studies determined the optimum time and cost schedules for this program. Any stretch-out will increase total program costs and delay introduction of an advanced fighter.

B. Possible savings

The FY 1970 budget requests for the F–14 breaks down as follows in total obligational authority: $275 million for procurement of six test and evaluation models of the F–14A and long lead-time items and spare parts: $175 million in R&D for work on the F–14A; $50 million in R&D for the Navy's share of development costs of the "B" engine and for F–14C avionics; $18 million in R&D for the PHOENIX.

Estimated savings on the F–14A: $275 million in FY 1970 if the proposal in this paper is adopted; perhaps $1 to $2 billion over the next five years if the decision is taken not to procure any A models of the F–14. However if an increased number of F–14B's are procured to fill in for the "A" models, these savings might in the long term amount only to those realized on the "A" engine and miscellaneous development costs peculiar to the F–14A.

Estimated savings from dropping the PHOENIX system from the F–14 and perhaps some electronics for a less complex and less costly F–14: No reliable estimate available. The savings should be substantial.

Estimated savings if the whole F–14 program is cancelled, at the very least, perhaps $10 billion if account is taken that additional Phantom's or other aircraft would be procured instead.

Comment

False economies would be realized by cancellation of the F–14A program. In addition, a new fighter such as the suggested light weight fighter could not be operational prior to 1975. Cancellation of the F–14A would negate any opportunity to develop a fighter capable of countering advanced Soviet fighters.

A stretchout will increase overall program costs because of inflation, contract renegotiation, additional flight tests and purchase of F–4s to maintain force levels. Stopping the F–14A program and proceeding with the F–14B will result in additional program costs of $340M. Delaying the F–14A for one year will result in additional program costs of $100M.

Should PHOENIX be cancelled, the long-range intercept capability required to counter multiple target raids against surface forces, U.S. forward objective areas and Continental U.S. will be delayed until a replacement system can be designed and developed. In addition, the capability to counter advanced Soviet fighters equipped with long-range missiles will be degraded. Ninety-one percent of the development funds for the AWG–9/PHOENIX missile system have been spent.

COMMENTS ON HATFIELD COMMITTEE REPORT

THE MAIN BATTLE TANK—70

The Committee says the central issue concerning the MBT–70 is that by the mid–70s its tactical rationale may be made obsolete by nuclear weapons. It will be "a victim of technology or of a new strategy."

If this is the central issue, then the issue that is really raised is whether we should have any tanks at all. If the most up-to-date tank we can make by the mid-70s is thought to be obsolete and not "useful" by that time, then certainly the present tanks, a product improvement of the 1950 tank design will be even more obsolete and less "useful". If this central issue is correct, any tank of any kind is a waste of money, and the Committee on Peace through Law should really be proposing that we save all kinds of money by scrapping all our tanks, and doing away with the two tank divisions we now have in Europe and the two in strategic reserve.

Perhaps the most apt answer to this argument is provided by the Russians themselves. They are now re-equipping their armored units with the T–62, a tank of much later design than our present M60A1. They clearly expect to have a use for tanks on future battlefields, nuclear or not.

As to usefulness in tactical nuclear warfare, the tank is the weapon most likely to stay in fighting condition. The MBT–70 is being designed with such warfare in mind,

and will be more fitted for it than the obsolescent M–60 which this proposal would perpetuate as our main battle tank. Men equipped with the MBT–70 will be far better off in nuclear warfare than men equipped with our old tank or no tank at all.

The Committee does not accurately state the facts and figures on the MBT–70. For instance, the Committee says the joint German-U.S. agreement estimated the costs as of research and development as $86 million. This is wrong in two ways.

First, the money was $80 million—not $86 million. Next, the estimate was only for initiating research and development. The two countries recognized, since there was no joint agreement on the concept of the tank, nor on any of the details of its sub-systems, nor on its principal and secondary armaments, that the actual experienced development costs would be greater than the initial amount. The agreement specifically provided for more accurate greater costs as the design moved forward.

Even in quoting the President's budget the Committee is inaccurate. They say the FY 1970 R&D figure was $43.3 million. The true figure is $44.9. They say the Production Engineering costs are $24.5 million, the true figure is $25.4.

The Committee says that "The tank was to roll off the production line in December 1969." This is not so. The agreement called for a tank "ready for production" in 1970. This means all required development completed, a Technical Data Package completed and ready for publication to industry for bidding and contract negotiation, and subsequent tooling up of plants for production of the initial tank in mid-1972 or possibly later. Thus the target production date has not been extended by over four years. The extension, accurately stated, is around two years.

The Committee uses a figure of $277 million for the R&D cost to the U.S. alone. These figures are completely unrecognizable, and are far from the actual figures.

It is also not accurate that the sole concept of its design is based on tactical nuclear warfare in Europe. The MBT–70 is intended to operate anywhere in the world that the U.S. may engage in combat.

It is true that in 1963, before the German and American combat users of the tank had even started to discuss how they would use the tank in combat, and what each would want it to do, Mr. McNamara was forecasting production in December 1969. The hard nitty-gritty of agreeing in two languages on the specific details of the tank was not resolved until September 1965. These details were the basis of the "in-house" estimate of $138 million development costs. Later bids by potential contractors for the various components indicated that this money estimate was low, and the development time forecast by Mr. McNamara much too short.

After agreement on design conceptions, all to be radically new components, not product improvements, in September 1965, the first prototype was delivered in July 1967. Since then testing has proceeded in an orderly fashion, resolving development problems for mechanisms and functions never before put together. There is every prospect that if no monkey wrenches are thrown in the works, that the United States will succeed in putting in the field, for use by its troops anywhere in the world, a tank that is far superior to any tank ever seen before.

CONTINENTAL AIR DEFENSE

1. Our Air Defense system does include more than 700 interceptor aircraft. The precise number is more than this but the report fails to point out that only less than half are in the regular force and the remainder in the Air National Guard. Likewise, the report omits the fact that the current program is being phased down and at the end of FY 1975 the total interceptor force will consist only of substantially less aircraft.

2. The report also fails to give any consideration to the fact that much of our air defense system, including ground environment, has already been phased down to amortize the cost of the proposed modernization, and that additional thinning out is programed.

3. The actual inventory of Soviet heavy bombers is greater than the 150 stated in the report. However, since it is thought that a number of these will be used as tankers, the number used in a strike role would be about 150.

4. The Hatfield paper overstates both the numbers and the capabilities of U.S. heavy bombers. At the end of FY 1968 there were less than 500 heavy bombers (B–52s) in the active inventory. In addition, we have about less than 100 B–58 *medium* bombers. The 646 bombers referred to in the Hatfield paper apparently include aircraft in storage.

5. As for capabilities. *Only the B–52H can even approach* the performance capabilities indicated by the report and then only after one in-flight refueling. There is just no way that even the B–52H can go 12,500 miles unrefueled with a bomb load of 75,000 pounds. *Less than one-fourth* of our bomber force are B–52*H* aircraft.

6. The report recommends a reduction of 10% to 20% in the funding for the current air defense system and a "thinner" system. The money involved here is primarily for operation and maintenance, military pay, etc., and will be in the "big" appropriation bill, not the authorization bill. The report recommends "small cuts" in the R&D requests for AWACS, interceptor improvement and SAM–D. The Committee on Armed Services went much further—reducing AWACS from $60 million to $15 million; interceptor improvement from $18.5 million to $2.5 million; and eliminating the $75 million request for SAM–D altogther.

7. Thus it does not appear that there will be an issue on Continental Air Defense between the Armed Services Committee and the Hatfield group. This paper does point out, however, the factual errors in this section of the Hatfield report.

ATTACK AIRCRAFT CARRIERS

The Committee chooses to attack United States aircraft carriers by questioning their number, role effectiveness, and vulnerability. Then they propose to withhold the authorization for a new nuclear attack carrier.

This carrier is needed now, no matter what particular number may be accepted as a proper amount. We are now operating five carriers that are over twenty three years old. Three carriers of the Essex Class are twenty-five years old and fought in World War II. In the present fleet, even with this new carrier, five of our carriers will be 30 or more years old by 1975.

These oldest carriers (of the three ESSEX Class) cannot be further modified to fit them to carry modern aircraft. They are hard run veterans of World War II that have served their time. They cannot be made to grow any more. They are already experiencing twice the landing accident rate found in our new and larger deck carriers such as the Forrestal Class.

Unless it is our intention to condemn our pilots to go into combat with less than modern aircraft, flying from inadequate carrier bases, we must continue the replacement program of which this ship is one.

The Committee in attacking these carriers comes up with some figures which are not recognizable by responsible and knowledgeable people. For instance, it says that the Navy keeps only five of its 15 attack carriers on station, that the other ten are non-deployed, and then constructs figures indicating that for each carrier on station it costs $4 billion as an investment.

In the first place, for the duration of the Vietnam war the Navy has been operating sixteen carriers in the attack role. Next, as a general rule, only one carrier in each ocean is annually laid up for overhaul. One in the Pacific and one in the Atlantic. The others are available for operations. For most of the Vietnam operation the Navy has maintained five carriers in the Western Pacific alone. In addition, there are the carriers operating in the Mediterranean, the Atlantic, the Carribean, and the Hawaiian and Eastern Pacific areas.

This fantasy of idle, unemployed status for two-thirds of the ships involved in carrier task forces must certainly be an eye opener to the men on them, and their families, as they spend their long days and nights at sea in the Navy as it really is.

Of course this whole approach of one deployed task force with two not available for operations is in complete disregard with the facts of the actual record in operations. For instance, in World War II, 85 per cent of the time of all carriers was spent in the forward operating area. Some ships spent as long as two years without ever returning to ports in the United States.

The Committee makes an assertion that ever since 1921 the Navy has had a magic figure of 15 capital ships, except during war. And that before World War II the prescribed number of capital ships was filled with battleships, and since then by carriers. No one in the business knows what the Committee has reference to here. Just before the Korean War the active carriers had fallen to only seven. The number permitted by recommendation of the Secretary of Defense for inclusion in the budget has seldom been as many as the Navy has recommended as necessary to support declared national policy.

The Committee once again proceeds to beat the old dead horse of carrier vulnerability as a justification for reducing their number and, holding up the authorization for this carrier. This argument is so threadbare that it can only be made by those who do not know the history of the carrier in war. No attack carrier built during World War II or since has been lost to enemy action or any other cause. They have been in the most violent and sustained combat, air, submarine and kamikaze. The carriers built since World War II are even tougher, and harder to sink. The accidental fire and explosions on the Enterprise show how tough they are. A number of bombs and rockets exploded on her deck. She could have resumed air operations as soon as the debris was pushed off the after-end of the flight deck.

The record of land bases indicates that they are more vulnerable than carriers. 300 aircraft have been lost, and 2800 damaged while on the ground in Southeast Asia. In the early part of the Korean War all our land bases on the Korean Peninsula were captured by the enemy.

At the end of the Korean War the U.S. had 126 major land bases overseas and not on U.S.-owned territory. By 1967 we had abandoned the use of 81 of these installations built and maintained at such great cost, almost all because of foreign political action. Carriers are not vulnerable to changes in the political winds.

The Committee asks, in attacking the need for carriers, how many wars might be fought in the next 20 years which will require American tactical aircraft before land bases can be prepared. It is a good question for the man with the crystal ball. On the record to date, the probabilities are great that this will be true of most wars. It was true in World War II, it was true in Korea, it was true in Vietnam. Even in the Cuban missile crisis there were not enough U.S. land bases in range to base the required tactical aircraft.

The Committee asks how many wars will be fought in areas where airfields cannot be made available within range of targets. Again a question for the man with the crystal ball. And again, on the record, and the plain facts of geography, the probabilities are great that

this will be true of most wars. And it is a simple fact that almost any target in the world is in range of aircraft from attack carriers. At the present time most of the world is not in range of U.S. land based tactical air from bases under our control. Political action around the world has reduced, and promises to reduce even more, the land bases we can use.

Even if land bases are made available swiftly, in most cases it is a matter of months before necessary full, maintenance, aircraft control, air defense facilities can be made ready for sustained operations. And as in the past, these preparations would depend upon naval convoys and carrier aircraft while being made ready.

The Committee asks how many situations will there be where the opponents may have sufficient anti-carrier weapons to make the use of carriers too risky. Again who can say the answer to that and know he is right. In a way it is a nonsense question. If there are such anti-carrier weapons, they would be even more effective against U.S. sea-going forces without carriers. Reducing carriers would make our use of the seas to support the land bases the Committee imagines as available a far more costly undertaking, and perhaps make it impossible.

Perhaps the Committee is referring to the Soviet Styx ship launched missile. The carrier is the most effective counter weapon to the Styx since it is the only U.S. naval weapon which outranges it. Consideration of the Styx shows the carrier as an absolute necessity to defend all U.S. sea-going traffic, and at the least risk to our forces.

Mr. GOLDWATER. In conclusion, Mr. President, I want to reiterate that I think the interest shown by this group of Senators and Members of the House indicates a long overdue awakening to the responsibilities of Members of both bodies toward all budgets. The preparation of the military authorization bill involves long and very detailed hearings and I can assure my fellow Members that none of these items are lightly glossed-over, and that the bill that has eventually reached the floor represents the policy thinking of the President, the policy and procurement thinking of the Secretary of Defense, and the concurrence in both of these by the Committee on Armed Services. If any Member desires to discuss any of these findings of mine with me, I will be more than happy to get together with him.

THE REVISED PHILADELPHIA PLAN

Mr. JAVITS. Mr. President, as most Members of the Senate probably know, last week the Comptroller General ruled against the revised Philadelphia plan recently promulgated by Assistant Secretary of Labor Arthur Fletcher. As I have indicated previously I support the plan. I also fully support the decision of Secretary of Labor George Shultz, with the backing of the Justice Department and the President, to go ahead with the plan.

I believe the Comptroller General's ruling to be erroneous and also to be premised on a misconception of his authority in this area. The ruling, essentially, is that the revised Philadelphia plan violated title VII of the Civil Rights Act of 1964 because it required Federal contractors to take race into consideration in formulating their hiring policy.

The ruling, if correct, would undermine the whole "affirmative action" program required by Executive Order 11246, not just the revised Philadelphia plan. It would mean that the Government could do no more than require that those who contract with it refrain from active discrimination. For example, it would specifically permit a contractor who had signed a collective bargaining agreement with a union which excluded blacks or other minority groups from membership and used that union as an exclusive referral agency for its employees to continue to perform work under Federal contracts with impunity, so long as he did not actually intend to practice discrimination.

It is also clear to me that the Comptroller General has a misconception as to his authority in issuing this ruling. The agencies charged with enforcing title VII of the Civil Rights Act of 1964, are the Justice Department and ultimately the courts.

Since the Justice Department through Attorney General Mitchell has expressed the opinion that the revised Philadelphia plan is legal, clearly any issues concerning it should be resolved in the courts, not in the Comptroller General's office.

Mr. President, I hope that the decision of the administration to go ahead with the revised Philadelphia plan will receive considerable support. In that connection an editorial in the Washington Post of Sunday, August 10, 1969, characterizes the Comptroller General's ruling as "sheer capriciousness." It also describes the revised Philadelphia plan as "the most hopeful approach yet devised toward opening up jobs in the construction industry to minority groups." I ask unanimous consent to have the editorial printed in the RECORD.

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

THE PHILADELPHIA PLAN

There is a smell of sheer capriciousness in the Comptroller General's ruling the other day that the so-called "Philadelphia Plan" to increase job opportunities for minority groups on federal construction projects violates the 1964 Civil Rights Act. The plan was developed by the Department of Labor and the Office of Contract Compliance in collaboration with contractors in the Philadelphia area. Civil rights groups have endorsed it enthusiastically. The President, the Attorney General and the Secretary of Labor have given it their blessing. Contractors engaged in federal projects have accepted it as fair and workable. And, as if anything further were needed to demonstrate its desirability, Sen. Everett McKinley Dirksen has now opposed it. Could any program present more compelling credentials?

The Philadelphia Plan is aimed at increasing minority participation among iron workers, plumbers, steam fitters, electrical workers and several other construction crafts in all federal and federally assisted building contracts for projects above half a million dollars. The plan involves a flexible determination—by a coordinating committee in which contractors and federal agencies are represented—of an acceptable range of minority employment in the building trades. This has been denounced—by those who oppose its purpose—as a quota system. But it has none of the rigidity of such a system; it sets goals rather than quotas.

You can get some idea of the need for such enlargement of employment opportunities for minorities from an observation by Assistant Secretary of Labor Arthur Fletcher when he signed an order a month ago putting the plan into effect. "In Philadelphia," he said, "less than two per cent of the work force in the mechanical trades is comprised of minority group members despite the city's substantial minority population."

Goaded by Senators Dirksen, Fannin and McClellan, Comptroller General Elmer Staats issued an opinion the other day that this beneficent and constructive sort of cooperation between contractors and the government is forbidden by Title VII of the Civil Rights Act of 1964. This is to say, in effect, that the Act forbids precisely what it was its central purpose to achieve—equality of opportunity. The Comptroller General's opinion borders on absurdity. Against it stands a careful and comprehensive opinion by the Attorney General holding the plan valid and entirely legal. Secretary of Labor Shultz is thoroughly justified in relying on the Attorney General's view and in continuing with the program.

The Philadelphia Plan is the most hopeful approach yet devised toward opening up jobs in the construction industry to minority groups. If it succeeds in Philadelphia, it should set a hopeful pattern for the nation. Here is an effective key, perhaps, to attainment of the employment equality which is a cornerstone of the American promise. Racial discrimination in job opportunities is a heavy burden on the American economy and an indefensible form of social injustice. It is most indefensible of all when it occurs in projects undertaken and financed by the Government of the United States.

JEAN HERSHOLT HUMANITARIAN AWARD TO MARTHA RAYE

Mr. MURPHY. Mr. President, during World War II the Hollywood Victory Committee arranged for 85,000 free entertainment performances for our overseas servicemen.

The men and women who participated in these shows did so without charge to the Government and I know that their morale-boosting performances are still remembered today with warmth and gratitude by thousands of World War II GI's.

Having been one of the organizers of the committee, I could not help recalling its work recently when Miss Martha Raye came to town. Miss Raye was one of the first of a long line of truly great troupers, such as Bob Hope, Edward Robinson—Adolph Menjou and hundreds of others, who donated their services to bring a few moments of relaxation and enjoyment to our fighting men, and it is typical of Miss Raye, I think that she is still at it.

For instance, Miss Raye, or "Colonel Maggie" as she is affectionately known to thousands of servicemen of all ranks, was recently awarded the Jean Hersholt Humanitarian Award during the Academy Award ceremonies for her work in Vietnam. This impressive award has bestowed on her in recognition of the fact that on five separate tours of duty in Vietnam, she has spent at least 4 months providing entertainment, comfort, and friendship for our servicemen. I should also mention the significant fact that she was wounded three times while performing in combat areas.

Yes, Miss Raye is Miss Morale, so far as I am concerned, and I could not help thinking of the important contributions she has made in this field when I learned that she was in town.

Of course, winning awards is nothing new to Miss Raye. Among the others she has received in recent months are the Silver Helmet from the AMVETS, the Eddie Cantor Humanitarian Award from B'nai B'rith, the Liberty Bell Award from the city of Philadelphia, and the Laugh Award at Temple University.

In spite of all these honors, I am sure that Miss Raye has a very special feeling for the one she received for her work in Vietnam. I am certain, too, that while her performances in this country are always marked by the same talent and enthusiasm which have made her one of the greatest performers in the entertainment world, a bit of her heart while she is on stage here is still with the men of our Armed Forces in faroff Vietnam.

I congratulate her on receiving this award and thank her for the great service she has performed for our armed services.

AMMUNITION CONTROL PROVISIONS ARE INEFFECTIVE, UNENFORCEABLE, UNDULY BURDENSOME, AND USELESS

Mr. HRUSKA. Mr. President, the Gun Control Act of 1968 made important changes in Federal firearms policy by controlling interstate sales of firearms. This enabled individual States to impose effective controls designed to meet local conditions.

Not every section of that law was meritorious and effective, however. It included provisions controlling interstate transactions in all firearms ammunition and imposing strict recordkeeping requirements upon dealers in ammunition.

I opposed the inclusion of sporting ammunition in last year's law for two reasons. First, I felt that the provisions of the act relating to sporting ammunition would impose an unwarranted burden upon sportsmen and upon dealers; and, second, I believed that the recording requirements were unenforceable and could not effectively control interstate transactions in sporting ammunition.

Mr. President, the idea of recording transactions in ammunition is not new. Pistol ammunition has been subject to Federal regulation ever since the enactment of the Federal Firearms Act of 1938. The ammunitions provisions of the 1938 law, however, have not been enforced.

Mr. John W. Coggins, Chief Counsel's Office, Internal Revenue Service, explained the failure to enforce the law in testimony before the House Interstate and Foreign Commerce Committee in 1963. Mr. Coggins told the committee that—

> It has been found impracticable to effectively administer the provisions of the Federal Firearms Act relating to ammunition.

Mr. G. D. Belin, General Counsel of the Department of the Treasury, in testimony before the same committee objected to the wisdom of ammunition control by explaining:

> Ammunition is not serially numbered and is very hard to identify. These factors make those provisions of the Act relating to ammunition impractical to administer. Further, we know of no instance where any of those provisions have been helpful in controlling the interstate flow of firearms or in enforcement.

It is unfortunate that notwithstanding the testimony of these knowledgeable witnesses who were in a position to know the shortcomings of ammunition regulations, Congress, in 1968, saw fit to include sporting ammunition in registration requirements.

The reaction of those charged with administering ammunition regulation has not changed.

On July 23, 1969, Mr. Randolph W. Thrower, the new Commissioner of Internal Revenue addressed himself to this subject in testimony before the Senate Subcommittee to Investigate Juvenile Delinquency. In his statement, Mr. Thrower said:

> With regard to ammunition transactions, it is only fair to report to the subcommittee that we are not able to process or check individual ammunition sales records in any meaningful way, particularly in view of the multitude of sales in only sporting ammunition.

Mr. Thrower went on to say:

> We have serious question as to the contribution to enforcement made by keeping records on sales of sporting ammunition. . .

The problems inherent in the enforcement of the ammunition provisions of the act were further highlighted by Mr. Donald E. Santarelli, associate deputy attorney general. Mr. Santarelli told the subcommittee that "ammunition is fungible and, thus, not easily identified. Furthermore, the hundreds of thousands of daily transactions in sporting ammunition create a volume of records almost impossible to deal with."

It is clear that the ammunition provisions enacted in 1968 constitute little, if any, improvement upon the unenforceable provisions included in the 1938 act.

Mr. President, many of the predictions made during final debate of the 1968 Gun Control Act regarding regulation of ammunition sales by opponents thereof, have now materialized.

It was foretold that great harrassment, inconvenience, and unnecessary added costs would be imposed on law-abiding users of firearms for sporting purposes. It was pointed out that the prescribed procedures would be undue and unnecessary restriction and burden; and the results thereof would not in any way contribute to the fight against crime, violence, or the criminal misuse of guns.

All of these things have come to pass and to be plainly evident.

The sheer volume of paperwork now required is staggering, all at great expense and time, as well as annoyance to the merchant as well as the customer.

Estimated sales transportations of .22-caliber ammunititon per day are on the order of a quarter of a million. To this must be added shotgun shell sales to millions of hunters. It is estimated that total daily transactions during hunting season could readily reach a half million.

During the debate, attention was called to the many small town and rural merchants who had stocked such sporting ammunition for the convenience of their customers. Many did not even deal in firearms. But there would be large numbers of such businesses which would cease to thus accommodate the hunter. The reasons are plain: the voluminous, expensive, and in vain paperwork; the cost of the Federal license; and the potential of severe criminal penalty in case of a sale to a person prohibited by the law to buy, notwithstanding every good faith and reasonable effort to avoid making such illegal sales.

All of these forecasts have come about in numerous places and in a large total, according to reports; and have lead to substantial inconvenience and added expense to thousands of lawful users.

All of these factors should at all times be considered against the background that: The required sales records serve no useful purpose; the Federal authorities are not able to process or check individual sales records in any meaningful way because of the astronomical number of transactions; the provisions regulating ammunition have not been helpful in controlling the interstate flow of firearms or in enforcement.

These provisions are not enforceable.

It is most reasonable, therefore, to see that sportsmen and dealers are relieved of the unnecessary recordkeeping burdens placed upon them by the Gun Control Act of 1968. I believe that sporting ammunition should be excluded from Federal Control.

The Senator from Utah (Mr. BENNETT) introduced a bill, S. 845, to exempt certain sporting ammunition from the provisions of the Gun Control Act of 1968. I welcomed the opportunity to join the distinguished Senator from Utah, and many other Senators, as a cosponsor of this very good bill. S. 845 was assigned to the Committee on the Judiciary for consideration.

Subsequent to the introduction of S. 845, the chairman of the House Judiciary Committee made it known that his committee did not intend to consider any firearms legislation this session. This action, of course, spelled doom to S. 845.

To avoid this roadblock, Senator BENNETT withdrew S. 845 and introduced a substitute bill which was designed to fall within the jurisdiction of the Committee on Finance instead of the Judiciary Committee. This bill, S. 2718, of which I am also a cosponsor, would amend the Internal Revenue Code in such a way as to relieve dealers of the burden of keeping records of transactions in sporting ammunition.

Although S. 2718 will not go as far as many of us would like, I believe that it will be an improvement over existing law. S. 2718 will relieve the dealer from the excessive paperwork that is now required of him for each and every sale of sporting ammunition. It will also relieve the sportsmen from the interrogations by dealers each and every time they purchase sporting ammunition.

And most important of all, this bill will in no way impair the objectives of the Gun Control Act—namely to keep the firearms out of the hands of the wrong people; and to reduce misuse and criminal use of firearms.

Mr. President, S. 2718 is a good bill. I urge prompt consideration and early favorable action.

THE ABM VOTE AND ARMS LIMITATION

Mr. MURPHY. Mr. President, I believe that the long debate on the Safeguard ABM system was an extremely healthy experience for us all. I feel strongly that, in the end, the vote dramatically reflected our deep concern for the continuing security of our great Nation. This was not a partisan victory, nor was it a partisan loss. Senators of both parties rallied to the President's banner in this cause and, I am sure, greatly strengthened his hand in our quest for peace.

An editorial entitled "ABM Vote and Arms Limits," published in the Los Angeles Times of August 8, is a concise and thought-provoking summary of this issue. 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:

ABM VOTE AND ARMS LIMITS

Issue: Now that the Safeguard ABM has won Senate approval, how have prospects for arms control been helped or hindered?

By voting to authorize first-phase deployment of the Safeguard ABM system, the U.S. Senate has enhanced the prospects for an eventual arms control agreement with the Soviet Union. The development is one, therefore, of historic importance.

The margin of victory for the ABM was slim—51 to 50 on one key amendment and 51 to 49 on another—but this is a case where the proverbial inch is probably as good as a mile.

Opponents vow to continue the fight, but most observers share the judgment of Senate Democratic Leader Mike Mansfield that the anti-ABM forces reached their "high water mark" in the voting this week.

The House is expected to approve deployment of Safeguard by a much larger margin than did the Senate. Opponents will make another fight when appropriations for the project come up in separate legislation, but their cause is generally regarded as lost.

It is important, at this point, to cut through the confusion which has been left by many weeks of wordy and acrimonious debate and get straight just what is involved.

The Safeguard ABM, which is a system for defense against missile attack on this country, marks a realistic and laudable attempt by the Nixon Administration to set the stage for an end to the nuclear arms race.

It would offer a "thin" system of protection for the American people against a small-scale Chinese missile attack or an accidental launching from any quarter.

The overriding purpose of Safeguard, however, is to preserve the credibility of our nuclear deterrent in the minds of the Kremlin leaders at a time when the latter are working hard to overcome the U.S. lead in missile striking power.

The premise is that the Russians will never be tempted to launch a surprise missile attack on this country if we keep them convinced that enough of our missiles will survive to destroy the Soviet Union in return.

This could be accomplished, as some ABM critics suggest, by increasing our own force of offensive missiles. But such a move would be far more provocative—and more injurious to the chances of arms control—than deployment of an ABM system which is strictly defensive in nature.

The Safeguard system, if built in total, will cost over $10 billion, including warheads. But if arms limitation talks with the Soviets produce an agreement to limit ABM deployment, the whole system will not be built.

The Nixon Administration this year is asking only for a $759 million authorization to go ahead with deployment of two prototype installations.

Congressional approval improves President Nixon's bargaining position for the upcoming arms limitation talks with the Russians—who already have a limited ABM system of their own, and show no inclination to abandon it.

Meanwhile, the closeness of the Senate vote on Safeguard dramatizes the fact that the Pentagon can no longer count on unquestioned congressional approval of expensive new military programs and weapons systems. Military spending will be closely and critically scrutinized.

Even many ABM proponents will agree that the new skepticism is not a bad thing.

NETWORK CIGARETTE ADVERTISING LETTERS

Mr. MOSS. Mr. President, in separate letters to me as chairman of the Consumer Subcommittee, the heads of the three major television networks have responded to my plea that the broadcasters relieve cigarette manufacturers of their contractual commitments so as to enable the cigarette industry to withdraw from all broadcast advertising by January 1, 1970. CBS said yes. NBC and ABC said no.

On July 31, 1969 I sent the following letter to the heads of each of the three major television networks:

As you know, the cigarette manufacturers have now indicated to the Commerce Committee their willingness to withdraw from the broadcast advertising of cigarettes after December 31, 1969, "if the broadcast industry will simultaneously terminate all contractual arrangements for the broadcast of cigarette advertising."

I am not unmindful of the economic disruption which would be caused by such abrupt termination of cigarette advertising. But weighing the public health imperatives in the light of your strong traditions of social responsibility, I would hope that you would find it possible to accommodate the time table adopted by the cigarette manufacturers.

I would very much appreciate hearing from you about your intentions with respect to enforcement of advertising contracts with the cigarette companies after January 1, 1970.

I have now heard from each network.

Mr. Stanton's letter on behalf of CBS is temperate, rational, and in the highest traditions of broadcaster responsibility. Mr. Goodman's letter for NBC is disappointing. Mr. Goldenson's letter on behalf of ABC is unresponsive, shallow, and insensitive.

Mr. Stanton says that if Congress will grant the tobacco industry antitrust immunity for its agreement to withdraw from the broadcast advertising of cigarettes, "CBS will release the cigarette advertisers from their commitments." He points out that responsibility for granting such exemption properly rests with Congress. We agree and we intend to carry out that responsibility as soon as possible.

Mr. Stanton also raises valid questions which merit response.

He questions the legislative soundness of the tobacco industry's proposal of a "congressional prohibition of any Federal Trade Commission action which would require health warnings in print media." I agree. I, too, oppose any such prohibition, and I see no inclination on the part of the Senate to grant such prohibition. I might add, however, that the National Association of Broadcasters warmly supported such prohibition in the House.

He fears the "transfer of existing expenditures for broadcast cigarette advertising to print media." So do I, as I indicated at the time the tobacco industry made its proposal. This must not be allowed to happen. And if it can be prevented only by FTC action to require a warning in every cigarette ad, the FTC must be left free to require such warnings.

Mr. Goldenson takes the position that even if the termination of cigarette advertising "would greatly reduce cigarette consumption," he would consider that ABC had no responsibility to terminate cigarette advertising unless it were terminated in all news media. In fact, he is shocked by such "discrimination" as contrary to "fair competition."

"Discrimination," and "Fair Competition" are serviceable slogans. But we are not talking about slogans. We are talking about the direct and unparalleled impact of the broadcast media upon the American home. Ever since television became an advertising medium, its salesmen have been contemptuously deriding newspapers and magazines as second-class media. Television with its animated, visual-audial impact upon nonselective viewers, has been heralded as the most powerful sales medium in history. Now Mr. Goldenson claims to be the victim of discrimination.

The unpleasant fact is that television and radio cigarette advertising have been singled out as abominations by every major public health organization concerned with the hazards of cigarette smoking, because they have a direct and inescapable impact upon young people.

As the broadcasting critic of the Washington Post put it this morning, research has demonstrated that "no way exists for avoiding the young viewer of TV."

There are few 4-, 5-, or 6-year-old children in this country who cannot recite by rote a half dozen cigarette jingles and catch phrases. They did not learn them by reading magazines and newspapers. The broadcasters themselves have recognized their unique impact by agreeing to a 4-year phaseout of broadcast cigarette advertising.

Moreover—and the broadcasters conveniently suppress this fact—broadcasters alone enjoy a public monopoly conferred by Congress of broadcast frequencies. Congress has asked in return, only that broadcasters serve the "public interest." Magazines and newspapers carry no such burden.

Now, let us look at the shamelessly self-serving argument that until Congress bans the sale of cigarettes, the freedom of unrestrained advertising in all media remains a sacred right.

Of course, if cigarettes were a new product about to be marketed with full knowledge that their consumption would kill hundreds of thousands, their sale would be banned without hesitation or quibble.

But no responsible public health official, to my knowledge, is recommend-

ing a ban despite the proven hazards of smoking. Why? Because millions of Americans are addicted or, at least, heavily habituated to smoking. The inevitable consequence of a cigarette ban in terms of a black market and the attendant law-enforcement chaos and social misery would make the bitter experience of prohibition pale by comparison. That is why cigarettes are not banned and the broadcasters know it.

It does not follow as the night the day that the failure of Congress to ban smoking, by law, forces us to permit the unrestricted promotion of cigarettes. Neither logic nor humanity dictates that we leave our young people thus exposed and unprotected.

As I indicated in my letter to the networks, I am not unmindful of the economic dislocation which would be caused by the loss of cigarette revenues. That loss, however, should be viewed only in the perspective of the human and economic loss which accompanies the premature death and disease which strike thousands of Americans each year.

Cigarette advertising on television and radio was certainly not the only factor influencing the decision of 70 million Americans to smoke. But I find it hard to believe that the more than $2 billion of cigarette advertising revenues enjoyed by broadcasters since 1952 were not instrumental in persuading hundreds of thousands to smoke and hundreds of thousands not to quit.

We are told that experience in other countries proves that the end of television advertising will have no impact on cigarette consumption. But no country in the world has approached the massive exposure of citizens through television to cigarette commercials. There is no comparable experience.

Mr. Goldenson's threat to curtail public-interest broadcasting if cigarette advertising revenues drop is simple blackmail and not worthy of further comment.

While refusing to release cigarette manufacturers from their commitments, NBC expresses its willingness to allow cigarette companies to substitute its noncigarette brand advertising. Fairness requires that the cigarette manufacturers be able to utilize the maximum feasible time for the advertising of noncigarette products. The committee will explore this possibility with the cigarette companies.

NBC's recommendation for institutional, public service sponsorship by the cigarette companies is also worth exploring further.

But cigarette manufacturers should not be forced, by commerical considerations, to continue to advertise cigarettes on radio and television.

I am today asking the FCC to take note of the discrepancies among the network responses and to inform me if the FCC's mandate from Congress to see that broadcasters operate in the public interest affords them any opportunity to influence NBC's or ABC's decision.

On our part we in Congress can at least make certain that cigarette advertising on radio and TV will cease by September 1970.

I have asked the Justice Department to prepare legislative language which would facilitate the agreed withdrawal of cigarette advertising from radio and TV by the cigarette industry. The language will not be "discriminatory," but will be broad enough to permit tobacco industry withdrawal from print media as well if that later becomes feasible.

GASOLINE RETAILERS WANT DEPLETION ALLOWANCE AND OIL IMPORT QUOTAS ABOLISHED

Mr. PROXMIRE. Mr. President, all too often we forgot that the oil industry is composed of many small businessmen. These small businessmen are not like the giant major oil companies; they do not have the benefit of the oil depletion allowance or oil import quotas. Although these small independent businessmen do not have the gigantic profits or Government subsidies of the major oil companies, they must compete against them.

Mr. President on June 23 and 24 the Retail Gasoline Dealers Association of Wisconsin, Inc., held their convention in Eau Claire. At that convention they adopted the following resolution:

OIL DEPLETION ALLOWANCE

Whereas, it is apparent that petroleum producers have been favored by way of Federal Government oil depletion allowance against income tax to the extent of 27½% annually; and

Whereas, the importing petroleum producers has further been granted favored treatment on foreign crude oil imports; and

Whereas, such special allowances have been conducive to the promotion the ruinous price wars; and

Whereas, such results have caused grave economic hardship and in some cases complete economic disaster to the retailer; Now, therefore,

Resolved, that the Retail Gasoline Dealers Association of Wisconsin, Inc., in convention assembled, urges the Congress of the United States and our Wisconsin Senators and Congressmen to take appropriate action to terminate the 27½% oil depletion allowance to oil producers and to terminate favored treatment on foreign crude oil imports.

I think this resolution is eloquent testimony to the need to change our tax laws and the oil import program which give the major oil companies all these subsidies to the detriment of the consumers and small businessmen. I, for one, shall do all that I can to implement this resolution.

WALKER W. BROWN, PRINCIPAL, JOHN A. SUTTER JUNIOR HIGH SCHOOL, CANOGA PARK, CALIF.

Mr. MURPHY. Mr. President, I should like to give what I feel is much deserved recognition to a distinguished educator from the State of California, Mr. Walker W. Brown, principal of John A. Sutter Junior High School in Canoga Park, Calif. Mr. Brown has earned the highest esteem of all who have worked with him during the 20 years he has worked with our young people.

In his years as a teacher and administrator, Mr. Brown has always strived to teach his students the American ideals. Through his work with student government, the meaning of democracy and a deep appreciation of it have been brought firsthand to his students, and at the same time, he has been educating and training the responsible leaders of tomorrow.

Under his direction, programs dealing with Americanism and our American heritage have been held and have continued for the entire school year. Due largely to the leadership of Mr. Brown, Sutter Junior High School was named a recipient of the 1968 Principal Award and George Washington Honor Medal from Freedom's Foundation of Valley Forge.

Mr. Brown has shown not only to his students, but also to all the teachers who work with him as well as all of his associates, that no matter what their own personal political leanings, they can still take pride in the great history of our free people and in just being Americans.

Mr. President, I am proud that California has an educator of Mr. Brown's caliber. I am sure that he and his colleagues fully realize that he can best mold responsible citizens of the future at this early age. This is the time when young people are in their formative years, a time when their feelings toward things of great value like democracy and our American way of life are being molded—feelings they will hold for the rest of their lives. And under Mr. Brown's guidance, a giant step is being taken toward ending future campus disruptions and toward providing the responsible leadership that will be so badly needed in the tumultuous years ahead.

Mr. President, I salute Mr. Walker Brown, principal of Sutter Junior High School, for the outstanding work he has done with our young people, and I pray that his sincere efforts may continue for many years to come with even greater success than he has had thus far.

EMERGENCY INSURED STUDENT LOAN ACT OF 1969

Mr. SPONG. Mr. President, on July 24, 1969, at 12:50 p.m., three Americans returned from a trip into space which took two of them to the surface of the moon. Behind the trip lay hours of research and development, billions of dollars, and the dreams of millions of persons through the United States and the world. Preparation for the trip not only produced a mammouth scientific and technological success but also resulted in various spin-off developments which will advance many fields.

All of this would, haowever, have been impossible without educated men and women. Education is the single most important element responsible for the recent space feat. It is the single most important factor in enabling us to continue to progress. It is the best insurance we have in a future of fewer domestic problems than exist today. It is one of the surest and safest investments we can make.

In view of this, it is ironic that college and university students face a serious lack of financial assistance this fall. At a time when the need for highly trained personnel is increasing and the costs of postsecondary education rising, adequate financial assistance must be provided.

Under current conditions, the major loan program, the national defense student loan program, would be able to finance only 50 to 60 percent of the loans requested by colleges and universities. This means that many of our young people and their parents would face serious financial problems this fall. In fact, some students might not be able to pursue their studies.

The problem is compounded by the fact that the guaranteed loan program, which was enacted to supplement the national defense student loan program, has not lived up to expectations. Under this program the Federal Government was to guarantee loans made to students by banks and certain other lending institutions. The program has, however, been plagued by the fact that the interest ceiling on the loans has consistently been below the interest rate which banks could earn from other loans. Student loans, therefore, have been scarce.

Almost daily, I receive pleas for help from colleges, from parents, from students—from persons willing and eager to improve knowledge and skills in our Nation. These are not people asking for a handout—but people asking for a small amount of assistance to enable a group of young persons to make an additional contribution to our country tomorrow.

S. 2721, as reported on August 8, would fortify the student loan programs and increase the authorization for educational opportunity grants and the college work-study programs, two programs which generally operate hand in hand with the loan programs and provide special aid for lower income students. This bill will go far toward meeting the imminent need for increased loan and scholarship assistance.

I believe we would be negligent of our responsibilities and unmindful of priorities if we failed to enact legislation.

RATIFICATION OF THE HUMAN RIGHTS CONVENTIONS IS WITHIN THE CONSTITUTIONAL POWERS OF THE SENATE

Mr. PROXMIRE. Mr. President, the question of ratification of the Convention on Political Rights of Women was put before the Senate in 1953. Since then, many have raised the question of whether or not ratification of this treaty is within the constitutional powers of the Federal Government. The two questions that are raised are: First, are the conventions within the treaty power of the United States in that they do not conflict either with any express limitations in the Constitution or with any other applicable limitations? Second, do the substantive provisions of the conventions conflict with any U.S. statutes?

The President and Senate are not empowered to provide in a treaty what the Constitution prohibits them from doing in the United States. This dictum was first made by the U.S. Supreme Court in *Geofroy* v. *Riggs*, 133 U.S. 258, 267 (1890), when the Court stated that the treaty power does not extend "so far as to authorize what the Constitution forbids." In *Reid* v. *Covert*, 354 U.S. 1, 17 (1957), the Court overruled an Executive Agreement with Japan which gave jurisdiction over capital crimes committed by military personnel and their dependents to the military. The Uniform Code of Military Justice was held unconstitutional as applied to a civilian because it did not provide guarantees of trial by jury and grand jury indictment.

In *Missouri* v. *Holland*, 252 U.S. 416 (1920) the U.S. Supreme Court ruled that the treaty power is not limited by the 10th amendment, which reserves for the States all powers not specifically delegated to either the Federal or State Governments. Article 2(2) gives to the Senate and the President the authority to make treaties. Speaking for the New York State Bar Association, Mr. Terrence H. Benbow said:

> The scope of the treaty power is not limited to matters in respect of which Congress may legislate.

Mr. President, there is no provision in the Convention on the Political Rights of Women which would conflict with the express limitations on treaties. And the convention's limitations on the United States are already in existence in our law. The New York Bar Association stated:

> We have found nothing in these conventions inconsistent with any existing Federal statute.

Mr. President, in this day and age, the fates of all nations are increasingly intertwined. Human rights has become important to insure a future of peaceful coexistence and cooperation between nations. To insure that "better world" we must ratify the Convention on Political Rights of Women now.

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

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

S. 2825—INTRODUCTION OF FISHERIES DEVELOPING ACT OF 1969

Mr. KENNEDY. Mr. President, I introduce today a bill to help revitalize the American fishing industry. The need is clear, and the time for action long overdue.

One of our finest industries—with a long and proud tradition dating back to early colonial days of our Nation—is threatened by economic decline. American fishermen—many of whom come from families which for generations have earned their living from the sea—are being pushed out of jobs. On both coasts, and on the Gulf of Mexico and on the Great Lakes, almost all segments of the industry are being hurt.

Since 1945, world catch has tripled from 43 billion pounds to 123 billion pounds, yet the catch by our domestic fishing industry has remained stable, between 4 to 6 billion pounds.

Skyrocketing imports reflect the decline of our domestic industry and have contributed to that decline. In 1960, fish imports were 25 percent of total United States supply. In 1958, they were over 75 percent. In just the last two years, the percentage of the domestic market supplied by imports has increased by over 15 percent. We consume over $700 million worth of imported fish annually.

The fall of the fishing industry is all the more distressing because it represents a failure to capitalize on existing potential—both in domestic demand and in the United States stock available to meet that demand.

Since World War II, while domestic output has remained static, domestic consumption of fish products has nearly tripled—from 5.3 billion in 1945 to 14.2 billion in 1967. Yet we have more than enough capacity to supply this demand. Conservative estimates are that fishery resources off the U.S. coasts are enough to support a total annual sustainable yield of about 30 billion pounds, including marketable species not at present being fished.

With United States annual consumption expected to grow from 15 billion pounds today to 21 billion pounds by 1985 and 31 billion by the end of the century, the potential benfits from utilizing our own stocks are clear. But to take advantage of these possibilities will require full-scale measures to reverse the spiraling decline of our domestic fishing industry—a decline that in just one decade has seen us fall from second to sixth among nations of the world in tonnage of fish landings.

As a Senator from New England and from Massachusetts, where American fishing had its proud beginnings, I am deeply aware of the regional impact and personal hardship which has occurred. New Bedford and Boston and Gloucester no longer bustle with the vigorous activity and excitement which once reflected the worldwide fame of their great fleets. In these ports today I have seen brave fishermen, who made a lifetime from the sea, grounded without work. I have seen the ships lying idle—unfit and unequipped for modern-day fishing, unable to compete with subsidized foreign vessels. I have talked with boat owners and captains and crewmen and processors, and learned their frustration at a decline which is beyond their individual control.

In 1960, New England fisherman landed 93 percent of the fish caught on the New England continental shelf, with the remainder landed by Canadians. Just 5 years later, New England fishermen landed only 35 percent of the fish, with the Russians catching more than all other nations combined.

The pressure on haddock at Georges Bank has been so severe that the International Commission on the North Atlantic Fisheries recently found it necessary to declare a moratorium, recognizing that this is the only way to save severely depleted stocks. The consequence has been an even greater need for fishermen to turn to new and underutilized species. But the decline of the last several years has left them without the resources to do so, victims of a relentless vicious circle.

I was in touch with the Department of Interior on this haddock situation,

along with my colleagues in Congress and officials in Massachusetts. Fortunately, the Secretary chose to declare the New England commercial fishery a "resource disaster" which qualifies for special emergency funds, and these will be some help. But modest stopgap funds certainly do not offer any final answer. Much more assistance is needed.

Mr. President, I have mentioned this background because I feel it is extremely important that we understand both the seriousness of the present condition of the fishing industry and the potential for resurgence if we make a genuine commitment.

The situation is summarized in the January 1969 Report of Marine Science Affairs, prepared by the National Council on Marine Resources and Engineering Development:

> The United States has become the world's most lucrative market for fishery products with a two-fold increase in demand during the past ten years. However, while the fishery catch worldwide and off our coast has more than tripled during the past two decades, the total catch by U.S. fishermen has slightly declined, with the United States now sixth among the fishing nations of the world. This problem in U.S. fisheries is further aggravated by the fact that foreign fishermen take most of the catch from the highly productive high seas fishing grounds off the U.S. coast, and about three-fourths of our domestic demand is satisfied by imports.

A number of factors have contributed to this decline—overlapping and contradictory Federal, State, and local regulations; depletion of species through overconcentration; high building and insurance costs on vessels; fragmentation of the industry; and so on.

We have failed to modernize our fleets and our fishing techniques—at a time when foreign countries have been heavily supporting such modernization for their own industry. We lag behind in both vessels and equipment. And our techniques for locating fish are so weak that our fishermen spend an estimated average of 50 percent of their time at sea simply finding the fish.

Because fishing is often a family enterprise, the supply of capital is limited. The dismal economic conditions which have prevailed have further cut off the flow of risk capital, and forced banks to stop making loans to small fishermen. In addition, few large companies are attracted to the industry as there is little hope of profit in the immediate future.

The relative competitive position of our domestic industry has been hurt most seriously by the subsidies and other support which several foreign nations give to their own fisheries. Even if our fleets and our techniques were fully competitive, the lower price of imports from this assistance would still be putting great pressure on our domestic market. This is all the more reason why we should lead, not follow, on fisheries development.

The long delay in Federal action on antidumping and related charges brought by our fishermen is also unnecessary and disruptive, and I urge the Department of the Treasury to move with deliberate speed on these matters.

The foregoing profile of our fishing industry today is alarming, but the possibilities for tomorrow are not without hope. As we look to the future, a strengthened fishing industry can stimulate economic development at home and abroad; develop new tools for dealing with hunger and malnutrition in our own country and in developing nations; improve our balance of payments; increase our research and technical capabilities for tapping the vast potential resources of the ocean; enhance our stature as a world maritime power; and confirm that, when given a fair chance, the U.S. economy is capable of adapting to new conditions.

Two years ago, in the 90th Congress, I introduced S. 2426, to improve our fisheries through a comprehensive and coordinated program. Unfortunately, the Senate did not act on the bill. The Fisheries Development Act of 1969 incorporates many of my earlier proposals and takes account of further changes in the industry. We must act forcefully both to meet the immediate emergencies and to solve the underlying problems.

To restore our fishing industry to its rightful position as a world leader, I propose the following eight-point program:

First, establish a fisheries extension service.

A basic cause of the decline in the fishing industry has been the failure to keep abreast of new technology. Foreign nations are constantly seeking better hardware and outfitting their fleets with the most advanced equipment. They are developing new and more efficient techniques. And they are passing on the latest knowledge to all segments of the industry.

In contrast, the delivery of information and assistance in the U.S. fishing industry is relatively haphazard and wholly inefficient. Vast amounts of information are generated by the more than 20 Government agencies involved in oceanography, but they are not correlated or gathered in any single location.

Section 102 of my bill provides authority for establishing in the Department of Interior a Fisheries Extension Service to disseminate research results and modern technological information to all sectors of our fisheries.

The Service would provide a link between the fishermen and the research and academic community. It would promote a continuing educational program on fishing technology, marketing procedures, and processing techniques. It would offer instruction and practical demonstrations. In addition, the service would be a source of complete information on Government assistance programs and would foster cooperation and communication among the various segments of the industry.

The bill authorizes $10 million for fiscal year 1970, $15 million for fiscal 1971, and $20 million for fiscal 1972.

Second, establish a program of technical assistance grants.

Our fishing industry can be vigorous and strong only if we take advantage of the most modern equipment and methods, and constantly seek newer and better ways to fish. At present, we have fallen far behind foreign countries in this regard. Most American vessels, for example, have not begun to use various types of conventional sonar gear which is already standard aboard many foreign ships. As a result, we have been cut out of solid opportunities for cost reduction.

Section 103 provides for grants to finance demonstration projects and assist the purchase of advanced equipment necessary for modernizing fishing techniques.

Examples of possible projects might be demonstrations of the effectiveness of new sonar equipment, of central fleet radio direction, of mechanized harvesting systems, of using computers to detect and forecast productive fishing areas, of different methods of shellfish farming, and of various techniques of aquaculture.

Authorizations under the bill would be $5 million for fiscal 1970, $7.5 million for fiscal 1971 and $10 million for fiscal 1972.

Third, encourage expansion into new species.

As the experience with haddock at Georges Bank so well illustrates, overexploitation of various species ultimately threatens their survival and the survival of fishermen who depend on them. Other resources are available. But more balanced fishing and therefore a more stable industry can be achieved only if there is an effective program to utilize underexploited species.

To make it feasible to capitalize on new and underexploited species, boats must be converted and markets must be developed. My bill gives limited assistance toward both of these goals—in section 104 and title II.

Section 104 provides grants to convert fishing vessels for use in unexploited or underexploited species, including funds for the acquisition of gear. Five million dollars is authorized for such grants for each of the next 3 fiscal years. In addition, for emergency situations such as we presently have in New England, further efforts and support will be necessary.

Fourth, undertake a comprehensive study and review of existing fisheries regulation at the local, State, and Federal levels.

At the present time, fisheries are governed by a hodge-podge of overlapping and contradictory State laws and other restrictions. Many of these were developed years ago, and have grown obsolete and increasingly unworkable.

Section 105 directs the Secretary of the Interior to undertake a comprehensive review of existing fisheries regulations, and to develop a series of model codes suitable to adoption by the States. These codes would be designed to reconcile the competing ends of sport and commercial fishermen, to coordinate activities within and between different commercial fisheries, and to promote the conservation, restoration and efficient exploitation of our marine resources. One million dollars is authorized for fiscal year 1970 to start the study.

Fifth, study and constantly review the fish-import situation.

As we all realize, the sharp increase in imports represents the most immediate threat to our fishing industry. Section 106 of my bill calls for a semiannual report by the Secretary of the Interior to

the President and the Congress on the importation of fisheries products. The report would include a profile of the quantity and value of imports for the preceding 6-month period, broken down by tariff category and country of origin. It would also give a projection of anticipated imports for the following 6 months, and an analysis of the effect of imports on the domestic fisheries.

Sixth, expand research on fish-protein concentrate.

The development of fish-protein concentrate promises to be the most significant breakthrough in fish processing in this century. FPC is odorless, tasteless, inexpensive and highly nutritious. It is easy to store, easy to ship, and can potentially open up global markets for American fisheries. The widespread use of FPC as a diet supplement could provide the impetus for a revolution in American fishing, and a small investment now will pay enormous returns. It can also help forestall what many experts have warned will be, in a few years, an unprecedented global famine.

Congress has authorized funds for the construction of one FPC plant and the leasing of another, and some work is presently underway. But we still have had little research or experience with reducing fatty fish to FPC, and many other important aspects have gone unexamined.

Section 107 would increase the funds available for research and development into the means of reducing whole fish to FPC. It adds to existing FPC legislation an authorization of $1.5 million annually for this purpose.

Seventh, grants to fishermen's cooperative associations.

Cooperatives can be extremely effective in coordinating and assisting the efforts of fishermen in a given port or area. In New England, for example, the Point Judith Fishermen's Cooperative has been successful in organizing about 50 medium and small offshore draggers in Rhode Island. The cooperative has been in business for 20 years buying, selling, processing, and handling fish for its members and providing them with gear and supplies.

The model can be applied elsewhere, but the financing problems are severe. Section 108 of the bill would authorize $3 million annually for the next 3 years for grants to fishermen's cooperatives.

Eighth, authorize and assist the formation of fisheries marketing agreements.

Title II would enable fishermen, processors, cooperatives and other organizations, and persons engaged in handling fish to form voluntary associations for certain purposes. In particular, these would include combined efforts to regulate the marketing of products, to promote the development of new products, to conduct marketing research, and to undertake promotional campaigns and other related activities. Title II would give a limited exemption from the antitrust laws to such voluntary, dues-paying organizations. It also authorizes $1.5 million for each of the next 3 years for assistance grants to such associations.

Analogous marketing associations have been successful in the field of agriculture, and there is a great potential for fisheries.

Fishing cooperatives could set quotas on marketing and maintain reserve stocks to dampen seasonal price fluctuations. They could set quality standards to increase public confidence in the product, and they could conduct research and advertising campaigns to increase per capita consumption in the United States. They could promote movement into new species. The authorization of such agreements would encourage the fishermen to help themselves.

Mr. President, I have met and talked with fishermen in Massachusetts and other areas. I have seen their disappointment and their frustration at the present situation. But I have also seen the pride and strength and dedication of our Nation's fishermen. Through centuries of history, they have distinguished themserves as being valuable citizens and an important economic resource. Against the perils of the sea they have risked their lives daily, catching fish which at one time supplied an entire Nation. They have handed down their skills from generation to generation. They have been tough, hard working, firm in the face of constant danger, strong in family life and dedicated to their work.

It is these qualities which have enabled them to spend long hours at sea—often weeks at a time, away from their families, braving storms and the elements for only a very modest economic return. And it is these qualities which convince me that with coordination and assistance at this time of crisis, our fishermen can and will prevail.

Only a few weeks ago, two dozen leaders of the fishing industry in Massachusetts gathered for a solid day of unprecedented meetings. The topic was how to coordinate their activities and their resources to save our Northeast fisheries. These men worked on tentative plans to develop a single, unified organization—with its own staff—to effectively draw together and represent the interests of the various sections of New England fishing. They also expect to establish far closer times with their counterparts throughout the Nation who share so many of the same problems.

I understand that a further meeting is scheduled in the near future, and I think that this mutual commitment represents a great step forward. These tough and forceful men of the sea are accustomed to working things out on their own. But they realize that now survival requires cooperation. They are showing that their determination is strong enough to sacrifice cherished independence for the benefit of the industry as a whole.

Fishermen, boat owners and processors can work together for their common good. Leaders from Gloucester and New Bedford and Boston recognize the value of pooling their resources and their efforts. Fishing interests in Maine, Massachusetts, Rhode Island and other States of similar needs will hopefully cooperate with each other—and gain stature and influence by presenting a forceful, common front.

I have high admiration and regard for our fishermen in Massachusetts who have shown this dedication and this willingness to cooperate in the vigorous pursuit of their needs. I look forward to working closely with these leaders, and I expect that a more unified industry will facilitate our efforts here in Washington.

The fishing families of Gloucester and New Bedford and Boston are anxious to save the industry and are prepared to work hard to do so. The same holds true for fishermen throughout the Nation. For the decline of fishing is not just a regional problem in New England. It is occurring in all areas of the United States which depend on fishing for the livelihood of some of their citizens—the Atlantic Coast, the Pacific Coast, the Gulf States and the Great Lakes.

And so, while the decline of our domestic fisheries is certainly cause for alarm—if Congress is willing, it should not be reason for hopelessness. For there is indeed grounds for hope. We have the knowledge. We have the means. We have the desire. We have the dedication. What we need is a comprehensive, forward-looking program and a genuine determination to bring about the rebirth of the American commercial fishing industry.

This kind of rebirth is essential. It can mean new jobs to fishermen and processors. It can mean new orders to shipyards and suppliers. It can mean the rebuilding of our port facilities. It can mean more and better food to the hungry people of the United States and all the world. It can mean added tax revenues for our hard-pressed municipalities.

And it can mean that the faded reputation of the American fishing industry can be restored—a reputation which dates, for example, from the time when the swift schooners of Gloucester and Boston and New Bedford once marked the crest of world fishing ability and knowledge.

My proposals should not be considered as a cure-all for the American fisheries. Rather, they should be viewed as a part of the overall effort.

But the urgency of the situation is clear. Only a commitment to action now can save our fishing industry for the future. The bill I introduced today reaffirms my own commitment to this endeavor. I believe that the programs would be a substantial help to our fishermen, and I hope for prompt and favorable action by Congress.

Mr. President, 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. 2825) to provide certain essential assistance to the U.S. fishing industry, introduced by Mr. KENNEDY, was received, read twice by its title, referred to the Committee on Commerce, and ordered to be printed in the RECORD, as follows:

S. 2825

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SHORT TITLE

SECTION 1. This Act may be cited as the "Fisheries Development Act of 1969".

TITLE I

STATEMENT OF PURPOSE

SEC. 101. The purpose of this title is to encourage and facilitate efficient use of fishery resources in all regions of the United States, to coordinate and maximize the benefits from new fisheries technology, development and research, and to provide other assistance to the fisheries industry.

FISHERIES EXTENSION SERVICE

SEC. 102. (a) In order to aid in diffusing useful and practical information on subjects related to commercial fishing operations, the processing of fisheries products, and the marketing thereof, and to encourage the application of such knowledge, the Secretary of the Interior (hereinafter referred to as the "Secretary") is authorized to establish in the Department of the Interior a Fisheries Extension Service and to exercise through such Service the existing extension authority of the Bureau of Commercial Fisheries, as well as the extension authority under the provisions of this section. All such extension activities shall be coordinated with the fisheries extension activities carried on by the States and by the sea grant colleges and, to the extent practicable and feasible, shall utilize, or be carried out through State fisheries agencies, colleges and universities, or other institutions with expertise in the field of fisheries development, with special emphasis on institutional arrangements which promote regional undertakings.

(b) In determining which industries and geographic areas shall receive priority for the purposes of initiating extension activities authorized in this section, the Secretary shall consider such factors as (1) the size of the industries to be affected; (2) the state of their technology as compared to that of similar industries in foreign countries; (3) the extent of the potential resources and markets; (4) the amount of information resulting from relevant research activities; and (5) the economic benefits to be derived from the practical application of such information to commercial operations.

(c) The Secretary is authorized to carry out fisheries extension work pursuant to this section which shall consist of the giving of instruction and practical demonstrations in commercial fishing, in the processing and marketing of fisheries products, and in business management at all levels of the fishing industry, to persons engaged in such activities for economic gain, and of imparting information on said subjects through demonstrations, publications, and otherwise. Such work shall be carried on in such manner as may be determined by the Secretary after consultation with appropriate State and local officials, and local representatives of the industries to be benefitted by such work.

(d) There are authorized to be appropriated for the purposes of this section $10,000,000 for the fiscal year beginning July 1, 1969, $15,000,000 for the fiscal year beginning July 1, 1970, and $20,000,000 for the fiscal year beginning July 1, 1971.

TECHNICAL ASSISTANCE GRANTS

SEC. 103. (a) The Secretary is authorized to make technical assistance grants to fishery cooperatives, marketing associations, and other private agencies or organizations, to pay in whole or in part the costs of implementing technological improvements in the fisheries for demonstration purposes.

(b) In determining whether to make such a grant, and in fixing the amount thereof, and the terms and conditions on which it will be made, the Secretary shall take into consideration the amount available for grants under this section; the number of applications for such grants; the financial condition of the applicant; and the benefits which are expected to accrue from the proposed demonstration project.

(c) Payments pursuant to a grant under this section may be made in advance or by way of reimbursement, and in such installments as the Secretary may determine.

(d) There are authorized to be appropriated for the purposes of this section $5,000,000 for the fiscal year beginning July 1, 1969, $7,500,000 for the fiscal year beginning July 1, 1970, and $10,000,000 for the fiscal year beginning July 1, 1971.

EXPANSION INTO NEW OR UNDEREXPLOITED SPECIES

SEC. 104. (a) For the purpose of encouraging and assisting the United States fishing industry to expand into unexploited or underexploited species the Secretary is authorized to make grants pursuant to this section for the necessary conversion of fishing vessels (including the acquisition of gear).

(b) In determining whether to make such a grant and in fixing the amount thereof, and the terms and conditions on which it will be made, the Secretary shall take into consideration the amount available for grants under this section; the number of applications for such grants; the financial ability of the applicant to pay any remaining cost of conversion and to operate the vessel after conversion; and the benefits to the industry generally.

(c) Payments pursuant to a grant under this section may be made in advance or by way of reimbursement, and in such installments as the Secretary may determine.

(d) There are authorized to be appropriated for the purposes of this section $5,000,000 for the fiscal year beginning July 1, 1969, and for each of the two succeeding fiscal years.

FISHERIES LAW STUDIES

SEC. 105. (a) The Secretary is authorized to undertake a comprehensive study and review of existing fisheries regulation at the local, State, and Federal levels. Such study shall include but need not be limited to (1) a review of existing Federal, State, and local regulation of commercial and recreational fishing, and (2) an assessment of the effectiveness of such regulation in promoting the efficient and beneficial use of marine resources.

(b) The Secretary is further authorized to develop a series of model codes suitable for adoption by the various coastal States. These codes shall be designed to harmonize the conflicting interests of various commercial and recreational fishing, and to promote the conservation and efficient exploitation of marine resources.

(c) The results of such study and such model codes shall be incorporated into a report on the state of fishery regulation and shall be presented to the Congress and the President on April 26, 1971, and kept up to date by an annual supplement presented on May 31 of each following year.

(d) There are hereby authorized to be appropriated for the purposes of this section $1,000,000 for the fiscal year beginning July 1, 1969, plus such additional sums as the Congress may deem necessary for each fiscal year thereafter.

IMPORT STUDY

SEC. 106. In order to aid the Congress in adopting the Nation's tariff policies to the needs of the domestic fishing industry, the Secretary shall submit beginning as soon as practicable a semiannual report to the President and the Congress on the importation of fisheries products into the United States. Such report shall include, but need not be limited to (1) a profile of the quantity and value of the fisheries products imported into the United States in the preceding six months, broken down by tariff category and country of origin, (2) a projection of imports of fisheries products anticipated in the following six months, and (3) an analysis of the effects of these past and projected imports on the domestic fisheries.

FISH PROTEIN CONCENTRATE

SEC. 107. Section 3 of the Act entitled "An Act to authorize the Secretary of the Interior to develop through the use of experiment and demonstration plants, practicable and economic means for the production by the commercial fishing industry of fish protein concentrate," approved November 2, 1966 (80 Stat. 1089), as amended, is amended by adding at the end of the second sentence the following new sentence: "There is also authorized to be appropriated not to exceed $1,500,000 for each fiscal year beginning after June 30, 1969, to carry out the research authorized by the first section of this Act."

FISHERMEN'S COOPERATIVE ASSOCIATIONS

SEC. 108. The Secretary of the Interior is authorized, under such rules and regulations and under such terms and conditions as he may prescribe, to make grants to fishermen's cooperative associations, for the following purposes: (1) to finance the purchase of fish and shellfish or products thereof and the cost of storing fish and shellfish and the products thereof in cold storage or other storage facilities owned, leased, or used by such association; (2) to provide operating capital needed to supplement the capital funds of such association; and (3) to finance or refinance the acquisition by purchase or lease of land, buildings, and equipment and the construction or reconstruction of buildings or other improvements used by such association in connection with activities related solely to the storage, processing preparation for market, handling, or marketing of fish and shellfish or the products thereof. No grant shall be made under this subsection if, in the judgment of the Secretary, the grant will increase the production of any fish or shellfish which is commonly produced in excess of annual marketing requirements, or will materially contribute to the depletion of any fish or shellfish species contrary to sound conservation practices. There is authorized to be appropriated $3,000,000, for the fiscal year ending June 30, 1970, and for each of the two succeeding years, for grants pursuant to this section.

TITLE II

STATEMENT OF PURPOSE

SEC. 201. The purpose of this title is to assist voluntary associations of fishermen, processors, cooperatives and other organizations and persons engaged in handling fish and fish products, and to conditionally exempt such associations from certain provisions of the anti-trust laws, so that they may, through marketing agreements, promotional and product development activities, marketing research, and other related activities, better regulate the fluctation of prices and the marketing of fish and fish products which create the unstable and chaotic conditions in the fishing industry, and expand and develop existing and new markets, both domestic and foreign, for under-exploited species.

VOLUNTARY ASSOCIATIONS AUTHORIZED

SEC. 202. (a) In order to effect the purpose of this title, the Secretary shall have the power, after due notice and opportunity for hearing, to permit the voluntary association for the purpose of this title of fishermen, processors, cooperatives and non-cooperative organizations and others engaged in the handling of any fish or fish products (hereinafter referred to as "handlers").

(b) Such voluntary associations may be formed for the purposes of the issuance of marketing agreements, the development and promotion of a specific product or products, and the establishment of market and product research programs designed to improve

the quality or increase the consumption of the product.

(c) The making of any such agreement shall be lawful and shall not be held in violation of any of the antitrust laws of the United States if such agreement meets the requirements of this title and such additional requirements as are prescribed by the Secretary for the purpose of this title.

PURPOSES OF MARKETING AGREEMENTS

SEC. 203. Agreements made pursuant to section 202 may—

(a) limit, or provide methods for limiting, in a fair and equitable manner the total quantity of any fish or fish product, or any grade, size, or quality thereof, produced in any specified manner during any specified period or periods of more than three months each, which may be marketed in or transported to any or all markets during any specified period or periods by each handler or all handlers, but such limits shall be subject to minimum limits determined by the Secretary;

(b) allot, or provide methods for allotting, in a fair and equitable manner the amount of any fish or fish product, or of any grade, size, or quality thereof, which each handler may purchase from or handle on behalf of any and all other handlers during any specified period or periods;

(c) establish or provide for the establishment of reserve pools of any such fish or fish product, or of any grade, size, or quality thereof, and provide for the equitable disposition of the net return derived from the sale thereof among the persons beneficially interested therein;

(d) require or provide for the requirement of inspection of any such fish or fish product produced during specified periods of marketing;

(e) determine, or provide methods for determining, the evidence and extent of the surplus of any fish or fish product, or of any grade, size, or quality thereof and provide for the control and disposition of such surplus, and for equalizing the burden of such surplus elimination or control among the handlers thereof;

(f) prohibit unfair methods of competition and unfair trade practices in the handling of any fish or fish product;

(g) provide that any fish or fish product, or any grade, size, or quality thereof shall be sold by the handlers of any class or handlers in the manner provided in such agreement;

(h) provide to the association the powers and duties—

(1) to administer such agreement in accordance with its terms and provisions.

(2) to make rules and regulations to execute the terms and provisions of such agreement;

(3) to receive, investigate, and report on complaints of violation of such agreement; and

(4) to recommend amendments to such agreement; and

(i) make such other provisions incidental to, and not inconsistent with the terms and conditions above specified and necessary to execute the provisions of such agreements.

AGREEMENTS NOT APPLICABLE TO RETAILERS

SEC. 204. Agreements formulated under this title shall not be applicable to any person who sells fish or fish products at retail in his capacity as retailer.

AUTHORITY TO PREVENT SHORTAGES

SEC. 205. The Secretary shall not permit to continue in effect any agreement which reduces the supply of any fish or fish product below a quantity sufficient to provide for normal domestic consumption, exports, and carryover.

SHARING OF EXPENSES

SEC. 206. Each association formed under this title and approved by the Secretary may require that each member thereof shall pay to the association such member's pro rata share (as approved by the Secretary) of such expenses as the Secretary may find are reasonable and are likely to be incurred by such association, during any period specified by him, for such purpose as the Secretary may determine to be appropriate for the maintenance and functioning of such association, other than expenses incurred in receiving, handling, holding, or disposing of any quantity of commodity received, handled, held, or disposed of by such association for the benefit or account of persons other than members, such pro rata shares shall be computed on the basis of the quantity of the fish or fish products distributed, processed, or shipped by such association, and such other activities as the Secretary may approve.

SEC. 207. (a) All parties to any marketing agreement pursuant to this title shall severally, from time to time, upon the request of the Secretary, furnish him with such information as he finds to be necessary to enable him to ascertain and determine the extent to which such agreement has been carried out or has effectuated the declared policy of this title, and with such information as he finds to be necessary to determine whether or not there has been any abuse of exemptions from the antitrust laws. Such information shall be furnished in accordance with forms of reports to be prescribed by the Secretary. For the purpose of ascertaining the accuracy of any report made to the Secretary pursuant to this section, or for the purpose of obtaining the information required in any such report, where it has been requested and has not been furnished, the Secretary is authorized to examine such books, records, papers, copies of income tax reports, accounts, correspondence, contracts, documents, or memorandums, as he deems relevant and which are within the control of (1) any such party to such agreement from whom such report was requested, (2) any person having, either directly or indirectly, actual or legal control of or over such party, or (3) any subsidiary of any such party.

(b) All information furnished to or acquired by the Secretary pursuant to this section shall be kept confidential by all officers and employees of the Department of the Interior and only such information so furnished or acquired as the Secretary deems relevant shall be disclosed by them, and then only in a suit or administrative hearing brought at the direction, or upon the request, of the Secretary, or to which he or any officer of the United States is a party, and involving the agreement with reference to which the information so to be disclosed was furnished or acquired. Nothing in this section shall be deemed to prohibit (1) the issuance of general statements based upon the reports of a number of parties to an agreement or of handlers subject to an agreement, which statements do not identify the information furnished by any persons, or (2) the publication by direction of the Secretary, of the name of any person violating any marketing agreement, together with a statement of the particular provisions of the agreement violated by such person. Any such officer or employee violating the provisions of this section shall upon conviction be subject to a fine of not more than $1,000 or to imprisonment for not more than one year, or to both, and shall be removed from office.

GRANT ASSISTANCE

SEC. 208. (a) The Secretary is authorized to make grants to voluntary associations formed pursuant to this title in order to assist such associations in carrying out the purpose of this title. No grant shall be made under this section if, in the judgment of the Secretary, the grant will increase the production of any fish or shellfish which is commonly produced in excess of annual marketing requirements, or will materially contribute to the depletion of any fish or shellfish species contrary to sound conservation practices.

(b) There are authorized to be appropriated $1,500,000 for the fiscal year ending June 30, 1970, and for each of the two succeeding fiscal years, for grants pursuant to this section.

SEPARABILITY

SEC. 209. If any provision of this title is declared unconstitutional, or the applicability thereof to any person, circumstance, or commodity is held invalid the validity of the remainder of this title and the applicability thereof to other persons, circumstances, or commodities shall not be affected thereby.

UNANIMOUS-CONSENT AGREEMENT

Mr. FULBRIGHT. Mr. President, I ask unanimous consent that after action on the education bill has been completed there be a limitation of 3 hours on my amendment, the time to be equally divided and controlled by myself and by the Senator from New Hampshire (Mr. MCINTYRE) and the Senator from Mississippi (Mr. STENNIS).

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

ADJOURNMENT UNTIL 10 A.M. TOMORROW

Mr. KENNEDY. Mr. President, I move, under the order previously entered, that the Senate adjourn until 10 o'clock tomorrow morning.

The motion was agreed to; and (at 6 o'clock and 56 minutes p.m.) the Senate adjourned until tomorrow, Tuesday, August 12, 1969, at 10 o'clock a.m.

NOMINATIONS

Executive nominations received by the Senate, August 11, 1969:

FEDERAL MARITIME COMMISSION

Helen D. Bentley, of Maryland, to be a Federal Maritime Commissioner for the remainder of the term expiring June 30, 1970, vice John Harllee, resigning.

RENEGOTIATION BOARD MEMBER

Rex M. Mattingly, of New Mexico, to be a Member of the Renegotiation Board, vice Thomas D'Alesandro, Jr., resigned.

IN THE ARMY

The following-named persons for appointment in the Regular Army of the United States, in the grades specified under the provisions of title 10, United States Code, sections 3283 through 3294 and 3311:

To be major

Montgomery, Johnny L. [redacted].

To be captain

Burd, Cleve J., Jr. [redacted].
Cantrell, William D. [redacted].
Cohen, Howard B. [redacted].
Dillon, Thomas E. [redacted].
Giesen, Philip C. [redacted].
Grof, Robert L. [redacted].
Halstead, Wayne P. [redacted].
Hannah, Richard J. [redacted].
Harris, James H. [redacted].
Leftik, Martin I. [redacted].
Many, William C., Jr. [redacted].
McDermott, Michael J. [redacted].
Mullin, Michael J. [redacted].
Proctor, Richard O. [redacted].
Sellei, Peter G. [redacted].
Stracner, Bobby Dale [redacted].
Willis, Milford R. [redacted].

To be first lieutenant

Aasheim, Glen H., xxx-xx-xxxx
Ange, Charles G., Jr., xxx-xx-xxxx
Arnold, Thelma S., xxx-xx-xxxx
Baumann, David T., xxx-xx-xxxx
Bell, Hubert J., Jr., xxx-xx-xxxx
Brooks, Ronald A., xxx-xx-xxxx
Clark, Patrick W., xxx-xx-xxxx
Cook, Paul E., Jr., xxx-xx-xxxx
Darone, Ronald D., xxx-xx-xxxx
Demski, Stanley L., Jr., xxx-xx-xxxx
Dewey, George C., Jr., xxx-xx-xxxx
Farthing, Clifford V., xxx-xx-xxxx
Greene, John E., xxx-xx-xxxx
Hames, William H., Jr., xxx-xx-xxxx
Layman, Kay F., xxx-xx-xxxx
Leininger, Peter A., xxx-xx-xxxx
McDaniel, Gary D., xxx-xx-xxxx
Meinert, William J., Jr., xxx-xx-xxxx
Middleton, Douglas J., xxx-xx-xxxx
Millen, Thomas R., xxx-xx-xxxx
Miller, Gerald D., xxx-xx-xxxx
Naish, Lyle T., xxx-xx-xxxx
Price, Barbara J., xxx-xx-xxxx
Prince, Roy A., xxx-xx-xxxx
Reeves, Earl L., Jr., xxx-xx-xxxx
Scharnberg, Ronald, xxx-xx-xxxx
Smalling, Oliver H., xxx-xx-xxxx
Stabenow, David L., xxx-xx-xxxx
Suddath, James F., Jr., xxx-xx-xxxx
Tillman, George R., xxx-xx-xxxx
Vartigian, Helen A., xxx-xx-xxxx
Wallschlaeger, C. T., xxx-xx-xxxx
Wong, James, xxx-xx-xxxx

To be second lieutenant

Barrett, James R., xxx-xx-xxxx
Bailey, Albert W., xxx-xx-xxxx
Bender, Alfred J., III, xxx-xx-xxxx
Fish, Elbridge G., II, xxx-xx-xxxx
Holk, Richard P., xxx-xx-xxxx
Iverson, David L., xxx-xx-xxxx
Kessler, Eugene P., xxx-xx-xxxx
King, Marc A., xxx-xx-xxxx
Oldham, Gary R., xxx-xx-xxxx
Singer, James C., xxx-xx-xxxx
Thibeault, William R., xxx-xx-xxxx

The following-named distinguished military students for appointment in the Regular Army of the United States, in the grade of second lieutenant, under the provisions of title 10, United States Code, sections 2106, 3283, 3284, 3286, 3287, 3288, and 3290:

Abshier, John D.
Boyers, David G.
Boyles, Thomas J.
Byrd, James D.
Calloway, Craig F.
Dahms, Robert A.
Davenport, Royce A.
Fairley, Donald R.
Floyd, Robert L., II
Garrett, Earl T.
Gaskins, John N., III
Hogan, Thomas R.
Hollingshead, William
Huggins, Charles R.
Jenkins, James N., III
Kessie, Charles L.
Knueven, Paul A.
Letherwood, Howard Q.
Martin, Jerry R.
McGarrigle, John W.
Messmore, Robert W.
Nazar, Stephen
Nix, Jack P., Jr.
Phillips, Ronald S.
Rulison, Vernon C.
Sakuma, Steven M.
Selvage, Robin
Shirah, Henry C., II
Sitter, Paul J.
Smith, Dale W.
Stoecker, John C.
Strand, Richard N.
Wilson, Elmer I.
Wilson, Samuel V., Jr.
Wynn, Phail, Jr.
Zolezzi, Michael A.

CONFIRMATIONS

Executive nominations confirmed by the Senate August 11, 1969:

PUBLIC HEALTH SERVICE

The nominations beginning John H. Ackerman, to be medical director, and ending Lee A. Bland, Jr., to be senior assistant health services officer, which nominations were received by the Senate and appeared in the CONGRESSIONAL RECORD on July 18, 1969.

WITHDRAWAL

Executive nomination withdrawn from the Senate August 11, 1969:

DIPLOMATIC AND FOREIGN SERVICE

John G. Hurd, of Texas, to be Ambassador Extraordinary and Plenipotentiary of the United States of America to Venezuela, which was sent to the Senate on June 18, 1969.

EXTENSIONS OF REMARKS

CONGRESSIONAL REFORM—AN URGENT NEED

HON. JACK BROOKS

OF TEXAS

IN THE HOUSE OF REPRESENTATIVES

Monday, August 11, 1969

Mr. BROOKS. Mr. Speaker, I was delighted to read in the CONGRESSIONAL RECORD of August 6 the remarks of the distinguished gentleman from California (Mr. SISK), chairman of the Special Subcommittee on Reorganization, concerning the current status of proposals to modernize the Congress.

As many of my colleagues know, this is a subject in which I have a deep interest. Several years ago I had the privilege of being appointed to the Joint Committee on the Organization of the Congress, which was so ably cochaired by our colleague, RAY J. MADDEN. According to the remarks of Mr. SISK, the work of this joint committee has provided the basic point of departure for the current deliberations.

I am encouraged by the subcommittee's expression of genuine concern for reform and the sincerity of its efforts. Although I personally have never doubted the intentions of the subcommittee, many people throughout the country have been, to put it mildly, somewhat skeptical about its purposes. The recent remarks of Mr. SISK, therefore, come at a very propitious time. I hope they will remove any doubts or apprehensions among those who have said that a reform measure will never be adopted or will forever be buried in a Rules Committee graveyard.

I realize, of course, that any effort takes time. I know how complex and intricate the subject of reorganization is; and how difficult it is to produce in a short period of time a bill that is both constructive and workable. All of us fully realize, however, that we cannot, indeed must not, wait to accomplish this goal. Many Members of this body, Members of the Senate, the press, the representatives of various public-spirited interest groups and the public at large are anxious for us to produce the kind of bill that will continue the Congress as a vital and positive force in a modern society. Therefore, I am pleased about the possibility that the recommendations of the subcommittee will be available early in October and that we can possibly have a bill on the floor during the early part of the next session.

Despite the need to proceed as quickly as possible, I suggest the subcommittee might want to follow the joint committee's precedent of allowing not only Members of Congress, but also outside observers, scholars, and interested parties to comment upon the recommendations made.

My purpose here today, however, extends beyond urging and encouraging the subcommittee to proceed as rapidly as possible. In a constructive and responsible spirit, I wish to make several suggestions—suggestions based upon my 4 years' experience on the joint committee, that perhaps might prove valuable to the subcommittee at this time. The suggestions that follow extend somewhat beyond those which I voted for as a member of the Joint Committee on the Organization of the Congress. My suggestions are:

First, it is imperative that this subcommittee, especially since it is a committee composed exclusively of Members of the House of Representatives, tackle the difficult question of the length of the term of office of Members of the House of Representatives. My firm belief is that the realities of our political system have made the 2-year term completely obsolete and totally unrealistic. The restrictive nature of the 2-year term often prevents the House of Representatives as a body from facing and dealing most effectively with many of the urgent demands of our society and the crises that confront us both at home and abroad. Today, a Congressman must be able to take a broad national perspective. Forced to campaign for office every other year, a Congressman has insufficient time to devote to national issues; frequent campaigns often force him to view matters on narrow and parochial grounds.

Second, title V of the Reorganization Act, as passed by the Senate in 1967 deals with the controversial subject of registration of lobbyists. It is urgent that this section be retained. There is, however, a definite need for improvement in the statutory language. I believe the Reorganization Subcommittee should give attention to the problem of defining "lobbying" as well as further attention to the appropriate instruments for enforcement of any regulations.

Third, I urge the special subcommittee to give attention to the complicated problem of making television and radio time and newspaper space available to candidates for Congress at Government expense. It is my hope that the special subcommittee will give attention to this area and at least invite the comments of the leaders of our news media as to the feasibility of such a proposal.

Finally I recommend the subcommittee explore the possibility of rotating at least part of the membership of the Ways and Means and Rules Committees. While I will not go into full details today, I feel that we ought to increase the membership on these committees to include additional seats which would be elected on