

courage more efficient management. Inasmuch as military spending is essentially non-productive and inflationary by nature, we simply cannot afford the expenditure of a single dollar beyond our minimal needs. The Senate Armed Services Committee realized this when it cut nearly seven per cent from the military procurement authorization bill. The pending amendment would cut about 7.1 per cent from all military spending.

There are numerous precedents for Congress to legislate a general cut in spending for a particular department and to allow the administrators of the department involved to determine where to apply the cuts. As recently as February 27, the Senate adopted an amendment offered by the distinguished Senator from New Hampshire (Mr. COTTON) to cut by two per cent spending by agencies covered in the appropriation bill for the Health, Education and Welfare departments.

This amendment, would limit overall military spending this year to \$66 billion, would leave to the President and the Defense Department the decisions as to where to impose spending cuts. Many members of the Senate, in debate on the pending bill and on other occasions, have pointed to specific areas where they felt cuts could be made.

This amendment would leave the decision on cuts up to the executive agencies which in the past have opposed specific cuts on the ground that only the Pentagon knew where they should be made.

In making these cuts, moreover, I recommend that the Pentagon take special effort to assure that scientific and other technical manpower are not permanently lost to our national security programs. It is crucial that current retrenchments—like current expenditures—be designed with our long term security in mind. Conversion of our defense industry for peaceful purposes should not be considered as a part time concern. Conversion is a necessary instrument of intelligent defense planning, preserving our mobilization base for a future crisis.

In the future our defense spending should be maintained at a relatively steady and balanced level. We should not allow uncertain new appraisals of Soviet intentions and capabilities to panic us into erratic splurges of investment in untested systems.

The area where it is most important for the United States to retain a general advantage is in science and technology. The ultimate commentary on our defense policies in recent years is their failure to provide for leadership in this crucial realm, while entailing levels of expenditure far beyond the

reach of our competitors in every other area.

Mr. PROXMIRE. 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.

ADJOURNMENT UNTIL 8:30 A.M. TOMORROW

Mr. BYRD of West Virginia. Mr. President, if there be no further business to come before the Senate, I move, in accordance with the previous order, that the Senate stand in adjournment until 8:30 tomorrow morning.

The motion was agreed to; and (at 6:44 p.m.) the Senate adjourned until tomorrow, Friday, August 28, 1970, at 8:30 a.m.

EXTENSIONS OF REMARKS

AND WAITING JUSTICE SLEEPS

HON. ROBERT DOLE

OF KANSAS

IN THE SENATE OF THE UNITED STATES

Thursday, August 27, 1970

Mr. DOLE. Mr. President, Kansas City, Kans., recently marked the appointment of a new police chief with a community testimonial dinner. The man of the hour was Police Chief Boston Daniels, a well-known and highly respected law enforcement official in Kansas City for many years prior to becoming the head of the police department. His appointment was hailed by all segments of the community, for he has the respect and support of all age, ethnic, and political groups in the city.

The featured speaker at the dinner was George W. Haley, a native Kansas Citian who has recently come to Washington as Chief Counsel for the Urban Mass Transit Administration in the Department of Transportation. In his remarks Mr. Haley touched on several aspects of recent national trends and events which directly affect the atmosphere in which Chief Daniels undertakes his new responsibilities.

Because they are both timely and worthwhile, I ask unanimous consent that Mr. Haley's remarks be printed in the RECORD.

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

REMARKS BY GEORGE W. HALEY

There is no question but that I am glad to be here tonight. To be invited back home after ten months in Washington on this occasion is indeed a high moment in my life. My reflections—indeed the challenge I feel—on addressing you at this particular banquet—fills me with a great amount of anxiety.

I, of course, am happy to see all of you. To greet the Mayor and City Commissioners;

County Commissioner Richard Walsh and Mrs. Walsh; to greet the Honorable Robert Dole, United States Senator from Kansas and the Honorable Larry Winn, Congressman from the 3rd District, both of whom I see in Washington frequently; to greet the Honorable Bruce Watkins, Clerk of the Jackson County Circuit Court; to greet the Honorable James P. Davis, eminent Kansas legislator and president of Progress, Inc. which is sponsoring this banquet and the political, workhorse, dynamo—Clyde A. Townsend, one of my very best friends; to greet Jim Browne, newly appointed director of the Board of Public Utilities (Kansas City is really making strides); and indeed, to greet Police Chief Boston Daniels and his charming and gracious lady, Rosemary; indeed to greet all of the distinguished dignitaries and the more than six hundred of you—fills me with nostalgia. I confess my family and I are really homesick in Washington. If my wife had her way, we'd have already moved back to Kansas City.

Don't get me wrong. The work in Washington is challenging and exciting and worthwhile. The Department of Transportation, under Secretary John Volpe, may be the youngest Cabinet-level department but it's a sharp outfit with its work cut out for it.

And the Urban Mass Transportation Administration—where I hang my hat—we are really "where the action is". I know Mayor McDowell, the commissioners and many others of you are well aware of the great crisis of inner-city transportation. You know well the need for people from all walks of life to have easy and efficient access to jobs, to training centers, schools, hospitals, parks and good housing.

You know—as we do in Washington—that more and more public transportation must be looked upon as a public responsibility, just like public education, public health, and public safety. The right to basic mobility can no longer be satisfied with the building of sidewalks. America is a growing nation, a moving nation, and our cities must maintain an efficient flow of people and goods if they are to survive.

But I did not come here tonight to talk shop, as they say. Rather—I want with my friends to speak briefly about the times and the troubles that reach out and affect us all.

It seems long years ago in my high school

glee club, I sang a Negro spiritual which troubled, I'm troubled in mind . . ." This said, among other things, "I'm troubled, I'm evening—distinguished citizens here assembled—I say to you with my deepest concern "I'm troubled, I'm troubled, I'm troubled in mind. . . ." For these are trying times in the area of law enforcement generally. The horrors of Kent State, Jackson College, Augusta, Georgia and even more recently, the late Leon Jordan of Kansas City, Missouri and two youths on separate occasions in Lawrence, Kansas are incredibly true. These killings cannot be allowed to continue unabated if this nation is to survive. They debase humanity and beget counter-killings on a scale that spells disaster for all of us, black and white alike. They return us to the anarchy and bestiality of that primeval condition in which every man is the enemy of every other man. My friends, these killings must be stopped.

Now I am not here this evening to deliver a speech . . . to go on at length about the crisis of stability that threatens this great nation. (I don't want you to think that I'm a Washington bureaucrat yet—who gives a 2 hour speech every time he gets to his feet!) But I would like to share with you—my friends—and particularly with Chief Daniels—a few words I like very much that happened across my desk the other day.

These words have nothing to do with Transportation, nothing to do with what I'm paid by the taxpayers to do. But they have everything to do with our gathering here tonight; they explain why we honor a man like Boston Daniels.

Let me read this passage to you:

"God give us men! A time like this demands Strong minds, great hearts, true faith and ready hands . . .

Men whom the lust for office does not kill,
Men whom the spoils of office cannot buy;
Men who possess opinions and a will;
Men who have honour—men who will not lie;

Men who can stand before a demagogue
And damn his treacherous flatteries without winking;

Tall men—sun-crowned—who live above the fog

In public duty and in private thinking.
For while the rabble, with their thumb-worn creeds,

Their large professions and their little deeds
Mingle in selfish strife—Freedom weeps,
Wrong rules the land,
And waiting justice sleeps."

Those words were written by Josiah Gilbert Holland more than a century ago.

But they ring fearfully true today . . . "And waiting justice sleeps . . ."

If we allow justice to sleep . . . if the forces of wrong can polarize and tear this nation asunder . . . Carlyle has said the only thing it takes for evil to overcome good is for good men to do nothing . . . if we fall victim to selfish strife . . . then truly, freedom will weep the bitter tears of failure.

And if freedom . . . and liberty . . . and brotherhood . . . and peace are to be obtained for all Americans and handed down . . . then they will demand men such as the man we honor here tonight.

I wish I could speak to you tonight with unrivaled confidence. I wish I had the specific answers to the specific problems. I wish . . . as I know so many of you wish . . . that I could put my hand into the air and stop a bullet in flight. Is there one of us who would not reverse—were he able—these national tragedies? Al Capp has said that the real martyrs of Kent State were the young men who pulled the trigger. Is it possible each of us—in our own way—died to some extent with these tragedies? It is beautifully said: "Each man's death diminishes me."

But my friends, that is not the nature of fatal mistakes. We cannot turn back the hands of time. The Moving Finger having writ, moves on. But it will be a greater tragedy—a more serious mistake—to ignore these events—to not learn from them. I join you, and all the citizens of this great city, in a feeling of hope and encouragement. Because Kansas City, Kansas—and its most distinguished City Commissioners—have taken a massive stride forward; a giant step in the right direction.

The man we honor here this evening has the respect of this entire community. He is professional, experienced, and dedicated to his calling. He is a natural leader. He knows fear, but is not afraid of it. He is not unaware of compassion and understanding. He is a man for these times, a man who will serve his city well.

I said earlier—perhaps in a moment of emotion—"these killings must be stopped!" But Boston, I'm sure you know I didn't mean for you to catch bullets with your hands. You know, too, that I am not one who subscribes to anything approaching a police state—something too many people are too quick to prescribe in the face of rising strife.

But I do mean this. And I mean it well and I'm not trying to con you:

The times demand a strong mind, a great heart, true faith, and ready hands. The times demand men of honour who will not lie. The times demand men who live "above the fog" in public duty and private thinking.

And this city now has that kind of a man as their Chief law enforcement officer!

I am delighted, proud, and confident with your appointment.

A public servant such as Chief Daniels will make this great city an even greater place to live—and my wife, my children and I—look forward even more to coming home again.

It was wonderful to be with you on this occasion. I thank you.

MAN'S INHUMANITY TO MAN—
HOW LONG?

HON. WILLIAM J. SCHERLE

OF IOWA

IN THE HOUSE OF REPRESENTATIVES

Friday, August 14, 1970

Mr. SCHERLE. Mr. Speaker, a child asks: "Where is daddy?" A mother asks:

"How is my son?" A wife asks: "Is my husband alive or dead?"

Communist North Vietnam is sadistically practicing spiritual and mental genocide on over 1,500 American prisoners of war and their families.

How long?

CONGRESSMAN PHILBIN REPORTS TO DISTRICT

HON. PHILIP J. PHILBIN

OF MASSACHUSETTS

IN THE HOUSE OF REPRESENTATIVES

Friday, August 14, 1970

Mr. PHILBIN. Mr. Speaker, in keeping with my usual practice toward the end of each Congress, I circulate in my district a summary of the issues and legislative accomplishments of the current Congress.

This year I am making available a report on the 91st Congress to the third district and under unanimous consent I place the text in the CONGRESSIONAL RECORD at this point:

During the short recess of the House, I thought that this might be an opportune time to provide the Third District with this report on the legislative accomplishments, to date, of the 91st Congress, in keeping with my usual practice.

Overall, the 91st Congress can best be described as a responsible, working Congress that made far-reaching contributions to the nation and one that will be remembered for its legislative "firsts," in several important areas. In addition, the first session of the 91st Congress last year was in session from January 3 to December 23, the sixth longest in history. At this time, adjournment is unpredictable in view of the remaining workload of legislation.

The most comprehensive tax reform bill in history became law, largely through the initiative and work of the Congress. The reform proposal also provided tax relief for lower income Americans and a 15 percent increase in Social Security benefits.

For the first time since 1923, when it was first introduced, the House approved the Equal Rights Amendment and there is prospect of early action in the Senate. I was a cosponsor of the Equal Rights Bill and signed the discharge petition to bring it on the floor of the House for debate. I was glad to support it in the House because I feel the time is long past due to remove from our laws any discrimination on account of sex. In fact, it was largely through my efforts that legislation was finally passed in the 90th Congress to remove restrictions on the promotion for women in the armed services, and we now have the first lady Brigadier General in military history with General Elizabeth Hoisington as director of the Women's Army Corps, made up of 12,000 enlisted and 1000 women officers, and with General Anna Mae Hays as supervisor of 5000 Army nurses.

For the first time since World War II, there was the most searching Congressional inquiry into and debate on the foreign and military spending policies of the Executive branch of the government, thus renewing one of the most powerful roles of the Congress under the separation of powers provided by the Constitution. In large measure, the length of the first session was due to the extended debate on defense procurement authorization and appropriation bills.

This debate reflected the deepening concern of many Americans over the widening of the war in Indochina, especially after Cambodia, despite the President's assurances

of the June 30 withdrawal from that country.

I am opposed to escalation of the war in Vietnam, Cambodia, Laos or elsewhere and favor a flexible withdrawal of our forces timed to meet the existing conditions without danger to our troops and the commitments we have made not only to the peoples of Southeast Asia, but to other parts of the free world.

Congressional participation in establishing national policies is a healthy thing for the country. It can be particularly beneficial when there is at the same time full realization by Congress of the responsibilities involved when it extends the power of the purse over the shaping of foreign policy.

It must be remembered that ending the war by a stroke of the pen or directing that no funds be spent for the conflict as of a certain date, as some would do, cannot be accomplished without assuming the responsibility for what is to follow. Open debate can provide the necessary guidelines for proper Congressional control over appropriations, subject to the Executive veto power. It is in this way that Congress can limit military spending, as it already has done in a selective way without affecting funds for food, clothing and many other necessities that our troops require.

In fact, the 91st Congress shifted our national priorities by providing increased funding of needed health, education and welfare programs. In the process, there was one Presidential veto of the Health, Education and Welfare Appropriations Bill, upheld by a narrow margin, and a later veto of hospital construction funds which was overridden. More recently, the President vetoed the Education and Independent Offices Appropriations bills. The Education veto was overridden by the House while the Independent Offices Appropriations veto was sustained. I voted to override these vetoes.

In the legislative process, it should be recognized that all legislation is subject to Presidential veto. When the veto is exercised, the Congress can override and the measure becomes law. However, when appropriation bills are overridden by Congress, the President retains discretionary power over full and partial spending of the funds involved.

In the first session, Congress cut \$5.6 billions from the President's defense budget and added \$1.1 billion more for social welfare programs. This included doubling the food stamp program for the poor to \$610 million, approval of a \$4.8 billion extension of the housing program, increased education and training benefits for Vietnam veterans, and more adequate funding for badly needed pollution abatement programs. I vigorously supported these measures.

The Congress last year passed one of the most stringent coal mine health and safety bills which I supported, and an additional safety bill has been reported to the House this year.

Congress in extending the Voting Rights Act, one of the landmark Civil Rights laws, approved the vote for 18-year-olds and the issue may be determined by the courts in time for the 1972 Presidential election. The extension also provides for the retention of key remedies for abolishing discrimination in voting.

The House, in approving the Electoral Reform bill, provided for the direct election of the President and Vice President and the measure is now awaiting Senate clearance. If finally approved, the proposal, which amends the Constitution, must then be ratified by three-fourths of the States. I also supported this measure.

The House for the first time in a quarter of a century sought to reform its rules and procedures and the extended debate on the 141-page bill will be resumed after the House recess.

Numerous amendments are being offered to

the bill. One of the most significant amendments, sponsored by Congressmen O'Neill and Gubser, dealing with the recording of teller votes in the Congressional Record, has been adopted and is among the reforms I am supporting.

The Postal Reform bill is another achievement of the 91st Congress. The new law abolishes the Post Office Department and creates in its stead the United States Postal Service, within the Executive branch, to own and operate the postal service. The new service is to be governed by a commission serving rotating terms of office. The law also contains prohibitions designed to end political influence in the postal service.

I supported the postal reform bill, but still have some reservations concerning the desirability of changing the present mode of providing suitable pay for postal workers, which heretofore resided in Congress. I also have some questions about the vast administrative powers vested by the new law in a few top level officials of the new U.S. Postal Service and the lack of Congressional veto of any increased postal rates.

On the whole, the new law demonstrates an effort by the Congress to eliminate huge postal deficits and represents an action which the postal workers and general public appear to favor. I voted for the bill because I was hopeful it would bring improvements in our overall postal system.

Both sessions of the 91st Congress provided increased funding for education programs and this produced the severe tests between a new President and a Congress with the opposition party in control. Two Presidential education vetoes were overridden and in addition, the Congress renewed the Elementary and Secondary Education Act and increased the authorization for the NDEA student loan, work-study and education opportunity grant programs, all very important to the Third District, our State and Nation, which I thought merited my support.

Social Security benefits were increased by 15% in the first session and a House-passed bill in the second session provides a 5% increase effective January 1971 and automatic cost-of-living increases thereafter. I supported both bills and also sponsored H.R. 11603, which contains the cost-of-living increase provision.

Consumer protection legislation was given continued attention in the 91st Congress. The National Commission on Product Safety was extended and the Child Protection and Toy Safety Act laws approved. Awaiting House for Senate action, after extended hearings, are several consumer bills, including the Fair Credit Reporting Act, Poison Prevention Packaging Act, Consumer Protection Act, and Unsolicited Credit Cards bill.

In pollution abatement, the 91st Congress besides increasing funding of existing programs, approved the Endangered Species bill, extended Clean Air Research, and passed the Water Quality Improvement Act and Fish Conservation bill. From the beginning, I have been a committed conservationist and strong, consistent supporter of environmental and ecological measures in the Congress.

Among housing legislation approved are the Housing and Urban Development Amendments, extending existing programs, and the Emergency Home Finance Act to provide home mortgage funds at reduced rates through Federal home loan banks. I was also among the first Members of Congress sponsoring and working for housing legislation and have supported every housing bill coming before the House during my service.

As one of the original sponsors of the Arts and Humanities bill, I supported increased funding of these very desirable programs which could be given real life and valuable expansion through vibrant, intelligent, flexible Government support.

I am very proud to have taken an active, vigorous part in the enactment by the 91st

Congress of the continuing social, economic and cultural programs, which if properly administered and funded, will bring inestimable benefits to the health, education and welfare of the American people and also bring new strength and prestige to our nation.

These are some of the highlights of the almost continuous first and continuing second sessions of the 91st Congress which, on the whole, is seeking to be responsive to the needs of the nation. The record is still being written and I believe that the American people will agree that thus far it is a good record.

COMMITTEE WORK ESSENTIAL KEY TO LEGISLATION

Committee work provides the most demanding part of a Congressman's daily job. This can mean an appearance before some other committee on legislation directly affecting his District, on a pending bill of national significance, or on some legislative proposal the Congressman is sponsoring in the House.

For instance, I was glad to record my approval of the extension of the life of the New England Regional Commission before the House Public Works Committee and to stress to my colleagues the involvement of the Third District in this legislation, in view of the proposed activity of the Commission to deal with pollution abatement in the North Nashua River Basin. The benefits of this demonstration work will later be extended to other parts of the Third District, our State, region and Nation.

Again, personal appeals on two occasions to the Subcommittee on Parks helped to clear two separate bills from the House Interior and Insular Affairs Committee on the enlargement of the Cape Cod National Seashore and the Minute Man National Historical Park.

When members of the Massachusetts State Legislature appeared before the House Banking and Currency Committee on pending mass transit bills, I urged consideration of their views on the pressing, serious mass transit problem. At the same time, I sought early consideration of my own H.R. 13203, which seeks to establish a mass transit fund and a more substantial Federal coordination and contribution toward the solution of our mass transit ills.

Of course, during the 91st Congress, my work on the House Committee on Armed Services, of which I am the ranking member, took up much of my time.

In the Committee and on the floor of the House, I was a leader in adjusting and increasing the pay, separation and retirement benefits, medical, dental and hospital treatment for all personnel of the armed services. In fact, all pay, health and other measures for the welfare and benefit of our service personnel originated in and were shaped with every measure of generosity by the House Armed Services Committee, which is noted for fighting the battles of our boys in the Armed Services and their dependents.

Last fall during the debate on the Military Procurement bill, I was successful in getting House adoption of my amendment to regulate lethal chemical and biological warfare components in a compromise acceptable to both sides of this hotly contested CBW issue.

In addition to participating in the full Committee sessions dealing with our military posture and the military procurement and construction authorization bills, I conducted extensive hearings of my own as Chairman of Subcommittee No. 1, which had an unusually heavy legislative agenda.

I also conducted two special subcommittee investigations into the operation of the Post Exchanges and Commissaries and the role of military funding in the field of Independent Research and Development. These inquiries are continuing, and during the House recess, I am reviewing the extensive testimony heard

thus far for the preparation of needed reports to the full Committee.

Besides other legislation, my Subcommittee No. 1 has been concerned with the heavy responsibility of our national strategic stockpile. It is this subcommittee which performs the vital oversight of our critical materials, totalling over 100 categories of rare minerals and materials, in the Nation's \$6.5 billion stockpile inventory.

During the 91st Congress, as Subcommittee Chairman, I guided through Congress 18 stockpile disposal bills, which were signed into law. The funds resulting from the sale of these surplus items went into the general treasury, thus helping greatly in reducing the budget deficit.

American industry also benefited from the Subcommittee's work, because our stockpile disposal actions helped to alleviate severe industrial shortages of critical metals.

In committee and on the floor of the House, I have emphasized my support of Israel's request for additional aircraft for its own defense on the grounds that further delay in providing this aircraft for defense of this young, democratic government in the Middle East could seriously impair Israel's ability to defend itself.

Peace in the Middle East is of greatest concern to the United States and the free world.

I have moved in many ways to express my warm friendship, sympathetic consideration and support for the brave young State of Israel and its gallant people and to sustain a policy that will contribute to the defense and wellbeing of this free democratic nation in the Middle East so that total peace can be established.

Even before the recognition of Israel by this government, I was vigorously supporting, encouraging and doing everything possible to sustain and further the cause of Israel. I am continuing my efforts and supporting this government in assisting Israel to sustain and uphold its sovereignty and its free institutions and bring total peace to the Middle East.

During my entire service on the Armed Services Committee, I have always worked for a strong affirmative, peace-structured foreign policy and sought to build an impregnable national defense to protect the nation, keep our commitments to the free world, deter aggression, preserve the peace, and encourage the rule of law by justiciable institutions for mankind.

CONGRESS HELPED DISTRICT

The 91st Congress made numerous contributions to the well-being of the Third District and I would like to signal out in this brief report some of the more important actions that are directly beneficial to our area.

Federal action on two broad fronts to abate pollution in the North Nashua River Basin is now becoming a reality with the continued funding of key flood control projects in the Fitchburg area in the Public Works Appropriations bill and the first concerted attack on pollution in the Basin under the \$2.5 million allocated to the New England Regional Commission for this purpose in the Commerce Department Appropriations Bill as the first increment of the \$9 million program to clean up the Nashua.

A total of \$745,000 during the 91st Congress was voted toward the planning of the design of two flood control reservoirs, Whitmanville and Nookagee near Fitchburg. A revision of the original design of these projects is now required as a result of the decision of the city of Fitchburg not to participate in the water supply features of these reservoirs. While it had previously indicated interest in the increased reservoir storage capacity to meet its future water needs at an estimated local cost of \$3 million, the city will now explore alternate sources of supply.

The Army Engineers have informed me that preliminary evaluations indicate that both Whitemanville and Nookagee can still meet the economically sound and justifiable requirements for Federal construction assistance and there is the possibility that construction can start in 1972 or 1973 if the re-designed projects meet the governing criteria.

The \$100,000 provided in this year's Public Works Appropriation bill will permit the final planning of Whitemanville at a total planning cost of \$570,000. Nookagee this year was voted \$200,000 to continue the planning for which the Congress has already provided about \$300,000. An appropriation next year of \$130,000 will permit the final planning of this project.

As chairman of the Massachusetts Congressional Delegation Committee on Flood Control, I helped clear through the Congress the huge \$500 million flood prevention program for New England after the disastrous 1955 floods. Consequently, even before the 1962 and 1967 redistrictings which brought many additional Charles River Basin communities into the Third District, I was seeking solutions to the water resources problems of this Basin.

I was successful in pressing for adoption of the Charles River Basin water resources development plan under the guidance of the Army Engineers and during the 91st Congress \$275,000 was voted in the Public Works Appropriation Bills which will permit completion of this \$660,000 study.

These funds will help provide detailed study of the complex problems peculiar to this Basin, which are largely the result of rapid urban expansion of the area where some towns in the upper reaches have doubled their growth in the last ten years.

The Charles River Basin urgently requires solutions to its land, air and pollution problems, but in addition it has other environmental aspects which require attention. The Charles is a unique river corridor. It has historical buildings and sites, marshlands teeming with wildlife in the upper reaches, and landscaped river banks and parklands in the densely populated urban areas. The preservation of these values is especially important in the face of the urban sprawl.

When the Charles River water resources development plan is completed, the communities along the Charles will have some guidance in meeting such problems as control of flash-type flooding, pollution, wildlife preservation, recreational needs, land use and other water resources priorities.

The 91st Congress also voted \$600,000 toward the advance engineering and design of the new \$26.5 million dam on the Lower Charles River in Boston, which is designed to provide flood protection for areas of Boston and Cambridge and also control the water level upstream above Galen Street in Watertown.

The 91st Congress took effective action toward the start of the \$200 million modernization of the Boston Naval Shipyard. Early last year, I was successful in getting the needed approval of the Real Estate Subcommittee of the House Armed Services Committee for the transfer of the Boston Army Base to the Navy. The formal transfer was made on June 30 this year.

Subsequently, in the Military Construction Authorization bill, the committee approved the transfer of \$7.3 million, previously appropriated for drydock modernization at Charlestown, and an additional \$300,000 to begin the first phase of the expansion program at the South Boston Naval Annex.

The modernization program was slowed down by a Pentagon freeze on military construction activities early this year, but just recently Secretary of the Navy Chafee informed me that the funds for Boston have now been released.

When the modernization is completed at the combined Boston Army Base and South

Boston Annex location, the new Boston naval facility will be able to repair modern class ships, including the new DD-963 class destroyers.

In June, I appeared before the Subcommittee on Parks of the House Interior and Insular Affairs Committee to urge adoption of H.R. 13934, which I co-sponsored with my esteemed friend and colleague, Congressman Brad Morse, who formerly represented Concord in the Congress, to complete Minute Man National Historical Park.

The bill, calling for nearly \$6 million for final land acquisition and development, has now been reported from committee and I am pressing for early action in the House so that the Park may be completed in time for the nation's bicentennial celebration in 1976.

Earlier this year, the committee cleared legislation along the lines of my H.R. 5246 to increase the funding authorization for the Cape Cod National Seashore. As a dedicated conservationist, I sponsored the first bill in Congress back in 1957 to establish a National Park on Cape Cod.

These are just a few of the legislative actions of the 91st Congress, in which I took part, to provide direct beneficial assistance to the Third District.

The CONGRESSIONAL RECORD is an unique publication. When the Congress is in session, it is printed overnight like your morning newspaper. It carries not only an official transcript of the debate on the floor of the House and Senate, but also a listing of bills introduced, reports submitted, a summary of committee activities, speeches, extension of remarks showing the views and opinions of Members on a wide variety of national issues, and a full report on the day's legislative activities.

Each Congressman has a limited allotment of the CONGRESSIONAL RECORD for distribution in his District. Since coming to Congress, I have made it my practice to send the RECORD to the public libraries and the schools and colleges in the Third District so that maximum use could be made of this valuable public document.

As part of this report to the Third District, I am including a portion of the CONGRESSIONAL RECORD Index listing an account of my work in the House. The complete Philbin index for the 91st Congress to date is far more extensive.

The official index of the Congressional Record presents an accurate record of the nature and extent of the participation of each Member of the House and Senate in the legislative process. While this reprint of the Index of the 91st Congress, to date, reflects my activities in the House, it is far from being complete simply for lack of space. It also does not show my work elsewhere—in my offices in Washington and in the Third District, in committee hearing rooms where legislation is shaped for presentation to the House, in the offices of Federal officials on matters affecting the District, or in the cities and towns making up the District.

I hope that this partial Index will help give you some indication of the range and scope of my activities during the current Congress as your U.S. Representative in Washington. The complete index of my work in the House is available upon request.

While the index sets forth with clarity the very large spread of my Congressional activities, it would be almost impossible to enumerate the thousands and thousands of people whose individual cases and problems I have handled throughout my tenure.

This assistance embraces practically every classification of citizens and people residing in the Third District, and even beyond its broad confines.

Veterans and their dependents, immigrants and their families, persons seeking or receiving social security benefits, medicare, medic-

aid, the enlisted personnel and officers of all the armed services who have come to me literally by the thousands to seek my counsel and assistance with their problems, business and professional men, labor leaders and their organizations, many municipal and state officials, fraternal and civic organizations, students, scientists, educators at every level, and hosts of people from the rank and file have all sought and received my assistance.

I regard the personal help that I have been able to render to so many during my service to be one of the most important and rewarding features of my Congressional work, because it has permitted me to assist so many people with challenging problems, who otherwise might not have been helped so effectively.

SALE OF ARMS TO SOUTH AFRICA

HON. DONALD M. FRASER

OF MINNESOTA

IN THE HOUSE OF REPRESENTATIVES

Friday, August 14, 1970

Mr. FRASER. Mr. Speaker, on August 11, 1970 I joined with 46 Members of the House and Senate in signing a letter to Secretary Rogers and in issuing a statement about the proposed sale of arms by Great Britain to South Africa. The letter, statement, and list of signatories were introduced into the RECORD on August 13, 1970, at page 28831 by the gentleman from New York (Mr. REID) who initiated the letter and statement. During a special order on that day, requested by the gentleman from New York (Mr. LOWENSTEIN) the proposed arms sale was discussed. As an extension of that colloquy I want to introduce into the RECORD some materials on this subject from the Indian and Foreign Review of August 1, 1970. The first is an unsigned "Note and Comment," and the second gives some Indian press opinion on "Arms for Apartheid." I believe it is useful for this House to have the reaction of an Asian Commonwealth nation to Britain's proposed policy.

The articles follow:

NOTES AND COMMENT: ARMS EMBARGO AGAINST SOUTH AFRICA AND UN SECURITY COUNCIL

The numerous resolutions of the United Nations, calling upon the South African Government to desist from its discriminatory policies have had little or no effect. Resolutions calling upon member-states to take measures of political and economic nature against the South African policies have also not produced result.

Meanwhile, South Africa has not only intensified its racist practices but has also built up a formidable military machine to oppose the freedom movement and to spread and support, by force of arms, its racist doctrines and practices in the neighbouring territories of Namibia, Portuguese colonies and Southern Rhodesia. South Africa indeed poses a grave challenge and threat to the peace of Southern Africa. There are few parallels in history where the views and voices of so many have been ignored by the so few and for so long.

In the recent debate in the British House of Lords on the plan of the Government of the United Kingdom to renew arms supply to South Africa, Lord Caradon, till recently British Ambassador at the UN, moved an amendment which would inhibit the present British Government from pursuing its objective. And it is not surprising that in the

British Upper House, Lord Caradon's motion was decisively defeated.

The arguments used by the British Government can be summarized as follows: It was bound by the 1955 Simonstown Agreement providing for British-South African cooperation to defend the Cape Sea route. Secondly, the defence requirements of the British Government, particularly East of Suez, both in their narrower and wider contexts, called for the resumption of arms supply to South Africa.

This argument was met in the British Upper House by Lord Chalfont, who pointed out that the Simonstown Agreement was outdated and out moded for any defence preparations or strategy of the present-day world.

The arguments about communism and Soviet influence in the area too were religiously used by the Government spokesmen. We have heard similar arguments about communism in South East Asia as also in the Middle East. Then the argument was used that the sale and supply of arms to South Africa would bring money. Obviously many British aristocrats and plutocrats are interested in money above every normal consideration although their polished manners forbid them to speak about it in public or private.

Then there are two further arguments—the arms were needed for maritime defence and would only be used against external dangers and not for suppressing the local population. We have heard this type of argument too so often. We have heard of the theory of supplying arms only to be used for specific purposes and no other. We do not have to go deep into history to realise what happened when particular Governments decided to use these arms for purposes very different from what the donors had in mind. Use of U.S. armament in the Indo-Pakistan clash in 1965 is a case in point.

There is another aspect too. United Nations have passed resolutions for encouraging liberation movements. Will these arms help or hinder such movements even if they were to be used for external purposes?

Equally offensive is the theory that the supply of arms does not in any way reduce the detestation which donor countries feel towards apartheid or regimes based on total race discrimination. These countries expect us to believe that such a supply of arms does in fact discourage these racial practices and these racist regimes. Logic and morality can, indeed, be perverted in many ways and it seems, some Christian gentlemen are more adept at it than their barbaric ancestors, heathens and such other inferior breeds.

India has protested against the proposed British scheme to resume sale of arms to South Africa. The Indian Prime Minister has, it seems, conveyed to her British counterpart that the proposed British move will heighten tensions and inject big power rivalries into the Indian Ocean. Besides India, a number of Commonwealth countries have lodged protests with the British Government.

Several African and Asian nations have informed the United Nations that the sale of arms will lead to increasing dehumanisation of non-White Africans and Asians living in South Africa. The proposal is reported to have created such a reaction that African Commonwealth countries may request other member-nations of that organization to boycott or indefinitely postpone the Commonwealth summit due to be held in Singapore next January.

That the only threat to peace and security in and around the southern half of Africa comes from South Africa regime's covert aggression and subversion against the neighbouring independent countries and people under colonial yoke struggling for their freedom is proved by the data on South Africa's defence budget which over the last decade has increased from 44 million rands to 272 million rands a year. Of the nearly one bil-

lion dollars spent on defence during this period, more than half was on the acquisition of weapons, aircraft, naval stores, and other heavy equipment. The South African air force is being geared to the task of combating "Terrorists" i.e. the freedom struggle of the oppressed people.

The contention that South Africa is receiving these weapons for external defence and not for the purpose of enforcing apartheid has not been borne out by facts nor was it ever accepted by the Security Council. On the contrary, the Security Council, during its deliberations in 1963-64, recognized that there was little chance of persuading South Africa to discard its racist policies without an effective embargo on the supply of arms and equipment to South Africa from other countries. This was reflected in Resolution 181 of August, 1963, 182 of December, 1963 and 191 of June, 1964.

The Security Council thus became committed to a certain course of action aimed at weakening South Africa's capacity to impose its racist policies in Southern Africa. But neither these nor other measures such as the cutting off of economic and trade relations and prevention of flow of investments have had much result because of the actions of certain states whose exports to South Africa alone make the crucial difference between success and failure of embargo. Many loopholes have been found to circumvent the purport of these resolutions.

A favoured technique has been the claim that weapons are being supplied under L.D. contracts, the terms of which are rarely specified. In a country like South Africa, where the indigenous people are kept in a virtual state of serfdom, even the supply of shot guns and hunting equipment by South Africa's trading partners adds to the oppressive apparatus of that country. The policy of surreptitious support for South Africa's war machine has done much damage to undermine effective United Nations action against apartheid.

In the light of the foregoing, the UN Security Council, on July 23, approved without any dissenting vote a resolution calling on all states to bar the sale of arms to South Africa "unconditionally and without reservations whatsoever." The vote was 12 to none with Britain, France and the USA abstaining.

The resolution, which was sponsored by the Council's five African and Asian members strengthens the decisions against arms sales to South Africa approved in 1963 and 1964 by applying it also to spare parts, the training abroad of South African forces and foreign investment in and the granting of licenses and patents to the South African arms industry.

Explaining Britain's abstention, the British delegate brought up a ridiculous objection to the condemnation in the resolution of "violations" of the old embargo. He said this did not seem a suitable word to use about recommendations made by the Council. The American delegate trotted up the excuse that the text of the resolution was "too sweeping" and went beyond the limits of what the U.S. Government was prepared to undertake. The French delegate did not explain his absence for obvious reasons. France seems to have actually become now South Africa's biggest supplier of arms.

The struggle against the aggressive and oppressive action of South Africa started nearly three quarters of a century ago when Mahatma Gandhi led the movement of popular defiance against racial discrimination. Since then, this movement has grown considerably and spread throughout the world. It was the Delegation of India that first brought to the notice of the United Nations the practices of the racist regime in South Africa. Some people never forgave India for it but India is nonetheless proud that she did so and over the years her initiative gathered more and

more strength and South Africa stands today universally condemned and can find real solace only in the embrace of colonial Portugal.

ARMS FOR APARTHEID

Commenting on Tory Government's decision to lift arms embargo on South Africa, *The Hindustan Times* (July 10) editorially said:

"By repealing the 1964 arms embargo, Sir Alec hopes to secure the defence of the Cape route, the joint control of which was provided for by the Simonstown agreement. The irony is that in 1967, following the closure of the Suez Canal, the Tories in opposition demanded arms supply to South Africa on the ground that the Cape route had become vital for western shipping. Now they argue that with the likely opening of the Suez Canal the Soviet penetration of the Indian Ocean area will be intensified. So the Simonstown agreement has become crucial.

During all these years of arms embargo South Africa has been emphasising its strategic significance to the defence plants of the West. Even before the British ban on military supplies became effective, South Africa had diversified its sources of supply and found France quite willing to do business. Even as Mr. Debre was thus enlarging French military supplies, the Tories in Britain started complaining bitterly that France was displacing Britain in South African affections and might even acquire the Simonstown naval facilities. Meanwhile Pretoria was assiduously plugging the line that its growing military power coupled with its foreign policy commitment to promote economic integration in southern and central Africa was the best antidote to Soviet penetration in the Southern Hemisphere. The British move shows that Whitehall has swallowed the argument, hook, line, and sinker. But as Lord Caradon, who resigned recently as Britain's chief UN representative, has pointed out, it would amount to undoing all the good work done in the last six years. Though the feeling was widespread among the Asian-African states that Britain could have done more against South Africa's racial policies, nobody grudged acknowledging the importance of the arms embargo. Now the Tories are putting the clock back and placing Britain on the wrong side in the struggle between African nationalism and white minority domination."

Writing on the same subject, *The Times of India* (July 9) in its editorial said:

"It will be a crying shame for Britain if the Tory Government agrees to sell arms to South Africa. It is true that such a deal can earn for it as much as sterling £225 million in three years. But is it in such dire straits that it has to cast all moral scruples to the winds to make that much extra money? In any case the Tory ministers should be honest enough to admit that it is the lure of financial gain alone which makes the idea of selling arms to South Africa so attractive to them. It is disingenuous of Sir Alec Douglas-Home to cite the Simonstown agreement to justify an arms deal. That agreement in no way obliges Britain to sell sophisticated weapons to South Africa. If this had not been so Dr. Verwoerd would have repudiated the agreement the very moment Mr. Wilson refused to sell arms to his Government. It is equally absurd for Sir Alec to argue that there is a threat to the Capetown route just because the Soviet navy has started visiting the Indian Ocean. The United States does not share this view. Even if the Soviet naval presence is greatly strengthened in the years to come, it does not follow that it will interfere with the freedom of movement on the high seas. In the wholly unlikely event of any such interference South Africa by itself will not be able to do much and the Western nations will have to act directly and in concert with the U.S. By selling arms to South

Africa in these circumstances Britain can only help to decrease the sense of isolation of the racist regime there and alienate not only all African people but also all coloured members of the Commonwealth. Even from the financial point of view the deal can turn into a liability if the African nations decide to retaliate.

It is an essentially moral issue. It should not be confused by raising questions regarding the likely use of the weapons for crushing the resistance of the suppressed and restive African majority. Dr. Vorster can comfortably give an assurance on this score. South Africa is self-sufficient in small arms required to deal with guerilla bands and angry crowds. What is more, armed resistance in the country is still so sporadic and ill-organized that the police force is more than capable of dealing with it. In any case, the racist regime in South Africa does not lack weapons of mass terror. France and Italy have been quite generous with supplies. The French Panhard armoured cars, for instance, can serve the same deadly purpose that the British Saracen armoured personnel carriers did in the massacre at Sharpeville a decade ago. The strike aircraft which the Italians are manufacturing for South Africa are ideally suited for counter-insurgency operations. They can do the job of bombing the Africans as well as the far more sophisticated and costly Buccaneers. Similarly, not much purpose is served by references to the UN Security Council's resolution of 1964 which prohibits the sale of arms to South Africa. If France and Italy are not inhibited by it, why should Britain be? Mr. Heath and Sir Alec can legitimately ask their interlocutors if the international community has ever censured countries which have gleefully rushed into the arms market in South Africa and have taken full advantage of the British trade sanctions against Rhodesia."

TOWARD MORE VOTER PARTICIPATION

HON. CHARLES H. WILSON
OF CALIFORNIA

IN THE HOUSE OF REPRESENTATIVES

Friday, August 14, 1970

Mr. CHARLES H. WILSON. Mr. Speaker, the privilege of voting is one of the most cherished which we Americans possess. Yet how many of us bother to exercise this privilege? And how many of us are barred from doing so by archaic and frustrating voting regulations—or antivoting regulations, depending on ones viewpoint—which throw all sorts of obstacles in a potential voter's path? Statistics paint a rather grim picture of just how widespread and extensive the non-voting population is.

No fewer than 47 million Americans failed to vote in the 1968 presidential election. The nonvoters outnumbered those casting ballots for Richard Nixon by 17 million, and the turnouts in State and local elections are usually even more feeble. While we often pride ourselves on being the world's leading example of democracy, the truth is that we lag far behind other free, western nations, in terms of voter participation.

Although most of the regulations which block many citizens from voting require State or Federal legislation to be altered, we can nevertheless work within the present system to assure that qualified voters are helped to register and to vote in the coming elections. In and

around my district in southern California, this kind of work is presently being undertaken.

I would like to salute and compliment the many fine groups in my area, including the League of Women Voters, the California Jaycees and the organizers of the Southwest Voters Registration for their outstanding and nonpartisan efforts in the public interest to help Californians to register and vote. By their worthwhile efforts, these individuals are clearly demonstrating that, "with a little help from its friends," democracy can work more effectively toward the goal of having each citizen's vote be heard by his Government.

In an effort to make a meaningful contribution to the important task of voter registration, I want to include at this point in my remarks the text of a mailing which I will send to all of the residents of my district. This mailing will serve to inform my constituents of what the registration requirements are and where they may write or call to assure that they will be registered for the November election. In this manner, I am hopeful that we can significantly reduce the level of nonparticipation in our important electoral process and assure that all who want to play their rightful roles in our democracy will be helped and encouraged to do so. I include the aforementioned text at this point in the RECORD:

Are YOU Registered to Vote?

DEAR CONSTITUENT: The act of voting is fundamental to a Democracy. But you cannot vote unless you are registered. If you, or anyone in your household, are eligible to vote but unregistered at this address, I urge you to register before September 10, so that you may vote in November.

To help you in this process, I am providing the attached card. If you are currently unregistered, please fill it out and return it to Southwest Voters Registration. Their officials will give it to an appropriate Deputy Registrar (guided by whichever party preference you may choose to indicate on the return card), and every effort will be made to register you to vote.

You are eligible to register to vote if by November 3: you will be 21 years of age, and have lived in California for 1 year and the County for 90 days.

If you have any questions, please call the County Registrar of Voters at 628-9211, ext. 63231, or the Southwest Voters Registration at 758-4750.

Sincerely,

CHARLES H. WILSON,
Your Congressman.

IF YOU ARE NOT NOW REGISTERED TO VOTE
FILL IN AND RETURN

(NOTE.—Filling out and returning this card does not register you to vote, but every effort will be made to have a Deputy Registrar contact you.)

Attention: We are presently not registered to vote: (Please print)

Names: _____

Address: _____

City: _____ Zip: _____

Phone: _____

Best time to contact:

In the Evening

During the Day

Call First

Party preference:

Democratic

Republican
Peace and Freedom
American Independent
Other
Decline To State
Registration closes September 10.

OBJECTIONS TO ABM

HON. MANUEL LUJAN, JR.

OF NEW MEXICO

IN THE HOUSE OF REPRESENTATIVES

Friday, August 14, 1970

Mr. LUJAN. Mr. Speaker, the following is a letter I have received from a constituent of mine, Ronald Standler, and I believe it should be included in the RECORD. Mr. Standler, a physics major at the University of Denver, has devoted a great deal of time and effort to his research on ABM and his remarks are worth noting:

DEAR MR. LUJAN: This is the survey of my objections to the Safeguard ABM System promised in my letter of 26 July.

As a scholar I have a very strong inclination toward bibliographic integrity. I guarantee that the quotations are accurate and that I have not misrepresented what the speaker said by deleting significant words. I do not include any material that appears unreasonable or inaccurate under the guise of a footnote, I think everything in this paper is credible. I do not know of any satisfactory answer to any of the points in this survey. The following list gives abbreviations used in textual footnotes; the number following the abbreviation in the footnote is the page number of the work cited.

ABM: Abram Chayes & Jerome B. Wiesner: *ABM—An Evaluation of the Decision to Deploy an Antiballistic Missile System Signet*, 1969, 282 pages.

ENW: Samuel Glasstone: *The Effects of Nuclear Weapons*, U.S. Atomic Energy Commission, Revised February 1964, 730 pages.

HAC: Hearings before the Subcommittees on Department of Defense and Military Construction of the House Committee on Appropriations, "Safeguard Antiballistic Missile System", 22 May 1969, 89 pages.

HASC: Hearings before the House Committee on Armed Services, "Military Posture" 27 February to 8 April 1970, 1856 pages.

JCAE: Hearings before the Subcommittee on Military Applications of the Joint Committee on Atomic Energy, "Scope, Magnitude, and Implications of the United States Antiballistic Missile Program", 6-7 November 1967, 154 pages.

JEC: Hearings before the Subcommittee on Economy in Government of the Joint Economic Committee, "The Acquisition of Weapons Systems," 29-31 December 1969, 279 pages.

LRS: Donald S. Bussey: *The Safeguard ABM—some of the issues*, Legislative Reference Service, 1 July 1969, 40 pages.

SA: Richard L. Garwin & Hans A. Bethe: "Anti-Ballistic-Missile Systems," *Scientific American*, March 1968, 218: 21-31.

SAFE/INFRO: *Safeguard Information* pamphlet issued by Department of Defense, March 1970.

SASC: Hearings before the Senate Armed Services Committee "Authorization for Military Procurement, Research and Development, Fiscal Year 1971, and Reserve Strength" 20 February to 11 June 1970, 2492 pages.

SD: Herman Lowenhar: "ABM Radars: Myth vs. Reality" *Space and Aeronautics*, November 1969, pages 56-64.

SFRC: Hearings before the Subcommittee on International Organization and Dis-

armament Affairs of the *Senate Foreign Relations Committee*, "Strategic and Foreign Policy Implications of ABM Systems," 6 March to 21 May 1969, 621 pages.

Let me put before you what I consider the arguments against deploying Safeguard from the scientific-engineering viewpoint.

COMPUTERS

The computers in the Safeguard ABM system will be the "largest and most complex ever built." (ABM 6) Dr. Foster, director of Defense research and engineering, has conceded that "when you try to integrate these two [missile site radar and Sprint] you have a software program that is enormous." (HASC 7070) The computer must interpret the radar signals, distinguish ICBM warheads from satellites, space junk, aurora borealis, astronomical objects (e.g., the moon), decoys, chaff, etc.; correct for refraction and reflection of radar signals by nuclear explosions, guide our interceptor missiles to the target, and arm and fire those ABM warheads that do successfully intercept the target. In addition, 10 to 15% of the computer capacity would be assigned to checking its performance for errors and defects, such as pinpointing the location of equipment failures. (ABM 6, 115) Since all of these tasks must be performed more or less simultaneously, the computer will use "the 'time shared' approach still being developed by data processing theorists." (ABM 6) The computer must be programmed to correctly respond to nearly every possible event if Safeguard is to work in a dependable manner; it has been concluded that "there is a substantial likelihood that . . . unpredictable effects [would cause] the system [to] . . . fall completely, for totally unexpected reasons." (ABM 117)

"To put perfected software into an ABM system would be—and this is the consensus of experienced system programmers—impossible. All the large software systems that exist contain 'bugs.' There is no prospect for wholly perfecting any large software system in the next decade." (ABM 123) This, of course, does not mean that the Safeguard ABM is doomed to failure because the computers are not perfect; but it does lessen the chance of Safeguard operating efficiently and continuously. Constant testing and improvements will be done with the Safeguard system. It is in these improvements that another danger comes. "The revising [of the computer program] has to be done very carefully because a programmer is likely to do more harm than good when he makes a 'corrective' change. Correcting one error may expose [or create] another, which, when it gets a chance, may disrupt the whole subsystem—which may then disrupt (or conceivably even destroy) the over-all system." (ABM 126) As has been my experience with very small programs at the University of Denver, debugging a program is an art. True, logic and mathematics helps, but they are not sufficient. (SFRC 494)

The failure of the computer will imply complete failure of the entire Safeguard system, since there would be no other possible manner in which so much information could be accurately processed in a matter of seconds. A highly skilled technician could not manually operate the Safeguard system using only his perceptions and good judgment without the assistance of the computer.

A well known Bureau of the Budget report of late 1968 by Mr. Richard A. Stubbing found that sophisticated electronics systems in their first year of deployment were likely to have failure rates much higher than the standards set forth in the original specifications. "A sample of 13 major Air Force/Navy aircraft and missile programs with sophisticated electronic systems initiated since 1955" showed that only four systems had "reliability over 75% of initial specifications." (SFRC 453) On the basis of this dismal record one may expect the Safeguard computer to per-

form less perfectly than its designers and proponents claim.

EFFECTS OF IONIZATION ON RADAR

When a nuclear warhead is detonated in the atmosphere, the sudden release of radiation in the form of X-rays creates a fireball (ENW 44, 316) of temperature on the order of several tens of million degrees Celsius. (ENW 29), which in turn ionizes the air. The gamma rays emitted by the initial and residual nuclear radiation will also produce ionization (ENW 373), as will beta rays from the residual nuclear radiation (ENW 470). If the density of the atmosphere is at least 1/10,000 that of the sea level value, the ionized air will absorb energy from the radar wave and attenuate the wave (ENW 506-7). However, if the density of the atmosphere is sufficiently high the collisions between neutral and ionized molecules is frequent enough to cause the ionization to "disappear very rapidly." (ENW 507-8) The two opposing effects of air density limit the most serious attenuation of radar waves to the region 45 miles above the Earth's surface, plus or minus ten miles (ENW 510, 532). Elaborate tables, graphs, and formulae are available to predict the area of the sky and degree of attenuation produced by a one megaton fission bomb at various altitudes. (ENW 512-545) As a physics student I believe in the sanctity of numbers: certainly anyone can make some assumptions and then produce some impressive appearing calculations to "prove" whatever they desire. Only with access to classified information can the dependence upon assumptions be converted to a factual appraisal. I will make one crude calculation to demonstrate how such a calculation might be performed.

We are given that in "the D region of the normal ionosphere, an electron density of one electron per cubic centimeter will cause a ten megacycle signal to suffer an attenuation of about 4×10^{-5} decibel per mile of travel. For other electron densities, and for higher signal frequencies, the attenuation is directly proportional to the electron density and inversely proportional to the square of the signal frequency." (ENW 527) The frequency of the PAR (perimeter acquisition radar) is purportedly 442MHz. (SD 58) $4 \times 10^{-5} \times (1/44)^2 = 2 \times 10^{-8}$ db attenuation per mile of travel in the D region per electron/ml for the Safeguard PAR radar.

A one megaton fission bomb detonated ten to forty miles above the Earth's surface will produce electron densities of at least 8×10^{16} electrons/ml in the D layer over an eighteen minute period. (ENW 520) If the radar beam is at a twenty degree angle with respect to the horizontal, the beam length in the D layer is given by $10x(1/\cos 80^\circ) = 59$ miles (ENW 528).

Since the beam passes through the D layer twice (once going to the target and again on the return trip back to the receiver), the total mileage in the D layer is 118 miles.

Hence the attenuation of the PAR beam 18 minutes after detonation is given by

$$2 \times 10^{-8} \times 8 \times 10^{16} \times 118 = 19 \text{ db} = 87\% \text{ loss,}$$

which is quite high. "No radar can perform adequately with a 20 db loss term, over and above normal losses, added to its range equation." (SD 60) The significant blackout for the PAR will last less than one hour if only one fission bomb is exploded as described above; at that time the electron density will have declined to 10^{16} electrons/ml and the attenuation to 2.4 db. (ENW 520)

The MSR (missile site radar) with its ultra high frequency of 3 GHz (SD58) will have about forty-six times less attenuation than the PAR, so it is relatively immune to blackout.

There are, in addition to blackout (excessive attenuation of radar signals by high ion densities), two other ionization-radar interactions that are important, although usually omitted from discussions of the ABM.

One of these is the refraction problem. This occurs when the radar beam passes through a region where the electron density changes. This is completely analogous to the common experience of a pencil partially immersed in water appearing bent. You can measure the index of refraction of water and, after measuring some angles and performing simple calculations, apply a correction to show that the pencil is straight without removing it from the water. A similar calculation could be performed in the case of refraction of radar waves if the electron densities for the sky between the target and radar were known (they are not known). Fortunately the error is often small: the error will be less than $\frac{1}{3}$ degree of arc for angles of incidence less than eighty degrees and changes of 10^6 electrons/ml for a 400 MHz radar. (ENW 528-9.) However, a small angular error can correspond to a large error in position for distant objects. As the angle of incidence increases there is a rapidly increasing refraction error until the beam is reflected by the ions. A 400 MHz beam meeting a 4×10^7 electron/ml density at an incidence angle of seventy degrees or more will be reflected. (ENW 530)

The other problem is the formation of erratic, irregular patches of highly ionized air in alignment with the Earth's magnetic field. The patches reflect radar waves and may give the computer the false impression that the patches are a solid physical object. The phenomena are called "clutter" (SASC 2306) and may appear to twinkle like the stars. (ENW 529) "Not enough is known of these phenomena to permit a quantitative description." (ENW 529) Hence, this precludes our programming the Safeguard computer to interpret these patches properly.

The warheads in our ABM missiles will be designed to contribute as little ionization as possible, but under the laws of physics they cannot avoid some ionization. The enemy may choose to detonate high yield devices at high altitudes inside the range of PAR but beyond the range of Spartan ABM. This is called a precursor attack; its goal is to blind and distort the PAR. To defeat the effects of ionization upon the radar beam, the PAR units at various northern ABM sites will be coordinated in the hope that other PAR units can see behind the blackout region of one PAR. (SASC 260, HASC 7075).

In conclusion, Dr. Hans Bethe, Nobel laureate in physics, said "my favorite penetration aid is blackout." (SFRC 36) Dr. Wolfgang Panofsky, Director of Stanford University Linear Accelerator Center, states "it has now become clear that the MSR and its computer will have to perform autonomously without any benefit from the PAR." (SASC 2307).

MINUTEMEN/SAFEGUARD ANTAGONISM

The high power Safeguard radars may damage the Minutemen missiles in the ground and during the initial part of their trajectory. Some twenty million dollars may be spent on proper shielding for the Minutemen system. (HASC 7592-5) Also, if a precursor attack is mounted against Safeguard, the high radiation and ionization levels might interfere with the Minutemen if their trajectory passed through the nuclear debris.

PENETRATION AIDS: DECOYS

In any rational assault on an ABM system, decoys will be used to exhaust the supply of interceptor missiles at little expense to the offense. A decoy must be lightweight to conserve fuel of the launch vehicle (if the enemy wanted a heavy decoy, they might as well put a warhead inside since ICBMs are in limited supply and every reentry vehicle has a chance of reaching the target) and be placed on a credible trajectory toward an important target so that the defense will find it imperative that the decoy be intercepted.

Two types of decoys may figure prominently in an attack. The first is "tank fragments," so called because they are pieces of the fuel tank and booster rocket which have been dispersed by a small conventional explosive charge after the nuclear warhead has separated. The same explosive that breaks up the rocket will also put each tank fragment on a slightly different trajectory from the warhead. The other type of decoy is an aluminum coated plastic balloon which is inflated and released above the atmosphere. Above the atmosphere there is no frictional drag; balloons will exhibit the same ballistics as warheads. The balloons, of course, can be manufactured to have a shape indistinguishable from warheads.

It is commonly argued by proponents of the Safeguard ABM that the Chinese do not have the technology capable of making decent decoys. The authoritative Legislative Reference Service states that "Chinese technical competence should not be underrated. If the same kind of high priority is assigned to this effort as appears to have been the case for the nuclear weapon, there would appear to be a strong probability that the Communist Chinese could develop penetration aids that could outwit the Safeguard system as presently conceived." (LRS 33)

PENETRATION AIDS: CHAFF

Chaff was originally tinsel much like the material used to decorate Christmas trees that was dropped from bomber aircraft to confuse defense radar. The ABM radar has a much higher frequency than an AA (anti-aircraft) radar and, thus, the chaff may be reduced in size. The size of chaff is usually given as half the wavelength of the radar it is used against: the chaff would be a reflecting dipole. "A wire of a given length is also effective against a radar of shorter wavelength." (SA, 29)

Using the basic relationship $f\lambda=c$ where $c=3 \times 10^8$ meters/sec. the velocity of electromagnetic waves, we solve for the wavelength λ of the PAR: $\lambda=3 \times 10^8/4.4 \times 10^9=0.7$ meter and λ of the MSR: $\lambda=3 \times 10^8/3 \times 10^9=0.1$ meter.

Hence wires 35 cm long will be adequate chaff for both the PAR and MSR. Adjusting Dr. Bethe's computation (SA, 29) we find that one hundred million (10^8) copper wires 0.001 inch in diameter and 35 centimeters long will weigh only 140 kilogrammes: "easily carried by an ICBM." (SFRC 36) These chaff wires are admittedly difficult to disperse evenly over a large volume. (SFRC, 36) once this is done, the chaff gives a radar image of "a large obscure volume, many miles across, moving on a ballistic trajectory." (ABM 20) In the ionosphere the chaff cloud would require that several Spartans be targeted inside the cloud to destroy possible warheads hidden inside. The obnoxious stuff (chaff) will "float" in the atmosphere and might be cleaned up with the powerful atmosphere blast of a nuclear ABM warhead.

Since all rationally constructed penetration aids are lightweight, the defense could ignore everything until it enters the atmosphere. At that point atmospheric drag will sort the less dense penetration aids from the heavier warheads. This technique makes area defense impossible and reduces the margin of available time to mere seconds. With decoys the number of objects considered by the computer will be unusually large, which means that the time-shared computer will be slower in issuing instructions—a slowness that may be fatal when every millisecond counts.

PENETRATION AIDS: JAMMING

The final type of penetration aid is electronic countermeasures or jamming. A radio transmitter could be placed inside a decoy which would send out noisy signals on radar frequencies. The transmitter would not require high power since the radar signals are relatively weak at target distances. This

might offer great success in confounding the defense.

MSR EASY TARGET

Because the radar must be housed in a building transparent to radio waves and because it is requisite to Safeguard's operation, the radar is an obvious target. The radars are much more susceptible to blast damage than Minuteman silos. (SFRC 271, SASC 2215) "Clearly, if silos can be targeted, so can radars, and there is no doubt which would crumble first." (SD 57) The estimate is that the radars can not endure more than a thirty pound per square inch overpressure. (SD 57, ABM 40) A one megaton bomb will produce thirty psi overpressures up to 1.3 miles from ground zero. (ENW Bomb Effects Computer) Since the radar buildings already contain a $\frac{1}{2}$ inch thick steel plate in addition to reinforced concrete walls, it is doubtful if they can be further hardened and still be transparent to radio waves. (HASC7104)

NOT MUCH TIME

It takes an ICBM 34 minutes to travel 6000 nautical miles. (ABM103) Regardless of the detection system we use, we can never have more than this brief length of time to prepare for the onslaught. In order to intercept the enemy's warhead, we must launch our ABM within four to ten minutes after the PAR detects the warhead. (SFRC 265-270) In these few minutes we must acquire accurate data on the trajectory and make a number of decisions. There is one decision that requires special attention. All ABM interceptors are equipped with a nuclear warhead which, under present U.S. policy, would require the consent of the President before we could fire them.

I think most people, both proponents and adversaries of Safeguard deployment, agree that it is a wise policy to require the President to authorize the use of any nuclear weapon by our nation's armed forces. A few people have suggested that it will be necessary (but not necessarily wise) to delegate that authority to a junior military officer at the Safeguard control center. (HASC 7089)

In the few minutes available for his decision, the President will not have very much information available. He will hardly have time for consultation with those standing beside him, not to mention meaningful consultations with his regular advisors. The whole idea of requiring Presidential consent is to allow him the opportunity to deliberate, and not a computer or a military officer. But the concept is almost meaningless if the President has neither the time nor the information available before he makes the decision. Hence the President's decision will be only a token expression.

Representative Otis G. Pike (NY) has declared: "I don't believe you can get to the President a message, have a rational decision made by the President, have the decision made to authorize the firing of the system in [deleted] minutes. I don't know anybody else who believes it either." (HASC 7091) Both Deputy Secretary of Defense Packard and General Starbird (commander of Safeguard) were present but did not refute Mr. Pike's statement except to say that the system had the capability of getting the message to and from the President even if he were in Rumania.

Dr. Licklider, Professor of Electrical Engineering at MIT, has written: "Early in its operation life, the Ballistic Missile Early Warning System [BMEWS] made its now-famous detection of 'incoming ballistic missiles' that turned out to be the moon. Fortunately, cool wisdom in Colorado Springs—and lack of confidence in the new system—prevailed over the reflex of counterstrike, and what could have been the greatest tragedy in history became a lesson. Was the lesson merely to remember that large, distant objects can reflect as much energy as smaller, nearer ones? Or was it that men may not trust the advice of untested electronic sys-

tems enough to launch nuclear missiles? Or was it that men should not trust the advice of untested electronic systems?" (ABM 122-3)

Senator Albert Gore has presented an instructive hypothetical case: "A sergeant or a lieutenant . . . or whoever is out in Montana at the missile site, who finally gets the President of the United States on the telephone, and in an excited voice says, 'Mr. President, the radars, $\frac{1}{2}$ minutes ago, picked up three ICBMs coming over the horizon from the Soviet Union, they are in trajectory bringing them on top of us, which button do I push?' The President asks some questions, and he said, 'Mr. President, I see three more. We have got three minutes left.' 'Well, do you see any more?' 'Yes, Mr. President, there are three more and they are headed for North Dakota; which button do I press?' [Senator Fulbright:] 'The panic button.'" (SFRC 213)

FOBS

The problem of time is intensified if the enemy begins their attack with a "Fractional Orbital Bombardment System" (FOBS). The trajectory used by FOBS is a circular one which follows the Earth's curvature at approximately constant altitude. This altitude is kept as low as possible so that it appears above the horizon only when it is near the target. The advantage of FOBS then is that it has a very short time between detection by our radar and its impact on target; if the FOBS projectile flies at an altitude of 100 nautical miles (115 statute miles) the time difference between initial radar acquisition and impact on target is only three and a half minutes. (ABM 104) FOBS may escape detection by BMEWS because of its low altitude. (JCAE 129) FOBS can also be used to send a missile via the South Pole. (SFRC 278) Fortunately, the payload that can be carried by FOBS is from $\frac{1}{2}$ to $\frac{3}{4}$ that which can be carried by an ICBM on a conventional trajectory (SA 23) and is probably less than three megatons. (JCAE 18) The accuracy of FOBS is poorer than that of an ICBM. (ABM 220) A small change in trajectory might allow a FOBS to orbit the Earth several times should it be desired that it not impact immediately.

With FOBS it may be possible to stage a successful surprise attack on Safeguard, and if FOBS warheads do knock out the MSR, Safeguard is dead.

SAFETY/HAIR TRIGGER

Professor Herbert York has pointed out a contradiction between "hair trigger" readiness and safety requirements. I wish to quote his explanation of this: "I should like now to turn to a technical problem that pertains to all the forms of ABM so far proposed, but which unfortunately is not so simple to discuss . . . [as other objections]."

"Any active defense system such as the ABM must sit in readiness for two or four or eight years and then fire at the precisely correct second following a warning time of only a few minutes. This warning time is so short that systems designers usually attempt to eliminate human decisionmakers, even at low command levels, from the decisionmaking system. Further, the precision needed for the firing time is so fine that machines must be used to choose the precise instant of firing no matter how the decision to fire is made. In the case of offensive missiles the situation is different in an essential way: although maintaining readiness throughout a long, indefinite period is necessary, the moment of firing is not so precisely controlled in general and, hence human decisionmakers, including even those at high levels, can be permitted to play a part in the decisionmaking process. Thus, the trigger of any ABM, unlike the trigger of the ICBMs and Polaris, must be continuously sensitive and ready, in short a 'hair trigger' for indefinitely long periods of time.

"On the other hand, it is obvious that we cannot afford to have an ABM fire by mistake or in response to a false alarm, and, indeed, the Army has recently gone to some pains to assure residents of areas near proposed Sentinel [the ABM system preceding Safeguard; both systems use the same components] sites, that it has imposed design requirements which will insure against the accidental launching of the missile and the subsequent detonation of the nuclear warhead it carries. These two requirements, a hair trigger so that it can cope with a surprise attack and a 'stiff trigger' so that it will never go off accidentally are, I believe contradictory requirements. This problem exists only in the real world and not on the test range [because] on the test range . . . the interceptions do not involve the use of nuclear weapons and the day, if not the second, of the mock attack is known." (SFRC 77-78)

Professor York further states that requiring the President's permission lessens "the probability of its [Safeguard] being fired under conditions of surprise." (SFRC 609) Professor York "strongly endorses" the requirement of Presidential consent, as do I. (SFRC 609). The point is that the process of consent consumes valuable time.

My letter of 19 July 1969 to Colonel Reid and his reply of 11 August 1969 (furnished through your courtesy) explored Professor York's two points: rapid action and safety. Colonel Reid recited past nuclear safety as an assurance for future safety on a new project—an irrelevant reply. (The remarks on the bottom half of page one and all of page two are good points, however.) Colonel Reid completely ignored the other half of Professor York's statement, the part about the necessity for rapid response after being inactive for a long time. Deputy Secretary of Defense Packard was also challenged with Professor York's testimony and he failed to reply to any of it, but he did, unsuccessfully, try to discredit Professor York. (SFRC 309-312) I mention Colonel Reid's and Mr. Packard's reaction only to underscore the importance and apparent irrefutability of Professor York's objections.

WARHEAD KILL MECHANISM

Everybody is aware of the tremendous damage caused by nuclear weapons at low altitude, and since nuclear weapons are used in Safeguard ABMs there is little public question that Safeguard can destroy enemy warheads. Unfortunately, the issue is not clear. Most of the destruction caused by nuclear weapons is a result of blast; about half of the total energy of a fission weapon is distributed as blast and shock. (ENW 8, 102) Above the atmosphere, where the Spartan will detonate, there is no blast to kill the enemy warhead.

The Spartan will use X-rays and neutrons to destroy the enemy warhead; the technical details have been admirably presented by Professor Bethe (SA 25-27). There are effective ways to shield the warhead from X-ray damage and possible ways to shield against neutrons. (SA 27) "The defense, not knowing the detailed design of the reentry vehicle [enemy warhead], has little way of knowing if it has destroyed a given vehicle . . . until the warhead either goes off or fails to do so." (SA 27) The question is not so much "Can the nuclear warhead kill a RV [reentry vehicle or enemy warhead] with radiation alone?" as it is "Can the ABM get near enough to the RV to kill it?" About 70% of a fission warhead's substantial energy is in the form of thermal X-rays. (ENW 26) The Spartan warhead is probably a fusion, not fission, device so neutrons will be produced in large quantities. (ENW 23) Since the flux of particles will decrease as the inverse square of the distance, the ABM must accurately intercept the RV.

The Sprint missile will detonate in the upper atmosphere above a "safe" level. Mak-

ing a very crude and unreliable calculation: if the Sprint carries a two kiloton warhead as reported (SD 62) using blast overpressure figures computed for sea-level conditions, the Sprint warhead will create a maximum overpressure of ten times normal atmospheric pressure over a radius of four hundred feet. I haven't the slightest notion what overpressure would be necessary to crush a RV, or the overpressure of a two kiloton weapon exploded in the thinner air of the upper atmosphere. But again, the accuracy of Sprint is important.

TESTING ABM

The proponents of Safeguard are fond of saying how well the system is performing on the test range. (SAFE/INFO Question #61; SASC 220, 254, 2328; HASC 7065, 7037, 7078-9) "There have been 16 Spartan firings to date. Eleven of these were completely successful, three partially successful, and two unsuccessful." (SASC 2328) Since no criterion is given for "partially successful," and in the field an enemy warhead is either destroyed or not, I think "partially successful" and "unsuccessful" should be relabeled as "failures." This gives a Spartan efficiency of 11/16 or 69%. When I criticized this in my letter to Colonel Reid, he replied "the reliability of the final production missiles will be greater than the present research and development missiles being fired. In actual combat, the production type missiles will not usually be exercised to their maximum design capabilities as the research missiles are today." (11 August 1969, page three)

With this point in mind, let us look at the progress being made with Spartan. In the period before mid-May 1969 the Spartan efficiency was 5/8=63%; after mid-May 1969 it was 6/8=75%, not a very great improvement and perhaps not statistically significant. (data from SASC 2328) I disagree with the DOD conclusion that this test "demonstrates the readiness of Spartan to perform satisfactorily." (SASC 2328)

Furthermore, the tests results cited above are not ICBM intercept trials. The first testing of Safeguard intercept of ICBMs will take place in the fall of 1970, over a year after funds to deploy Safeguard were requested SAFE/INFO question #18, HASC 7069, 7108) Asking to deploy a yet untested weapon is a very rash act. Secretary Packard shrugs off this objection by saying a "fly before you buy concept . . . is simply not feasible" with Safeguard. (HASC 7068)

The only real test would be provided by a real enemy who deliberately tried to be uncooperative and who attacked us with an intelligently thought out plan that we could not anticipate, as opposed to trials held on our test range. Simulated tests and laboratory trials do not provide much assurance of success. (HAC 57)

The environment created by many nuclear explosions at various altitudes within a brief time span is not well understood, confer the paragraph on "clutter" under Ionization of this paper. Dr. Wiesner feels that, even without the 1963 Test Ban treaty prohibiting nuclear explosions in space and in the atmosphere, this kind of environment "could not be simulated." (ABM 13; SFRC 520, 525)

SATURATE ABM WITH MIRV'S

MIRV is an acronym for "Multiple Independently Targetable Re-entry Vehicle." Several MIRV warheads may be carried into space by one ICBM; the defense must contend with intercepting each RV separately. It is conceivable that it would require twenty ABMs to negate what came from a single ICBM. (SA 25) It is obvious that MIRV will be a useful tool, with penetration aids, to exhaust our supply of ABMs and win not only the military engagement but also the cost battle: an expensive ABM system would be overwhelmed by an offense which is cheaper. Dr. Foster of DOD has clearly stated that

MIRV is the highest confidence penetration aid for defeating an ABM defense. (JOAE 40-41; SFRC 318-319; SASC 2193) and Secretary Laird agrees (HAC 11). There can be no misunderstanding: Dr. Foster has said "The principal objective of our MIRV systems is to improve our defense penetration capability [capability to penetrate Soviet ABM] in the presence of ABM defense." (SASC 2193)

In a straightforward statement, Dr. Foster tells how we will defeat the ABM around Moscow: "We propose to go through that system by sheer exhaustion of the defenses." (HAC 62) I think it is obvious that the Russian offensive technology would defeat Safeguard in the same manner that we intend to defeat their ABM.

MORE EXPENSIVE TO DEFEND THAN TO ATTACK

We must consider the next point: which is less expensive, to purchase additional Minutemen ICBMs with the knowledge that Russia can destroy some of them in their silos or to purchase Safeguard to defend the Minutemen we have. In this consideration we make the (unwarranted) assumption that Safeguard will be an effective ABM system, as claimed by DOD.

Let me state that an economic argument is difficult to make because cost data, number of missiles, etc., is difficult to obtain and likely to change. I suggest that you contact DOD and get the data to perform the calculation according to your own assumptions in order to convince yourself of the truth of the following.

We have already paid for the research, development, testing, and evaluation (R.D.T.&E.) for the Minutemen system and would have done so regardless of the status of the ABM. Hence, I think we can fairly neglect RDT&E costs for the Minutemen but include them on Safeguard.

If we assume that the efficiency of the Safeguard system is equal to the efficiency of an enemy ICBM the results will cancel; this is a convenient assumption. (e.g. If we assume Safeguard is 50% efficient we must launch two ABM missiles to destroy one target; likewise the enemy must launch two 50% efficient ICBMs to provide one target for Safeguard.)

We can also assume the cost of an enemy ICBM is comparable to the cost of our Minutemen if we wish to compare the target vs. interceptor cost.

The entire Minuteman system will cost \$17 billion for one thousand ICBMs: \$17 million per ICBM. (HASC 8169-70). The missiles themselves cost \$4,574 million each in fiscal year 1970. (SASC 907)

The entire Safeguard system of a dozen sites is expected to cost \$11.9 billion, including AEC warhead costs, with December 1969 cost levels. (SASC 227-8; SAFE/INFO question #43) The annual operating costs will be \$0.35 billion, plus personnel housing, manpower overhead, etc. (SASC 271; SAFE/INFO question #43)

The two Phase I sites protecting the Minutemen will have a total cost of \$5.4 billion including AEC warheads. (SASC 271, SAFE/INFO question #43) Annual operating costs will be \$0.1 billion. (SAFE/INFO question #43)

DOD omits AEC warhead costs as a matter of policy (JEC 35) and, if you request cost figures, be certain to have the warheads costs included.

The number of ABM missiles per Safeguard site is classified. The usual assumption is 33 Spartans per site, 75 Sprints per Minuteman site, and 12 Sprints at each of the other sites. (ABM 87) The Soviet ABM system around Moscow has 64 ABM launchers and a reload capability. (HASC 7094)

Using the Phase I costs divided by 108 ABM missiles, we see that it costs us exactly \$50 million plus operating costs to intercept one enemy RV if our system is 100% efficient.

Compare this with \$4.6 million per Minuteman!

Other authors have reached the same conclusion that the ABM is much more expensive than the value of the Minuteman it protects and the cost of the enemy's efforts to defeat it. (Dr. Panofsky: SASC 2216 2286-7; Dr. Bethe: SFRC 41; SA 25-26; Dr. Rathjens: SFRC 360, 363-364 [detailed argument presented]; also ABM 23, 88-92)

Despite these inescapable conclusions, a few proponents of Safeguard continue to suggest the contrary. Senator Stennis suggests (page 23 of Senate Report #91-1016 on FY 1971 military appropriations bill) that defensive cost is LESS than "the cost of the offense to offset that defense." And official DOD releases say that if the enemy exhausts Safeguard with a large number of RVs, "the defender wins the engagement. The defense has forced an attrition of the attack force which, of course, is one of the defense goals." (Colonel Reid letter of 1 July 1969 page three; SAFE/INFO question 34 point three) Senator Stennis and Colonel Reid are simply wrong.

WHAT HAPPENS IF SAFEGUARD FAILS

The enemy will assume Safeguard will work: they will assume whatever specifications would be most damaging to their offense. Hence areas "protected" by Safeguard would have more missiles targeted at them in order to exhaust Safeguard. If Safeguard fails, we will experience a "horrible debacle"; we will be "much more severely devastated than if the system had never been deployed." (ABM 121, 52; Dr. Hornig concurs SASC 2297)

CANNOT PROTECT BOMBER BASES

According to the authoritative government handbook *Effects of Nuclear Weapons*, an overpressure of three pounds per square inch will cause severe damage to transport airplanes and helicopters. (ENW 167) "Complete destruction or damage [of cargo airplanes] beyond economical repair may be expected at peak overpressures of four to six pounds per square inch." (ENW 253) A one megaton bomb will produce 6 psi overpressure 3.8 miles from ground zero and 3 psi up to six miles from ground zero. (ENW Bomb Effective Computer)

A single one megaton warhead with moderate accuracy would be sufficient to destroy all the aircraft at an Air Force Base. Since it is not claimed that our ABM system is perfect, defense of bomber bases is unreasonable.

DEFENSE OF CITIES IMPOSSIBLE

The Department of Defense has made it very clear that defense of cities against more than a few ICBMs is impossible.

Secretary Laird: "...it does not appear feasible, with existing ABM technology, to erect a defense against the Soviet missile threat to our cities which could preclude a catastrophic level of fatalities." (HAC 8, 40-41, 43)

Secretary Packard: "I am very pleased to know that you [Senator Gore] and I have come to the same conclusion on this matter—that an ABM defense of our cities makes no sense..." (SFRC 304)

DEFENSE OF WASHINGTON, D.C.

One of the dozen Safeguard sites has as its prime objective defense of Washington, D.C. (SASC 246; HAC 44; HASC 7112) Protection of the National Command Authority is an euphemism for city defense of Washington, D.C. I found the preceding quote of Secretary Packard and sent it to you in my letter of 7 February 1970 with a request for a direct explanation. Colonel Steele's cursory letter of 13 July 1970 obviously did not even attempt to answer my question. You also realize that it is a poor attempt: you state apologetically, "I think you can therefore assume this is all the Department of Defense wishes to say

on the subject." DOD cannot be blamed for their reluctance to admit that at least some of the Safeguard goals are unreasonable. And yet you, as an elected representative of the people, should not be asked to support a system that cannot be justified.

SECURITY

I am very much aware of the fact that because I do not have access to classified information, I am ignorant of many important facts. Secrecy regarding the construction of the components is obviously justified, but performance claims should be made available to the public. This will not endanger our security since the enemy will, when faced with ignorance of our weapons, assume whatever would be most damaging to them—hence their reaction will almost certainly be an overreaction and the resulting arms race will degrade our mutual security.

Dr. Teller, a supporter of many DOD programs including Safeguard, has called for less secrecy and more public discussion on the ABM. (SFRC 517-8, 523) Dr. Panofsky and Senator Symington have objected to selective declassification of old facts to conjure up the image of a new threat. (SFRC 194, 316; SASC 2214) It is inconceivable that DOD classifies performance figures on Soviet systems: they are apparently trying to honour our enemy's security system? (SFRC 268; HASC 7516, 7915) A rough calculation of Dr. Foster was severely censored (HASC 7089), but Mr. Packard's erroneous statement on the very same subject was later corrected for the record by DOD (SFRC 266). General Betts was not able to justify why DOD classified some statements (HASC 8307-8). DOD classified a public report that embarrassed it (SFRC 453). Congressmen sometimes leave notes on secret material on their desks after a closed hearing (HASC 6813, 6984).

IS THE ABM DEFENSIVE?

Proponents of the Safeguard ABM state that a defensive weapon will not provoke an arms race. I fail to understand this argument. If Safeguard works, it will have increased the number of Minuteman ICBMs and cities that might otherwise have perished. The obvious reaction of the enemy to this effect would be to increase his offensive force, probably with MIRVs. (SASC 2319-20; HAC 51-52) The proposed deployment of the ABM around Minuteman sites is not purely defensive since it will purportedly enhance the effectiveness of an offensive weapon.

INDEPENDENT ADVICE

It was very ironic (and really quite humorous if anyone could retain a sense of humour while talking about nuclear weapons) that the only scientist independent of DOD and its contractors Secretary Packard remembered consulting on the ABM prior to the decision to deploy Safeguard was Professor Panofsky of Stanford. (SFRC 307-308) As it turned out, this consultation was when the two met accidentally at the San Francisco airport for half an hour. (SFRC 328) The discussion was, of course, "informal" and "unclassified." (SFRC 327, 337) Moreover, Professor Panofsky opposed deployment of the ABM!

CONCLUSION

Professor York, director DOD Research and Engineering from 1953 to 1961, expressed the "gravest doubts as to the capability of any ABM system." (SFRC 78) He was not concerned with the possibility of a few failures but "catastrophic failure in which at the moment of truth either nothing happens at all or all interceptions fail." (SFRC 78)

Each of these technical problems by itself could probably be satisfactorily solved. As a composite it is almost certain that they will not be solved. In a nuclear missile exchange the offense has all the advantages. The ABM systems now technologically and

economically feasible are all members of one class: failures.

Safeguard will not work.

I have never written a paper or considered problems so dismal, so depressing. Even so, I have ignored other vital considerations: the arms race, the economic situation of our country, and the domestic/international political scene.

Respectfully yours,

RONALD B. STANDLER.

CONTINUE THE INVESTMENT TAX CREDIT FOR SMALL BUSINESS

HON. JOHN C. CULVER

OF IOWA

IN THE HOUSE OF REPRESENTATIVES

Friday, August 14, 1970

Mr. CULVER. Mr. Speaker, recently I introduced legislation which will be of particular benefit to small businessmen and farmers. My bill, H.R. 17532, amends the Internal Revenue Code to provide for the continuation of a tax credit for investments of up to \$15,000.

Prior to enactment of the Tax Reform Act of 1969, a business was permitted to take a Federal income tax credit for a percentage of qualifying investment, which consisted mainly of machinery and equipment. The taxpayer was allowed a credit equal to 7 percent of the investment for facilities with estimated useful lives of 8 years or more. Assets with lives between 4 and 8 years were, in effect, allowed a reduced percentage.

If a business invested \$40,000, for example, in a piece of equipment with a useful life of at least 8 years, the taxpayer could reduce his tax liability by \$2,800—that is, 7 percent of \$40,000. The Tax Reform Act of 1969 repealed this credit for property acquired after April 18, 1969.

My bill provides that if the taxpayer constructs, reconstructs, erects, or acquires qualifying property after 1969, he may take a credit for the amount of investment up to \$15,000 a year. Thus, a taxpayer who buys a machine for \$15,000 will be entitled to a \$1,050 tax credit—that is, 7 percent of \$15,000—the same as he was prior to enactment of the Tax Reform Act of 1969.

While H.R. 17532 would allow a tax credit on the amount of qualified investment up to \$15,000 for any size business, the bill is designed to help primarily small businesses and small farms, for whom a tax saving of \$1,050 will have a significant financial impact. It will be helpful to those who have difficulty in obtaining adequate financing for purchase of machinery and equipment, and it may well be a means of survival for many marginal firms.

At the same time it will serve to stimulate the economy of rural America. It will provide the opportunity for farmers to improve and modernize their equipment to meet the challenges of an ever-changing and more competitive agricultural economy. It will also benefit the business of the small firms which provide for the farmer the materials and services he needs. The result will be to stimulate the economic activity of rural

America, providing greater opportunities for employment and increasing the attractiveness of life there.

I believe that the complete repeal of the investment tax credit in the Tax Reform Act of 1969 was unfortunate. A limited credit is an appropriate and effective way of aiding the small businessman and farmer to compete with large corporations.

I insert a copy of the bill at this point in the RECORD:

H.R. 17532

A bill to amend the Internal Revenue Code of 1954 to provide for the continuation of the investment tax credit for small businesses, and for other purposes

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That section 49 of the Internal Revenue Code of 1954 (relating to termination of credit) is amended—

(1) by inserting after "pre-termination property" in subsection (a) the following: "and property to which subsection (e) applies", and

(2) by adding at the end thereof the following new subsection:

"(e) SMALL BUSINESS EXEMPTION—

"(1) IN GENERAL.—In the case of section 38 property (other than pre-termination property)—

"(A) the physical construction, reconstruction, or erection of which is begun after December 31, 1969, or

"(B) which is acquired by the taxpayer after December 31, 1969,

and which is constructed, reconstructed, erected, or acquired for use in a trade or business, the taxpayer may select items to which this subsection applies to the extent that the qualified investment for the taxable year attributable to such items does not exceed \$15,000. In the case of any item so selected (to the extent of the qualified investment attributable to such item taken into account under the preceding sentence), subsections (c) and (d) of this section, paragraphs (5) and (6) of section 46(b), and the last sentence of section 47(a) (4) shall not apply.

"(2) SPECIAL RULES.—

"(A) MARRIED INDIVIDUALS.—In the case of a husband or wife who files a separate return, the amount specified in paragraph (1) shall be \$7,500 in lieu of \$15,000. This subparagraph shall not apply if the spouse of the taxpayer has no qualified investment for, and no unused credit carryback or carryover to, the taxable year of such spouse which ends within or with the taxpayer's taxable year.

"(B) AFFILIATED GROUPS.—In the case of an affiliated group, the \$15,000 amount specified in paragraph (1) shall be reduced for each member of the group by apportioning \$15,000 among the members of such group in such manner as the Secretary or his delegate shall by regulations prescribe. For purposes of the preceding sentence, the term 'affiliated group' has the meaning assigned to such term by section 1504(a), except that—

"(i) the phrase 'more than 50 percent' shall be substituted for the phrase 'at least 80 percent' each place it appears in section 1504(a), and

"(ii) all corporations shall be treated as includible corporations (without any exclusion under section 1504(b)).

"(C) PARTNERSHIPS.—In the case of a partnership, the \$15,000 amount specified in paragraph (1) shall apply with respect to the partnership and with respect to each partner.

"(D) OTHER TAXPAYERS.—Under regulations prescribed by the Secretary or his delegate, rules similar to the rules provided by sections 46(d), 48(e), and 48(f) shall be applied for purposes of this subsection."

CONGRESSMAN MYERS 1970 QUESTIONNAIRE RESULTS

HON. JOHN T. MYERS

OF INDIANA

IN THE HOUSE OF REPRESENTATIVES

Friday, August 14, 1970

Mr. MYERS. Mr. Speaker, during the 4 years it has been my privilege to serve as a Member of the House of Representatives, it has been my practice to seek opinions and comments of the residents of the Seventh Congressional District through public opinion polls. These surveys have afforded a quick and effective means for residents to make known their views on a wide variety of national issues and have been very useful to me in my efforts to represent the people of the district.

In June of this year, we sent the latest in our series of questionnaires into every home in the district. The results of that poll are now in and I would like to bring to the attention of the Congress and the administration the tabulation of the survey. There was no effort to restrict the distribution of the poll or to affect the results by limiting it to any particular interest or economic group. This tabulation represents a broad sample of prevailing opinion in the 15 counties of the Seventh District.

Nearly 20,000 persons responded to the poll. This compares to 18,000 in 1969; 15,000 in 1968, and about 10,000 in 1967. This represents about 11 percent of those who received the poll which is considered an above average response. To see so many people calmly showing an interest in questions affecting our lives and government is a sign of encouragement.

Although the issues represented in the poll cover a wide variety of topics, it was clear that thousands of those participating were not satisfied with a declaration of views on a simple yes or no basis. The thoughtful comments they added provided an understanding of their opinions in far greater depth than would have been possible otherwise.

NIXON'S PERFORMANCE

It was clear from the poll that President Nixon's performance since he assumed office 18 months ago enjoys the overwhelming support of the people of the district. A total of 75 percent rated Nixon's performance either excellent or good while only 20 percent said they feel he is not doing so well. I do not pretend to believe that the 75 percent agrees with everything President Nixon has done since taking office. There has never been—there can never be—that kind of agreement in a free society. I do believe it does indicate the degree of confidence the people of our district have in the President.

The President has leveled with the American people. Whether you agree with him or not, he has told us how he feels and what he is going to do—and then has fulfilled his promises. This is the record that matters in the long run.

VIETNAM

This same confidence in the President's ability was reflected in the response to the question on Vietnam. A

majority, 51 percent, favor the administration plan for the orderly withdrawal of troops. Only 16 percent call for the immediate withdrawal of all U.S. troops which would preclude the administration's Vietnamization program. Another 28 percent support sufficient military action to defeat the enemy on the battlefield. The significance of this latter figure is brought into sharp focus when compared to our 1967 poll taken at the time President Johnson was sending large numbers of troops into Vietnam. Then, 74 percent of those responding favored an all-out military victory. Today, almost the reverse is true with 67 percent favoring withdrawal.

When President Nixon assumed office, more and more Americans were going to Vietnam. Since he has been President, American troops have been coming home. No partisan debate can change the fact that by next spring we will have about 270,000 fewer American troops in Vietnam than we had when the Nixon administration took office. No doubt this has had a major influence on how the people of the Seventh District rate his performance.

THE ECONOMY

The views expressed by many of those responding showed concern about inflation to be second only to concern about the war in Vietnam. Congress was criticized for its insistence upon adding additional appropriations which would assure continuing deficit spending. A total of 59 percent believe that spending for even the most desirable Federal programs should be cut back until inflation is brought under control. Another 34 percent favor wage and price controls similar to those imposed during World War II. Understandably, only 2 percent expressed support for raising income taxes as a means of controlling inflation.

I have supported the President's veto of appropriations bills which would have cost the American taxpayer more than \$1 billion. I will continue to support his efforts to introduce a new spirit of self-discipline in Government spending—a willingness to make hard choices and to enforce a strict sense of priorities. Nearly every economic indicator now predicts victory in the administration's war on inflation but Congress must continue to hold down Government spending if this victory is to be a lasting one.

DRAFT

There is broad support, 42 percent, for a Selective Service System based on the lottery and eliminating all deferments, thereby making all physically able young men eligible for the draft. This is similar to the system now in effect with the exception that undergraduate student deferments are still granted. Thirty percent favor the administration proposal for an all-volunteer army. The fate of this proposal in Congress is uncertain. Twenty-two percent favor retention of the present system. The Congress and the administration are concerned about correcting the inequities in the present system. The report of the Gates Commission was promising in that it indicated the feasibility of establishing a volunteer military force as soon as the manpower demands of the Vietnam con-

flict diminish. Certainly, this issue will get a full review before the present legislation expires next year.

WELFARE REFORM

Proposed reform of the welfare system drew a heavy response with 75 percent opposed to the guaranteed annual wage which is one of the major sections of the bill now before Congress. I voted against the plan because I feel strongly that the provision of a minimum income could only serve to discourage initiative and eliminate incentives among those who most need the help. We must develop programs to insure meaningful employment for those on the welfare rolls instead of developing yet another handout on top of those which have failed so miserably in the past.

STUDENTS AND THE 18-YEAR-OLD VOTE

Two separate but related questions evoked responses indicative of the deep concern over the disorders which have plagued our colleges and universities. An overwhelming 86 percent of the people of the district favor ending Federal aid to students found guilty of disrupting classes or other normal college operations. At the same time, 66 percent are opposed to lowering the voting age to 18. Opposition to the lowering of the voting age has increased from 61 percent in the 1969 poll, perhaps a reaction to the campus disorders within our district. As you know, since this poll was taken Congress approved legislation lowering the voting age to 18. That legislation is now being contested in several States including Indiana.

DRUG ABUSE

One of the major proposals of the Nixon administration providing tougher penalties for drug pushers and users has the support of 67 percent of those responding. Only 14 percent favor easing or eliminating penalties imposed upon those involved in the drug traffic, while 13 percent oppose any changes in the present law. Legislation revising the Federal narcotics laws has been stalled in Congress for more than a year. This inaction is a disservice to the public and to the thousands of people whose lives have been jeopardized by the illicit drug traffic.

ENVIRONMENT

I was encouraged to note the support of 82 percent for my package of seven bills designed to wage a constructive and effective campaign against air and water pollution. In a nutshell, these bills are designed to clean up our water resources, to improve the quality of the air we breathe, and to remove from the landscape the litter and trash which has been a national eyecore.

I also am sponsor of a resolution which would establish an annual observance of Earth Day which this year served as the focal point for those of us who sense the urgency of the environmental crisis. I am convinced we must act now in order to assure future generations of an environment capable of sustaining life.

POSTAL REFORM

Residents of the district differed in their approach to much-needed postal reform but nearly all agreed that some form of sweeping reorganization is necessary if we are to provide the people

of the Nation with an efficient and responsible postal system. Thirty-seven percent expressed favor of the postal corporation plan which passed Congress and was signed by President Nixon early in August. Hopefully, the new system will result in modernized procedures and improved working conditions.

SALT TALKS

Support for a strategic arms limitation treaty (SALT) with the Soviet Union came from 71 percent of those responding with only 13 percent expressing some doubt about the effectiveness of any agreement with the Soviet bloc. Progress in these talks has been very encouraging to date. If success is achieved in this conference, the day may come when Russians will decide that the best course for the Soviet Union as well as for the world is to concentrate their energy and know-how on improving the well-being of mankind rather than on developing the machines of destruction which threaten all of civilization.

AGRICULTURE

A total of 42 percent believe the Federal Government should promote rural development through programs of economic incentives and aid to private industry. Twenty-nine percent oppose Government playing such a role while another 25 percent were undecided. The unusually high percentage of undecided votes is indicative of the depth of this problem and the controversy over what is needed to stimulate rural development. The House recently approved a new agricultural act which I believe will result in greater income for the Nation's farmers. The Senate must act before it becomes law. Rural America has more than its share of need and a major thrust in public policy in the 1970's must be aimed at filling these needs.

The complete questionnaire results follow:

(In percent)

1. Do you believe our Selective Service System should be—(A) Retained as is, (B) Abolished in favor of an all-volunteer Army, (C) Based on a lottery system without deferments—

(A) -----	22
(B) -----	30
(C) -----	42
No response-----	6

2. Do you favor a Government-Guaranteed annual wage as a means of eliminating poverty—

Yes -----	12
No -----	75
Undecided -----	9
No response-----	4

3. Which do you believe should take preference in efforts to control inflation: (A) Raise income taxes, (B) Reduce Federal spending, (C) Wage and price control—

(A) -----	2
(B) -----	59
(C) -----	34
No response-----	5

4. What course do you favor in Vietnam—(A) Administration plan for orderly withdrawal of troops (B) Immediate withdrawal of all troops (C) Seek complete military victory—

(A) -----	51
(B) -----	16
(C) -----	28
No response-----	5

5. In dealing with the possession and use of marijuana, do you favor—(A) Easing and eliminating Federal minimum penalties (B) Increasing the penalties (C) No change in present laws—

(A) -----	14
(B) -----	67
(C) -----	13
No response-----	6

6. With regard to the question of granting 18-year-olds the vote in national elections, do you favor—(A) A change by amendment to the Constitution (B) A change by act of Congress (C) No lowering of voting age—

(A) -----	15
(B) -----	14
(C) -----	66
No response-----	5

7. Should the Federal Government promote rural development through programs of economic incentives and aid to private industry to help create jobs in rural areas—

Yes -----	42
No -----	29
Undecided -----	25
No response-----	4

8. Do you support Congressman Myers' legislation providing strict controls over pollution of our environment—

Yes -----	82
No -----	3
Undecided -----	10
No response-----	5

9. Do you support efforts by the Administration to reach an enforceable arms control agreement with the Soviet Union—

Yes -----	71
No -----	13
Undecided -----	11
No response-----	5

10. Do you favor ending Federal aid to individual students found guilty of disrupting classes or other normal college operations—

Yes -----	86
No -----	9
Undecided -----	2
No response-----	3

11. Concerning the operation of the Post Office Department, should Congress reorganize the department by—(A) Changing it to a non-profit public corporation (B) Allowing private industry to take over postal functions (C) Granting present postal authorities additional control with specific Congressional oversight—

(A) -----	37
(B) -----	25
(C) -----	29
No response-----	9

12. How would you rate President Nixon's overall performance since he took office—(A) Excellent (B) Good (C) Not so good—

(A) -----	30
(B) -----	45
(C) -----	20
No response-----	5

COMMONSENSE AND ACADEMIC FREEDOM

HON. PHILIP M. CRANE

OF ILLINOIS

IN THE HOUSE OF REPRESENTATIVES

Friday, August 14, 1970

Mr. CRANE. Mr. Speaker, Prof. Sidney Hook recently delivered an address at the 116th commencement of Rockford College in Rockford, Ill. This speech is entitled "Commonsense and Academic

Freedom," and its message is particularly poignant since it was probably the first commencement address to be given after the spring tragedies at Kent State and Jackson State.

Dr. Hook discusses the campus situation with amazing clarity and vision, and I commend his very thoughtful address to the readers of the CONGRESSIONAL RECORD:

COMMONSENSE AND ACADEMIC FREEDOM

(By Dr. Sidney Hook)

I wish to thank the members of the Graduating Class of Rockford College for extending an invitation to me through Dean Wattles to address them on this memorable occasion. It is a memorable occasion for various reasons, not only for you but also for the larger community, academic and non-academic, of which you are a part. It is especially memorable in that it is among the first commencements in this area of the nation, if not the first, to be held since the tragic events at Kent State College and Jackson State College, catastrophic occurrences for which we must all grieve and within our power atone.

As we live through these anguished days, it is difficult to think about anything except the tragedies, heartbreaking blunders and "might-have-beens" of the past. But if these tragedies and blunders are not to recur, we must turn our thoughts to the future. If we think about the future as citizens concerned with and about education, the overriding priority in the order of our concern, must go to the future of our colleges and universities. For on their development, the direction in which they move, much in our culture, in our very way of life—in your own way of life—depends. For the fate of our institutions of higher learning both reflects and helps redetermine the society in which they are found.

American colleges and universities today face the gravest crisis in their history—a crisis in their governance, their curriculum, their structure, their philosophy of education—to the extent that they have one—and, above all, in their freedom to inquire and to teach. From one end of the country to another, they are being subjected to unprecedented attacks from within their own academic communities that may close them down intermittently as they become transformed into centers of political action.

ACADEMIC FREEDOM ECLIPSED

There is a serious danger that unless this trend is resisted and reversed, colleges and universities will no longer be dedicated to the primary educational task of the discovery, publication and teaching of the truth but to the furtherance of ideological goals imposed by political activists among the faculties with the aid of student forces they have inspired and helped organize. The upshot may well be the gradual eclipse, under vague and misleading populist slogans of "participation" and "community control," of the very principles of academic freedom.

The development of free institutions of higher education in the United States has been a matter of slow but sure growth from the early days when they were the instruments of religious denominations and parochial political groups. Until yesterday, so to speak, the struggle for their liberation from these extraneous controls might have been considered won. One might have said with confidence that the faculties of our colleges and universities have been free to inquire into and teach the truth as they saw it in their respective fields of competence in complete independence. They were not compelled to subscribe to any ecclesiastical, economic or political dogmas to win or retain their posts. Occasionally, to be sure, there were episodic violations of these principles of academic freedom. But their very infre-

quency and the public outcry these violations evoked, testified to the strength of the tradition of freedom.

All this is under attack today; but no longer by the traditional enemies of academic freedom. During the last few years academic freedom has been threatened often openly and directly by political fanatics among students, and sometimes, with greater subtlety, by their faculty allies. On some campuses student extremists have set themselves up as arbiters of what may be taught in certain controversial fields. They have with relative impunity disrupted the classes of professors of whom they disapprove, and even threatened them with bodily harm. In some places they have reinforced their demands for unilateral concessions by faculties and administrations with fire-bombs and widespread vandalism. In other places they have refused to permit student bodies to choose freely among curricular options offered them with respect to subjects connected with national defense, or to abide by the majority decision once it was expressed. They have invaded the laboratories of scientists whose projects they have declared to be not in the public interest as they have conceived it, destroyed apparatus, ransacked and scattered files. And since the latest turn in foreign affairs, some of these elements have sized the opportunities and facilities, provided by institutions for all students, to further their own political interests and programs. The result has been chronic and serious interference with normal educational activities by other students who do not share these political interests or who, sharing them, feel that they can be best fulfilled through the normal educational processes. In short, fanatical students and some of their faculty allies have set themselves up as censors not only of what is good for man, society and the university, but of the methods and ways by which that good is to be realized.

FACULTIES NEED THE COURAGE OF PRINCIPLE

Responses by administrators and faculties to these desecrations have on the whole been feeble and defensive. Although the reaction of public opinion to acts of criminal violence has been much stronger, in the nature of the case, the proposals of educational laymen for meeting these conditions are unsophisticated and sometimes uninformed. They are usually hit-and-miss affairs which sometimes undermine educational autonomy, and harry the innocent in order to get at the guilty. Instead of isolating the hard core of fanatics from the mass of students, they make it easier for them to take a leadership role. There is really no need for punitive legislation on either federal or local levels to discipline violators of legal and educational due process. Experience has shown how ineffective such an approach is. The truth is that the faculties almost everywhere already have the power to do what is necessary if only they have the insight, and above all, the moral courage to do it. It is moral courage that has been in conspicuously short supply, and its deficiency has resulted in cumulative evils that become progressively harder to meet.

It is an attractive illusion to hope that if a faculty or a representative faculty-student agency that has relevant jurisdiction yields on a matter of principle in order to insure peace, this will insure peace. Experience confirms what should be apparent to any thoughtful person. Once the principle is yielded, the violation becomes a premise for escalating more and more imperious demands. Then when they become intolerable and an attempt is made to return to some form of the abandoned principle, the effort is sure to be interpreted by those skilled in the arts of demagoguery as a needless provocation.

The first thing we must try to do is to insure a change in the climate of violence that has engulfed so many of our colleges and

universities since the fateful events at the University of California at Berkeley a few years ago ushered in the academic revolution. There is no panacea by which this can be done. We cannot abolish history or retrieve the errors of omission and commission of the past. It is not enough to proclaim our re-dedication to the fundamental purpose of the college and university as an institution of learning and teaching. I am assuming that every well-regulated institution has established through the cooperation of its constituencies—faculties, students, and administrators—well-publicized guidelines on the rights and limits of expression in the academic community. The very nature of the quest for truth, of the process of negotiating differences about the scope of campus action presupposes that independence, criticism and dissent are integral to the life of the academic community. We cannot stress too much that it is never the right to dissent that is in question but only the form it takes. Protests, speeches, peaceful parades and demonstrations concerning real or fancied grievances are always in order. They are part of the birthright of all Americans. What is not part of this birthright are assault, arson, vandalism, the hurling of rocks and fire-bombs, the seizure of classrooms, offices and laboratories that disrupt the educational process.

FACULTY/STUDENTS CAN POLICE THEIR OWN CAMPUSES

It might be desirable as part of the ritual of academic life to have a joint meeting of faculty and students (or their representatives where numbers are large) at the outset of the school year to reaffirm the guide lines regulating the amenities of rational discourse and activity on the campus. To avoid as far as possible ultimate showdowns with law enforcement authorities, it is advisable to rely on student and faculty members to police their own campuses. If this were done, it would be easier to move more swiftly and justly against those who wish not to improve the university by remedying its defects but wish to establish a beachhead in the university and use it as a sanctuary for hit-and-run raids against the society they wish to destroy.

In the long run, however, the greatest threat to colleges and universities does not come from acts of criminal violence, as costly and senseless as they are. With or without faculty sanctions the law will ultimately be enforced against law-breakers as the toll of their deprivations mounts. Even with the surcease of violence, and perhaps as a price for its surcease, there still remain grave threats to the academic freedom of teachers and students in some tendencies strongly in higher education today. The wounds that the academy inflicts on itself in its bewildered effort to ward off attacks by its enemies may prove most dangerous to its future as a center of independent critical and creative thought. I can list only briefly some of these tendencies but their cumulative effect is weighty.

THE PROBLEM OF ACADEMIC TENURE

(1) Among these tendencies is the attempt to undermine and politicize the conditions of academic tenure without which academic freedom is not viable. There are many legitimate problems connected with questions of life-long academic tenure. In the educational interest of students, abuses of this tenure system should be corrected. But I am now calling attention to a new strategy, projected by extremist student groups on several campuses, that uses concern for conditions of tenure as an entering wedge to control both the content and personnel of instruction, and to achieve by indirection what direct action and confrontation cannot accomplish.

I speak of the demands for what has been called the principle of "parity," i.e. for 50% student voting rights on all decision-making

committees in the university, in colleges, or in departments. Among the chief issues on which parity of student power is demanded is tenure—both the granting of tenure and periodical renewal of tenure. Those making the demands are not content with being consulted before tenure is granted, with evaluating their teachers' abilities to communicate effectively and helpfully. This is an educationally legitimate procedure for which much can be said. But the demand goes far beyond that. It seeks power for students to decide on an equal footing with a professor's colleagues and peers whether he is to be invited to teach, whether he is to be granted tenure, and whether he is to have his tenure renewed every three or five or seven years—the time interval apparently depending upon the political militancy of those making the demand. The organizers of this movement towards parity, and its most zealous advocates, are those extremist political activists who have stressed political "relevance" as among the chief criteria of satisfactory teaching. It is not difficult to predict the upshot of the decisions of a tenure committee in which political fanatics enjoy parity with others. It would require only one faint-hearted faculty member, who feared for his own tenure or who sought to ingratiate himself with student activists or who agreed with their political criteria of relevance and acceptability, to give dominant power to a new and intolerant orthodoxy. A purge of the faculty would begin, ostensibly for technical pedagogical reasons, but actually on ideological grounds. In this way tenure as a basic safeguard of academic freedom will be eliminated. It is already under attack at universities on both coasts where extremist political activists have agitated for the dismissal of outstanding scholars whose views they caricature and denounce as "racist" or "fascist," and whose classes they often disrupt.

THE ATTACK ON RESEARCH

(2) In some prestigious institutions engaged in technological and scientific research, questionnaires are being circulated to the faculty requesting members to indicate what controls on research other than the judgments of their own scientific peers, should be established. Here, too, there are many legitimate problems on which men of good will and intelligence may differ. But there is reason to believe that under the cover of political and ethical criteria of selection, a program is being developed to eliminate research on all "war-related-problems"—a catch-all phrase for a vast number of actual and potential projects including many that have no, or extremely peripheral, bearings on national defense. This is coupled with the suggestion that "the community" or "the people" be brought into deliberations since they are affected by the consequences of all research. There is obvious danger here that the loudest and perhaps the decisive voices in determining the legitimacy of research will be, not the professionally trained and responsible scientists in consultation with his qualified colleagues and representatives of the electorate, but "the people" or the "community" whose moral and political judgment will be interpreted by a small activist élite desirous of imposing their own foreign policy line on the nation. Basic decision on research may be subjected to artfully concealed vetoes by those whose ruling passion is some political commitment or overarching ideological bias rather than the advance of scientific knowledge.

THE DEFEAT OF REASONED DISCOURSE

(3) There is even a grosser and more manifest threat to academic freedom which increases in boldness and arrogance every day. In centers of learning and teaching, of discovery and evaluation, we have taken it as axiomatic that reasoned discourse is the method by which conclusions are reached

and disagreements resolved. This presupposes freedom for all points of view to present their position, to marshal arguments, to offer alternatives to any policies and proposals in any field. Universities have flourished as the amenities of civilized discourse became the common law of the life of mind.

Today on many American campuses this freedom no longer exists. Certain extremist groups have destroyed the rights of students and faculty to hear views that challenge or even disagree with their own. The very freedoms which these groups have enjoyed and exploited to the fullest extent in the past, they now flagrantly deny to others. It is hardly an exaggeration to say that after the victory of the so-called Free Speech Movement at the University of California at Berkeley—which actually had little to do with free speech although it sparked student disruptions at home and abroad—free speech, in fact, disappeared in many areas at Berkeley. It has become hazardous to speak there in criticism of extremist causes or groups. No one can present positions that favor American policy. In hundreds of other universities, revolutionary or subversive or anti-government speakers are made welcome, but the meetings of other groups critical of them are not tolerated. Their meetings are disrupted. Their speakers are harried, shouted down, sometimes assaulted. While spokesmen for movements hostile to the government have unlimited freedom to incite to violent action in opposing governmental policies, spokesmen for these policies are often barred from campuses or can appear only under military cordons. By and large in these institutions the faculty and administration remain silent or content themselves merely with issuing ineffectual releases deprecating the worst excesses. They seem fearful of initiating disciplinary action even when official guests of the university have been insulted or scandalously mistreated lest this exacerbate the situation.

All of these threats to academic freedom come to a head in precipitate attempts to politicize the university in the aftermath of recent tragic events. It is sad to observe the capitulation to the movement towards politicization by scholars and administrators in leading institutions of learning who until recently regarded it as unthinkable that the university as a corporate body take a political stand in behalf of any cause no matter how exalted.

THE UNIVERSITY MUST NOT BECOME PARTISAN

Grant that there are many worthy causes in this world. Grant, since we believe in academic freedom, that all faculty members, students and administrators are free to devote themselves to the pursuit of these causes. Grant that the exercise of one's rights as a citizen of a free society should not jeopardize a scholar's standing in the academic community. But granting all this does not entail in the least that the university as such is thereby politically committed or should be. For when the university as a corporate body takes a stand in behalf of one political position rather than another, it is being inescapably partisan and hence unfair to those among its faculty and students who disagree with that stand or who, agreeing with it, regard it as a betrayal of the mission of the university to take a partisan political stand.

As individuals, faculty members and students have a right to support any position with respect to American involvement in Viet Nam or elsewhere. But when universities formally or officially shut down in protest, and on top of that declare that university resources are to be devoted to the termination of American involvement by bringing organized pressure to bear on Senators, Congressmen and the Executive in behalf of one strategy rather than another, it is obvious that this is a political commitment. The university cannot claim to be neutral with re-

spect to any political issue unless it permits all those who hold different positions on this issue to use its educational resources, too. But the variety of possible positions on the multiple issues that arise make such a course absurd. For if all groups used the university resources for political purposes, educational life would come to an end.

As individuals, faculty members and students have every right to throw themselves into the maelstrom of political activity during the coming electoral campaigns. But when universities as corporate bodies declare that they propose to shut down for two weeks next fall to permit faculties and students to engage in political activity, they are betraying their responsibility to serve "as citadels of reason, sanity and civility in a deeply troubled world." There are scholars, teachers and students who may not wish to engage in political activity of this kind, or who may wish to choose other times and other ways to influence political decisions. No institution has a right to restrict their freedom of choice in these respects.

Were any university as a corporate body to decide to shut down so that its staff and its students could engage for two weeks in prayer and other forms of religious worship, there would be an immediate outcry that such action violated the religious and academic freedom of the secular members of the academic community. No corporate body is justified in determining whether, when or how I should worship at the altar of my faith or any faith. It has no more justification to legislate for me in the field of politics. It is a shabby pretense to assert, as the President of one such Eastern institution has, that shutting it down for a fortnight "neither commits the university to any particular political position nor interferes with its prime educational responsibilities." It is no secret that the university is being shut down to mobilize its students and teachers for the election of one set of candidates over another, of so-called "peace" candidates, as if all candidates were not peace candidates differing only on how best to achieve it. But no matter how worthy a specific political strategy is, it is still a partisan one. And for those teachers and scholars who prefer not to engage in any political activity at this time or in this fashion, the assertion that the closure of the university is no interruption of prime educational responsibilities is sheer mockery.

THE FREE MARKET OF IDEAS MUST BE PRESERVED

Actually any college or university that has announced that its corporate resources are being devoted to the prosecution of a partisan political position or that it intends to close so that its faculty and students can march or descend on Washington for political purposes, has violated the clearly specified rules of its tax-exempt status. It is inviting taxpayer's suits.

What really is at stake in our current crisis is our pluralistic educational system, and ultimately the quality of our political democracy. If we have faith that we can learn from experience, the processes of learning must remain open to meet the problems of an open society. The challenges to its survival, to its survival as a free society, can only be met by preserving and strengthening what Justice Oliver Wendell Holmes called the free market of ideas—which is not identical with the free market of commodities. This entails the rejection of all authoritarian dogmas and practices that would transform the colleges and universities of the nation from communities of independent seekers for truths into instruments of ideological indoctrination.

To keep the institutions of higher learning open and free should be the task not only of professional educators but of all citizens. And to this double duty all of us must rise today—especially the young. For although it is true that the young will inherit the world, whether the world they inherit will be free, depends largely on them.