

Senator Walter Mondale on sudden infant death syndrome



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Senate

Mr. MONDALE. Mr. President, I am

very pleased that the Senate has agreed today to consider a series of amendments to the Sudden Infant Death Syndrome Act of 1974, and I hope that we will be able to pass the bill and send it on to the House and the President for his signature.

The legislation before us today is the outgrowth of 2 years of active Senate interest in and study of the problem of crib death or sudden infant death syndrome.

In this time, we have learned a lot about this phenomenon which strikes so unexpectedly and so tragically:

Although crib death touches at least 10,000 American families each year, most Americans know little about it.

Although medical researchers have explored a variety of hypotheses on the causes of crib death, none of them has been confirmed.

Although the National Institute of Child Health and Human Development calls it the largest cause of death in infants from 1 to 12 months old, SIDS is not even mentioned in Government statistics on infant mortality.

And, although SIDS was finally identified and described as a specific disease in 1969, large numbers of medical and legal authorities are not up to date on the research findings and implications of SIDS.

Perhaps the most shocking and disturbing aspect of this problem is what happens to the families whose children die of SIDS. Because the child dies suddenly and no medical explanation can be found, parents are sometimes unjustly accused by law enforcement authorities or even friends and neighbors—of responsibility for the child's death.

One young couple who lost a child told us that they had to move to another city because their neighbors were so suspicious that the child died because of some sort of negligence on the part of the parents.

As I mentioned, the Senate has taken an active interest in helping these families and in working to discover the cause of SIDS for more than 2 years. In January of 1972, my Subcommittee on Children and Youth held a hearing on SIDS. Following that hearing I introduced Senate Joint Resolution 206, which was passed by the Senate by a vote of 72 to 0 on June 7 of that year. The resolution was not acted on by the House. I request unanimous consent that the text of Senate Joint Resolution 206 be printed at this point in the Record.

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

S.J. RES. 206

Joint resolution relating to sudden infant death syndrome

Whereas sudden infant death syndrome kills more infants between the age of one month and one year than any other disease; and

Whereas the cause and prevention of sudden infant death syndrome are unknown; and

Whereas there is a lack of adequate knowledge about the disease and its effects among the public and professionals who come into contact with it: Therefore be it

Resolved by the Senate and House of Representatives of the United States of America in Congress assembled, That it is the purpose of this joint resolution to assure that the maximum resources and effort be concentrated on medical research into sudden infant death syndrome and on the extension of services to families who lose children to the disease.

Sec. 2. The National Institute of Child Health and Human Development, of the Department of Health, Education, and Welfare, is hereby directed to designate the search for a cause and prevention of sudden infant death syndrome as one of the top priorities in intramural research efforts and in the awarding of research and research training grants and fellowships; and to encourage researchers to submit proposals for investigations of sudden infant death syndrome.

Sec. 3. The Secretary of Health, Education, and Welfare is directed to develop, publish, and distribute literature to be used in educating and counseling coroners, medical examiners, nurses, social workers, and similar personnel and parents, future parents, and families whose children die, to the nature of sudden infant death syndrome and to the needs of families affected by it.

Sec. 4. The Secretary of Health, Education, and Welfare is further directed to work toward the institution of statistical reporting procedures that will provide a reliable index to the incidence and distribution of sudden infant death syndrome cases throughout the Nation; to work toward the availability of autopsies of children who apparently die of sudden infant death syndrome and for prompt release of the results to their parents; and to add sudden infant death syndrome to the International Classification of Disease.

Mr. MONDALE. I introduced a resolution, rather than a bill, in 1972 because representatives of the Department of Health, Education, and Welfare testified that they were deeply concerned already about SIDS and that no new authorizing legislation would be necessary to intensify their efforts.

Early in 1973, as a vehicle for further discussion and investigation into the problem, I introduced S. 1745, "to provide financial assistance for research activities for the study of sudden infant death syndrome, and for other purposes." I am deeply grateful to Senator KENNEDY, chairman of the Health Subcommittee, for his active role in developing this legislation and for his willingness to hold a joint hearing with the Subcommittee on Children and Youth on SIDS.

Our 1973 hearing, on September 20, focused on the need for humane and sensitive treatment of families whose children die of SIDS. Among the witnesses were Mr. and Mrs. John Smiley of California, who were jailed for 2 days in connection with the death of their infant daughter. They were released from jail and charges against them dropped after they received the assistance of an attorney from a national organization that works with families whose children die of SIDS.

During that hearing we also received testimony from officials of the Department of Health, Education, and Welfare. They testified that in the year and a half since they last appeared before the Senate, no efforts had been undertaken to provide assistance to families who lose children. No funds had been devoted to the training of social workers, coroners, nurses and other personnel who must be informed if they are to work sensitively with families of SIDS victims. And only \$601,000 was spent in fiscal year 1973 on research directly related to finding a cause and cure for SIDS.

We decided, on the basis of this disappointing record, that we could not wait any longer for this initiative to come from HEW. The Senate approved a more comprehensive, stronger version of S. 1745 on December 11 of 1973. On January 21 of this year, the House approved a different version of the bill.

The legislation before us today is what I believe will be an effective compromise between the House and Senate bills.

The bill approved by the Senate authorized the Secretary of HEW, through the Assistant Secretary for Health and Scientific Affairs, to establish regional centers for counseling, information, educational and statistical programs on SIDS. Authorizations for this program in the Senate bill were \$3 million for fiscal 1974; \$4 million for 1975; and \$5 million for 1976. The House version authorized \$2 million each for the 3 years.

The bill before us today provides authorizations of \$2 million for 1974; \$3 million for 1975 and \$4 million for 1976. It also includes language from the House bill specifying more clearly the purposes for which grants and contracts awarded under the program can be used. These activities are "the collection, analysis and furnishing of information—derived from post mortem examinations and other means—relating to the causes of sudden infant death syndrome; and "the provision of information and counseling to families affected by sudden infant death syndrome."

Language concerning the creation of regional centers for these activities has been deleted to provide for maximum flexibility in grant programs. It is our intention not to preclude the creation of regional centers, but to make it possible for a variety of approaches to counseling, education, information and statistical activities to be tried. In many cases, commonsense might suggest that creation of a regional center would be the most economical and efficient way of dealing with these concerns; as well as for coordinating research efforts.

The other major section of this bill deals with research. The Senate bill provided for a SIDS research program to be carried out through the National Institute of Child Health and Human Development. Authorizations were \$7 million for fiscal 1974; \$8 million for 1975; and \$9 million for 1976. The bill passed by the House contained no research authorization.

We have adopted the following compromise language:

The Secretary, through the National Institute of Child Health and Human Development, shall carry out research programs specifically relating to sudden infant death syndrome.

In addition, the bill before us requires a detailed annual report to Congress on the extent of the research conducted each year and on the number and amount of research and grant contract applications which have not been funded. In the Senate Labor and Public Welfare Committee, we have had a continuing debate with NICHD about what constitutes research on SIDS. Our contention is that the scope and seriousness of this disease require a focused, concentrated research effort. However, close examination of past research efforts showed us that most funds attributed to "SIDS" research were not specifically targeted on that disease, but on broader categories. For example, in fiscal 1973, NICHD reported an expenditure of \$4.1 million on SIDS research but only \$603,575 of that could be characterized as "primary" SIDS research.

The purpose of the research section of this bill is to encourage NICHD to significantly expand and focus its research program.

In closing, I would like to express my deep gratitude to Senator KENNEDY, chairman of the Health Subcommittee; and to Representative PAUL ROGERS, chairman of the House Subcommittee on Public Health and Environment, for their invaluable assistance in moving this legislation through the Congress.

I request unanimous consent that a copy of S. 1745, as passed by the Senate, be printed in the RECORD.

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

S. 1745

A Bill to provide financial assistance for research activities for the study of sudden infant death syndrome, and for other purposes

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That this Act may be cited as the "Sudden Infant Death Syndrome Act of 1973".

STATEMENT OF PURPOSE

Sec. 2. It is the purpose of this Act to provide financial assistance to identify the causes and preventive measures needed to eliminate sudden infant death syndrome, to provide information and counseling services to families affected by sudden infant death syndrome and to personnel engaged in research for the prevention of sudden infant deaths.

AUTHORIZATION OF APPROPRIATIONS

Sec. 3. Section 441 of the Public Health Service Act (42 U.S.C. 201) is amended by inserting the subsection designation "(a)" immediately before the first sentence and by adding at the end thereof the following new subsection:

"(b)(1) The Secretary, through the National Institute of Child Health and Human Development, shall carry out research programs specifically relating to sudden infant death syndrome.

"(2) There are authorized to be appropriated to carry out the purposes of this subsection \$7,000,000 for the fiscal year ending June 30, 1974, \$8,000,000 for the fiscal year ending June 30, 1975, and \$9,000,000 for the fiscal year ending June 30, 1976."

AMENDMENT TO TITLE XI OF THE PUBLIC HEALTH SERVICE ACT

Sec. 4. (a) The title of title XI is amended by adding thereto the words "AND PERINATAL BIOLOGY AND INFANT MORTALITY".

(b) Title XI of the Public Health Service Act is amended by adding at the end thereof the following new part:

"PART C—SUDDEN INFANT DEATH SYNDROME "SUDDEN INFANT DEATH SYNDROME COUNSELING, INFORMATION, EDUCATIONAL, AND STATISTICAL PROGRAMS

"Sec. 1121. (a) (1) The Secretary through the Assistant Secretary for Health and Scientific Affairs may make grants to public and nonprofit private entities, for the establishment of regional centers for sudden infant death syndrome counseling, information, educational, and statistical programs.

"(2) The Secretary through the Assistant Secretary for Health and Scientific Affairs shall carry out a program to develop public information and professional educational materials relating to sudden infant death syndrome and to disseminate such information and materials to persons providing health care, public safety officials, and to the public generally. The Secretary may carry out such program through grants to public and nonprofit private entities or contracts with public and private entities and individuals.

"(b) For the purpose of making payments pursuant to grants and contracts under this section, there are authorized to be appropriated \$3,000,000 for the fiscal year ending June 30, 1974, \$4,000,000 for the fiscal year ending June 30, 1975, and \$5,000,000 for the fiscal year ending June 30, 1976.

"APPLICATION; ADMINISTRATION OF GRANT AND CONTRACT PROGRAMS

"Sec. 1122. A grant under this part may be made under application to the Secretary at such time, in such manner, containing and accompanied by such information, as the Secretary deems necessary. Each applicant shall—

"(1) provide that the program and activities for which assistance under this part is sought will be administered by or under supervision of the applicant;

"(2) provide for appropriate community representation (with special consideration given to groups previously involved with sudden infant death syndrome) and the development and operation of any program funded by a grant under this part;

"(3) set forth such fiscal controls and fund accounting procedures as may be necessary to assure proper disbursement of and accounting for Federal funds paid to the applicant under this part; and

"(4) provide for making such reports in such form and containing such information as the Secretary may reasonably require.

"REPORTS

"Sec. 1123. (a) The Secretary shall prepare and submit to the President for transmittal to the Congress within one year after the date of enactment of this Act and annually thereafter a comprehensive report on the administration of this Act with regard to sudden infant death syndrome.

"(b) The report required by this section shall contain such recommendations for additional legislation as the Secretary deems necessary."

HEALTH SURVEY AND STUDIES

Sec. 5. Section 305(b) of the Public Health Service Act is amended by inserting immediately before the period at the end thereof the following: "specifically including statistics relating to sudden infant death syndrome".

The substitute amendment is as follows:

In lieu of the matter proposed to be inserted by the House, insert the following:

SHORT TITLE

SECTION 1. This Act may be cited as the "Sudden Infant Death Syndrome Act of 1974."

SUDDEN INFANT DEATH SYNDROME RESEARCH

Sec. 2. (a) Section 441 of the Public Health Service Act is amended by striking out "an institute" and inserting in lieu thereof "the National Institute of Child Health and Human Development".

(b) (1) Such section 441 is further amended by inserting "(a)" after "Sec. 441." and by adding at the end thereof the following:

"(b) The Secretary shall carry out through the National Institute of Child Health and Human Development the purposes of section 301 with respect to the conduct and support of research which specifically relates to sudden infant death syndrome."

(2) Section 444 of such Act is amended (1) by striking out "The Surgeon General" each place it occurs and inserting in lieu thereof "The Secretary", and (2) by striking out "the Surgeon General shall, with the approval of the Secretary" in the first sentence and inserting in lieu thereof "The Secretary shall, in accordance with section 441(b),".

(c) (1) Within 90 days following the close of the fiscal year ending June 30, 1975, and the close of each of the next two fiscal years, the Secretary shall report to the Committees on Appropriations of the Senate and the House of Representatives and to the Committee on Labor and Public Welfare of the Senate and the Committee on Interstate and Foreign Commerce of the House of Representatives the following information for such fiscal year:

(A) The (i) number of applications approved by the Secretary in the fiscal year reported on for grants and contracts under the Public Health Service Act for research which relates specifically to sudden infant death syndrome, (ii) total amount requested under such applications, (iii) number of such applications for which funds were provided in such fiscal year, and (iv) total amount of such funds.

(B) The (i) number of applications approved by the Secretary in such fiscal year for grants and contracts under the Public Health Service Act for research which relates generally to sudden infant death syndrome, (ii) total amount requested under such applications, (iii) number of such applications for which funds were provided in such fiscal year, and (iv) total amount of such funds.

Each such report shall contain an estimate of the need for additional funds for grants or contracts under the Public Health Service Act for research which relates specifically to sudden infant death syndrome.

(2) Within five days after the Budget is transmitted by the President to the Congress for the fiscal year ending June 30, 1976, and for each of the next two fiscal years, the Secretary shall transmit to the Committees on Appropriations of the House of Representatives and the Senate, the Committee on Labor and Public Welfare of the Senate, and the Committees on Interstate and Foreign Commerce of the House of Representatives an estimate of the amount requested for the National Institutes of Health for research to sudden infant death syndrome and a comparison of that amount with the amount requested for the preceding fiscal year.

COUNSELING, INFORMATION, EDUCATIONAL AND STATISTICAL PROGRAMS

Sec. 3. (a) Title XI of the Public Health Service Act is amended by adding at the end thereof the following new part:

PART C—SUDDEN INFANT DEATH SYNDROME

"SUDDEN INFANT DEATH SYNDROME COUNSELING, INFORMATION, EDUCATIONAL, AND STATISTICAL PROGRAMS

"Sec. 1121. (a) The Secretary, through the Assistant Secretary for Health, shall carry out a program to develop public information and professional educational materials relating to sudden infant death syndrome and to disseminate such information and materials to persons providing health care, to public safety officials, and to the public generally.

"(b)(1) The Secretary may make grants to public and nonprofit private entities, and enter into contracts with public and private entities, for projects which include both—

"(A) the collection, analysis, and furnishing of information (derived from post mortem examinations and other means) relating to the causes of sudden infant death syndrome; and

"(B) the provision of information and counseling to families affected by sudden infant death syndrome.

"(2) No grant may be made or contract entered into under this subsection unless an application therefor has been submitted to and approved by the Secretary. Such application shall be in such form, submitted in such manner, and contain such information as the Secretary shall be regulation prescribe. Each applicant shall—

"(A) provide that the project for which assistance under this subsection is sought will be administered by or under supervision of the applicant;

"(B) provide for appropriate community representation in the development and operation of such project;

"(C) set forth such fiscal controls and fund accounting procedures as may be necessary to assure proper disbursement of and accounting for Federal funds paid to the applicant under this subsection; and

"(D) provide for making such reports in such form and containing such information as the Secretary may reasonably require.

"(3) Payments under grants under this subsection may be made in advance or by way of reimbursement, and at such intervals and on such conditions, as the Secretary finds necessary.

"(4) Contracts under this subsection may be entered into without regard to sections 3648 through 3709 of the Revised Statutes (31 U.S.C. 529; 44 U.S.C. 5).

"(5) For the purpose of making payments pursuant to grants and contracts under this subsection, there are authorized to be appropriated \$2,000,000 for the fiscal year ending June 30, 1975, \$3,000,000 for the fiscal year ending June 30, 1976, and \$4,000,000 for the fiscal year ending June 30, 1977.

"(c) The Secretary shall submit, not later than January 1, 1976, a comprehensive report to the Committee on Labor and Public Welfare of the Senate and the Committee on Interstate and Foreign Commerce of the House of Representatives respecting the administration of this section and the results obtained from the programs authorized by it."

(b) The title of such title XI is amended by adding at the end thereof "AND SUDDEN INFANT DEATH SYNDROME".

The motion was agreed to.



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No. 32

Senate

ECONOMISTS COMMENT ON MONDALE \$200 OPTIONAL TAX CREDIT PROPOSAL

Mr. MONDALE. Mr. President, on January 28, I introduced S. 2906, which would cut nearly \$200 a year from the average family's tax bill by allowing taxpayers to take a \$200 credit for themselves and each of their dependents instead of the existing \$750 personal exemption.

This bill would increase the purchasing power of low- and middle-income Americans by nearly \$6.5 billion, and help to head off the growing threat of recession.

I am very pleased that the Senator from Minnesota (Mr. HUMPHREY), the Senators from Iowa (Mr. CLARK and Mr. HUGHES), the Senator from Louisiana (Mr. JOHNSON), the Senator from Connecticut (Mr. RIBICOFF), and the Senator from Utah (Mr. MOSS) have joined me in cosponsoring S. 2906.

I am pleased also that the distinguished Congresswoman from Michigan (Mrs. GRIFFITHS), a senior member of the House Ways and Means Committee, has introduced companion legislation in the House (H.R. 13197).

Shortly after introducing this legislation, I wrote to a number of distinguished economists seeking their views on the proposal. I have now received a number of responses, and I would like to share them with my colleagues.

I am very encouraged by the support shown in these letters. While some of those responding had reservations about the proposal, they all contained extremely helpful suggestions and thoughtful comments.

It is clear from the comments I have received that there are differences of opinion on the need for a tax cut at this time. There are also differences—although fewer—on the form such a tax cut should take.

This underlines the importance of the hearings Chairman LONG has scheduled for next Tuesday, March 19, on tax cut proposals. There should be a full airing of views on such an important matter. The chairman's decision is a welcome and constructive response to the deteriorating economic outlook.

I suggested hearings along these lines in a letter to Chairman LONG last month, and I am extremely pleased that time has been found for them on the very full Finance Committee schedule.

There are three important justifications for the \$200 optional tax credit.

It will help make up for the inflation and higher taxes that are imposing such a cruel burden on the average family.

It will help to head off the impending recession.

It will make our tax system more equitable.

Most of the comments I received dealt with some or all of these points.

COMPENSATION FOR INFLATION AND HIGHER TAXES

Inflation is accelerating. Prices rose 8.8 percent last year, but the rate was nearly 10 percent in the last 3 months, and consumer prices in January of this year rose at an annual rate of 12 percent.

Taxes too are going up, as inflation pushes taxpayers into higher brackets, and as payroll tax rates apply to higher levels of income.

A \$200 optional tax credit would compensate—at least in part—for this erosion in workers' incomes.

Walter Heller, Chairman of the Council of Economic Advisers under Presidents Kennedy and Johnson, emphasized this justification for the \$200 credit in his letter:

Inflation has eroded and is eroding the real purchasing power of the \$750 exemption at a rapid rate. The boosting of that exemption to restore its previous value, therefore, ought to have a high priority. Since inflation has taken a particularly heavy toll at the modest and low income levels (especially because of the leap in food and oil prices), it is appropriate that more of the benefits of any tax adjustment today should be concentrated in the low income groups. The shift to a credit option serves this purpose.

George Perry, senior fellow at the Brookings Institution, made the same point:

Consumers real incomes have declined in 1973 as a result of soaring food prices and will decline further in 1974 as a result of soaring fuel costs. Your tax proposal would restore some of these real income losses.

Arthur Okun, Chairman of the Council of Economic Advisers under President Johnson:

In 1974 the American consumer will be spending directly and indirectly for fuel about \$20 billion more than last year to get less product. This drain on the budget is bound to have serious effects on the experience of other consumer industries—what the consumer spends on oil is not available for spending on other discretionary items ranging from movie tickets to television sets. Indeed, if the oil embargo ends and the availability of gasoline increases while its price remains high, the drain on the consumer budget will be even greater. . . .

In the present context, the provision of a consumer tax cut may help prevent the kind of retrenching in consumer living standards that might otherwise take place in response to layoffs and fuel and food inflation.

AN ANTIDOTE TO RECESSION

In a column in the March 3 Washington Post, Hobart Rowen reported that key Nixon administration advisers have concluded that the downturn in real GNP for the first quarter of this year "could be over 3 percent, and possibly as much as 4 percent."

The respected economic forecasters at the Wharton School at the University of Pennsylvania have made a similar prediction.

This is decidedly more gloomy than even the relatively cheerless report of the Council of Economic Advisers a month ago. And, of course, it can scarcely be squared at all with the Canute-like pronouncements of President Nixon that—

There will be no recession in the United States of America.

When industrial production is declining, unemployment is growing, and the growth rate is negative, it takes more than verbal legerdemain to convince people that we are not in a recession.

So far, the administration's principal method of attacking the recession has been to try to define it away.

The budget it has proposed for the 1975 fiscal year can only make things worse. It is highly restrictive, with a full employment surplus of \$8 billion. This means spending will be \$8 billion less than it would have to be to pump up the economy and bring unemployment down to the "full employment" level of 4 per-

cent. This will clamp down on growth and employment even more than this year's estimated \$4 billion full employment surplus, which has already served to bring the economy to a standstill.

The \$200 optional tax credit would put an additional \$6.5 billion in the hands of consumers, and give the economy a badly needed shot in the arm.

Most of the economists who wrote commented on this justification for the \$200 credit:

Walter Heller put it this way:

Under present circumstances, with the economy sliding toward a recession, and with the President's budget projecting an increase in the full-employment budget surplus (in NIA, or National Income Accounting terms) between fiscal 1974 and fiscal 1975, the \$6.5 billion of fiscal stimulus implicit in your plan would be a welcome stimulus to a lagging economy. Moreover, it is the kind of a boost that could be translated into the withholding system and therefore into higher paychecks very quickly.

George Perry wrote:

By all available evidence, the economy is already in another recession. A boost to consumer purchasing power will help fight the downturn, lessening the rise in unemployment that is in store and improving the probability of a prompt recovery.

Robert Eisner, professor of economics at Northwestern University:

I believe that your proposed legislation for an optional \$200 per dependent credit is an excellent step in the direction of stimulating the economy. . . .

Arthur Okun:

In view of the bleak outlook for consumer expenditures (which represent nearly two-thirds of our GNP), the prospects for an early upturn are very speculative. There is considerable risk that the sag could continue all year in the absence of policies to bolster activity. On the other hand, there is little risk of a self-generating upsurge in the economy that would make additional fiscal support inappropriate. Thus, a well-timed cut in consumer taxes would be an important insurance policy against a prolonged and sharp slide in employment and output. . . .

The vast bulk of the additional consumer spending will go into areas where the economy has available labor and plant capacity to meet and greet added demand. In the present situation, one can feel particularly confident that the response will increase output and employment rather than add to inflation. While a number of shortage areas remain in our economy, those except for food and fuel will be vanishing during the first half of 1974 as rapidly as they emerged during the first half of 1973. The economy's operating rates will be lower by mid-year than they were late in 1972, when lumber was the only significant product with a shortage. In the case of food, only a trivial part of additional consumer income adds to the demand for food and thus a tax cut will have virtually no effect on food prices. In the case of petroleum, the system of price controls should ensure that any increment in demand is not converted into additional inflation. Indeed, by evidencing concern and effort by the government to make up for the acute cost-of-living squeeze on the worker, a tax cut could have beneficial effects in preserving the recent moderate behavior of wages.

Others who responded were not certain that a tax cut was the right economic medicine at this point. However, most said that if a tax cut was decided upon, the \$200 optional credit was preferable to an across-the-board cut or an increase in the \$750 exemption.

Otto Eckstein, professor of economics at Harvard and a member of the Council of Economic Advisers under President Johnson wrote:

The economy is headed for a recession, but a tax cut would come too late. The economy is likely to be moving up at a pretty good rate by the end of the year. The economic impact of a tax cut, even if action were taken immediately, would barely be felt before then. . .

If a tax cut is undertaken, it should be in the general form of your proposal. An across-the-board tax cut would mainly benefit middle income families; it would have a very low multiplier because they are not likely to spend the cuts on automobiles and other durables.

Gardner Ackley of the University of Michigan, Chairman of the Council of Economic Advisers under President Johnson:

I am not sure that further stimulus—which could certainly not be effective for a number of months—is needed. However, there is enough uncertainty about that, that it is probably useful for tax-cut proposals to begin to be discussed and warmed up for use if extra stimulus should become necessary.

Robert R. Nathan, head of Robert R. Nathan Associates, Inc. in Washington:

I think we are definitely in a recession and I have grave doubts about the basis for believing, as many of my good friends and liberal economists believe, that the economy will pick up in the second half of the year. . . . Therefore, something ought to be done about stimulating the levels of economic activity. . . .

A tax cut always worries me as a measure for stimulation of economic activity. Almost every time we get a tax cut we end up with a less progressive system. If we are going to have a general tax cut I think your proposal is excellent because it really does help the lower income groups much more than the middle or higher income groups, and that is very necessary.

John Kenneth Galbraith of Harvard:

Certainly yours is the right way to reduce taxes. The effect on lower income families is more favorable than to raise the exemption.

However, I am very doubtful about a tax reduction. Inflation is still a major problem. It's a tough fact that tax reduction is the wrong medicine for that. And were there need for more fiscal stimulation, I would respond to the pressure of social need with higher spending and public service employment.

The following table illustrates the point made by many of those who responded; that is, that the \$200 optional credit gives proportionately more relief to low- and middle-income taxpayers than do alternative proposals to raise the \$750 exemption to \$850, or to add a \$25 per-person credit on top of the \$750 exemption:

Adjusted gross income class	Percent of tax-able returns	Percent of tax relief		
		\$200 optional credit	\$850 exemption	Additional \$25 credit
0 to \$3,000.....	5.3	2.6	1.3	1.7
\$3,000 to \$5,000.....	12.7	9.7	5.2	6.6
\$5,000 to \$7,000.....	14.3	15.2	8.8	10.6
\$7,000 to \$10,000.....	20.1	27.2	17.4	19.9
\$10,000 to \$15,000.....	25.6	35.3	30.0	31.7
\$15,000 to \$20,000.....	12.4	9.3	17.7	16.3
\$20,000 to \$50,000.....	8.7	.8	16.5	11.8
\$50,000 to \$100,000.....	.7	2.5	1.1
\$100,000 plus.....	.21	.2

Source: Joint Committee on Internal Revenue Taxation Based on calendar year 1972 income levels.

The \$200 optional tax credit gives 78 percent of the relief to those in the \$5,000 to \$15,000 bracket, and 99 percent to those making less than \$20,000.

Increasing the \$750 exemption by \$100, however gives only 56 percent of the relief to those in the \$5,000 to \$15,000 brackets, even though they make up 60 percent of all taxpayers. Furthermore, it gives nearly 20 percent of the relief to those making more than \$20,000, even though they represent less than 10 percent of all taxpayers.

The proposal for an additional \$25 per person credit falls roughly between the \$200 optional credit and the \$850 exemption in the percentage of relief it provides to each income category.

Joseph Pechman, director of economic studies at the Brookings Institution, has prepared an enormously helpful analysis of the \$200 credit, the \$850 exemption, and two other options, which carries the comparison forward using 1974 and 1975 income levels.

His analysis generally coincides with that prepared for me by the Joint Committee on Internal Revenue Taxation using 1972 income levels. However, Pechman's analysis shows that as income levels rise, a substantially greater percentage of the benefits from the \$850 exemption go to those with incomes over \$20,000.

I ask unanimous consent that the full text of Dr. Pechman's excellent analysis, and the accompanying tables, be printed in the Record at the conclusion of my remarks.

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

(See exhibit 1.)

TAX EQUITY

Mr. MONDALE. Mr. President, a \$200 optional tax credit would be a significant step toward tax equity and fairness.

Hearings on American families before the Subcommittee on Children and Youth—which I chair—have demonstrated the unfairness of the existing \$750 exemption. While it is designed in large part to help families raise their children, it discriminates strongly against low- and moderate-income families.

The \$750 exemption for dependents is much more valuable for the wealthy than it is for average Americans. It provides the most help to those who need it least, and the least help to those who need it most.

For those in the highest 70-percent bracket—making \$200,000 a year or more—each \$750 exemption is worth \$525 in reduced taxes. But for someone in the lowest 14-percent bracket making around \$5,000 a year, each \$750 exemption is worth only \$105 in reduced taxes.

The new optional \$200 credit would be worth the same amount in reduced taxes—\$200—to everyone who used it, and would make a real start toward reducing the inequity inherent in the \$750 exemption.

A number of the economists I wrote stressed the greater equity of credits as opposed to deductions.

Murray Weidenbaum of Washington University, formerly Assistant Secretary of the Treasury for Economic Policy in the Nixon administration:

I have been urging the substitution of credits for deductions on the personal income tax as a way of increasing the progressivity of the Federal tax structure. The enclosed article presents some of the reasoning.

Otto Eckstein:

Your tax credit proposal would improve the fairness of our tax system. There is little reason why the value of an exemption—which is meant to help defray the living costs of each family member—should rise with income. Indeed, at the low tax rates of the lower brackets, the tax benefit of the exemption has become so small that it no longer bears any relation of the cost of supporting a dependent.

Robert Eisner:

[Your proposal] is an excellent step in the direction of . . . redressing inequities in the tax law. As you point out, the \$750 exemption offers large tax savings to the rich and little or nothing to the poor.

James Tobin of Yale University, a member of the Council of Economic Advisers under President Kennedy:

I very much favor conversion of exemptions into credits, and I am glad you are sponsoring such legislation.

Walter Heller:

The shift [to a credit option] also serves the longer-run purpose of recasting the exemption into a form that makes better sense in terms of a distribution of tax burdens that is fairer to the low income groups.

Wilbur Cohen, dean of the School of Education at the University of Michigan and Secretary of Health, Education, and Welfare in the Johnson administration:

I strongly support the idea of a tax credit for the personal exemptions. A tax credit is an important tax reform which should have extremely high priority.

Arthur Okun:

The best type of tax cut would put income rapidly into the hands of lower income and middle-income groups. From that point of view, the \$200 credit option for the personal exemption seems ideally suited to meet the economy's needs. It could be promptly reflected in withholding schedules and would provide relief to those who have suffered most as a result of the food and fuel price explosion of the past year. By concentrating the benefits in the tax cut in income groups

with marginal tax rates under 26 percent, it improves the progressivity and equity of the tax system.

Many people have trouble understanding why a \$200 credit saves low- and middle-income taxpayers more in taxes than a \$750 deduction. An example might help.

Suppose a family has an income of \$10,000. If there are four people in the family, that means four exemptions worth \$750 each, for a total of \$3,000. This \$3,000—plus the \$1,500 standard deduction—is then subtracted from \$10,000, and the tax is figured on what is left—\$5,500. The statutory tax rate on that is just under 17 percent, and the tax is \$905.

Under a system of \$200 tax credits, however, only the \$1,500 standard deduction is subtracted from the \$10,000 of income before the tax is figured. The statutory tax rate on this \$8,500 of income is just under 18 percent, and the tax would be \$1,490.

However, the four \$200 tax credits—worth a total of \$800—are then subtracted from that \$1,490, leaving a final tax due of only \$690. This amounts to a saving of \$215 over the \$905 that would be due using four \$750 exemptions.

HELP FOR NONTAXPAYERS

Many of the economists who wrote expressed concern that the \$200 optional tax credit would not help those with very low incomes who pay no tax.

Walter Heller, for example, said:

[The] proposal should be accompanied by other measures that will be of particular benefit to those who fall below the exemption limits and are badly in need of income support from the Federal Government.

James Tobin wrote:

I believe the credits should be cashable, for families that do not have sufficient tax liability to use the credits against.

Robert Eisner:

I do believe, however, that there is a serious deficiency in your proposal in failing to provide tax relief for really low income earners whose income taxes are less than \$200 per dependent or who pay no income taxes at all. . . . I should like to see your proposal enlarged to let the income tax credit be taken against social security taxes to the extent the taxpayer does not have income tax liabilities equal to the amount of the credit.

Robert Nathan:

I know most of the people pay some income taxes but there are still quite a number at the lower levels who do not pay and they would not be benefited. Therefore, from an equity point of view your proposal goes quite a long way but I don't think it would be quite as helpful to the really low income groups as some moderation in the payroll tax.

Stanley Surrey of the Harvard Law School, Assistant Secretary of the Treasury for Tax Policy under Presidents Kennedy and Johnson, raised a related, but somewhat different, issue:

[In] 1969 and 1971 the Congress, mainly through the low income allowance, made sure that the income tax would not dip below the poverty level. With inflation and price rises, we now have people below the poverty line being required to pay income tax. I think the first order of business is to restore the prior policy.

The \$200 optional tax credit would assure that no one with an income below the poverty line would have to pay Federal income taxes. The following table shows the current poverty line for non-farm individuals and families, and the level of income below which no tax would be due using a \$200 credit:

Family size	Poverty line	Income below which no tax is due using \$200 credit
1.....	\$2,409	\$2,644
2.....	3,101	3,988
3.....	3,807	5,182
4.....	4,871	6,247
5.....	5,748	7,300
6.....	6,461	8,353

Joseph Pechman's letter contains an excellent comparison of the impact of three other options on poverty level taxation. It is reprinted at the conclusion of my remarks.

It is true that those who pay no income tax at all would not benefit from the \$200 optional tax credit. As many of those who wrote suggested, cuts in the Federal income tax should be accom-

panied by other measures aimed at helping those with incomes so low they pay no tax.

The Senate has already acted on one such measure, the imaginative and constructive proposal by the distinguished chairman of the Senate Finance Committee, RUSSELL LONG, for a "work bonus" for low-income workers. Under the LONG "work bonus" plan—approved by the Senate on November 30 by an overwhelming 57 to 21 vote—each low-income worker with one or more children would receive a credit equal to 10 percent of his income up to \$4,000. The credit would be gradually phased out for those with incomes over \$4,000, so that no one with an income of over \$5,600 would receive the credit. The credit would be paid whether or not the worker paid any income tax, and would, therefore, benefit those not helped by the \$200 optional tax credit I have proposed.

The "work bonus" is in fact an excellent complement to the \$200 optional tax credit, since its benefits phase out at just about the income levels where the benefits from the \$200 credit begin. The "work bonus" establishes a strong beginning toward helping working Americans with low incomes. It is now in conference as part of H.R. 3153, and I hope the House conferees will agree to accept it.

Many of the economists who wrote me have urged that social security payroll tax reform be given high priority. I have advocated this for a number of years, and I hope we can move in this Congress to ease the heavy burden of the payroll tax on low- and moderate-income wage earners and their families. The LONG "work bonus" is one step in this direction, and I hope we can build on that to achieve fundamental reform in this very important area.

The excellent work done by Representative MARTHA GRIFFITHS' Subcommittee on Fiscal Policy over the last 2 years has laid the groundwork for thorough-going reform of the whole range of Federal income and "in-kind" transfer programs that are intended to benefit low-income Americans. As Representative GRIFFITHS' subcommittee has demonstrated, these programs have so many overlaps and differing eligibility formulas that they all must be considered together in devising an effective reform program. Changing just one aspect of the system can often lead to unforeseen and unwanted consequences elsewhere. For example, when a family benefits from a number of programs simultaneously—such as AFDC, food stamps, medicaid, and public housing—it often happens that the family is penalized severely for earning just a little bit of extra money. This entire area stands in need of reform, and I hope we can move on it in the near future.

In addition, we must retain and strengthen the existing social services program—which provides child day care, special help to the mentally retarded, services to help the elderly stay in their own homes—and other services to help low-income families, the disabled, the blind, and the elderly to achieve and retain independence. And we need to enact strong child development legislation, along the lines adopted by the Congress and vetoed by the President years ago. I will soon be reintroducing my child development bill, and I intend to push for early action on it.

Mr. President, I ask that the full text of the excellent letters I have received appear in the RECORD at this point. In addition, I ask that a column by Walter Heller in yesterday's Wall Street Journal entitled "The Case for Fiscal Stimulus," and a column by Hobart Rowen from the March 10 Washington Post, also be included in the RECORD at this point.

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

UNIVERSITY OF MINNESOTA,
Minneapolis, Minn., February 5, 1974.
Senator WALTER F. MONDALE,
U.S. Senate,
Washington, D.C.

DEAR FRITZ: In response to your inquiry of January 31 concerning your proposal for an optional \$200 tax credit, I find it attractive for the following important reasons:

Inflation has eroded and is eroding the real purchasing power of the \$750 exemption at a rapid rate. The boosting of that exemption to restore its previous value, therefore, ought to have a high priority.

Since inflation has taken a particularly heavy toll at the modest and low income levels (especially because of the leap in food and oil prices), it is appropriate that more of the benefits of any tax adjustment today should be concentrated in the low income groups. The shift to a credit option serves this purpose.

The shift also serves the longer-run purpose of re-casting the exemption into a form that makes better sense in terms of a distribution of tax burdens that is fairer to the low income groups. At the same time, it preserves the existing family differentiation for tax purposes in the higher income groups. So it recognizes both the need for a fair distribution of taxes by size of income and the need for reasonable differentiation of tax burdens according to family obligations.

Under present circumstances, with the economy sliding toward recession, and with the President's budget projecting an increase in the full-employment budget surplus (in NIA, or National Income Accounting terms) between fiscal 1974 and fiscal 1975, the \$6.5 billion of fiscal stimulus implicit in your plan would be a welcome stimulus to a sagging economy. Moreover, it is the kind of boost that could be translated into the withholding system and therefore into higher paychecks very quickly.

Needless to say, the exemption proposal should be accompanied by other measures that will be of particular benefit to those who fall below the exemption limits and are badly in need of income support from the Federal Government. It should also be accompanied or quickly followed by measures of tax reform to cut back or end the many unjustified tax preferences that erode our tax system and give unfair tax breaks to the upper income groups. A simple and significant increase in the minimum tax would be a good place to start.

Sincerely,

WALTER W. HELLER,
Regents' Professor of Economics.

THE BROOKINGS INSTITUTION,
Washington, D.C., February 5, 1974.

Senator WALTER F. MONDALE,
Russell Senate Office Building,
Washington, D.C.

DEAR FRITZ: Your proposal to allow taxpayers the option of \$200 tax credits in place of the \$750 exemptions now available to them on their income taxes is a constructive one and is particularly timely in today's economy. By providing some tax relief for almost all families earning \$20,000 or less, the measure responds to the two great problems of 1974—inflation and recession.

Consumers' real incomes have declined in 1973 as a result of soaring food prices and will decline further in 1974 as a result of soaring fuel costs. Your tax proposal would restore some of these real income losses.

By all available evidence, the economy is already in another recession. A boost to consumer purchasing power will help fight the downturn, lessening the rise in unemployment that is in store and improving the probability of a prompt recovery.

A tax reduction of \$6.5 billion, which is approximately the revenue loss from your proposal, is fiscally sound. The economy needs a push from the budget and an equitable tax reduction would be a desirable part of a stimulative program. Looking further ahead, even if the economy recovers from the present recession promptly, inflation will have accelerated the normal growth of income tax liabilities, making some permanent tax reduction desirable for the longer run.

In short, your proposal has significant merits on all important fronts. I am pleased to endorse it and hope it is enacted.

With best regards,

Sincerely,

GEORGE L. PERRY,
Senior Fellow.

YALE UNIVERSITY,
New Haven, Conn., February 6, 1974.

Hon. WALTER F. MONDALE,
U.S. Senate,
Washington, D.C.

DEAR SENATOR MONDALE: Thank you for your letter of January 31st. I very much favor conversion of exemptions into credits, and I am glad you are sponsoring such legislation. However, I believe the credits should be cashable, for families that do not have sufficient tax liability to use the credits against. I enclose a paper which may be of interest.

Sincerely,

JAMES TOBIN.

(The paper referred to is entitled "Reflections on Recent History", and was given by Professor Tobin on December 28, 1973 before the American Statistical Association.)

LAW SCHOOL OF HARVARD UNIVERSITY,
Cambridge, Mass., February 7, 1974.

Hon. WALTER F. MONDALE,
U.S. Senate,
Old Senate Office Building,
Washington, D.C.

DEAR FRITZ: This is in reply to your letter regarding the \$200 tax credit as an alternative to the \$750 personal exemption. This is an interesting approach and certainly deserves consideration.

My initial thought is that I would like to see somebody score it out with respect to the possible competing alternatives. For example, in 1969 and 1971 the Congress, mainly through the low income allowance, made sure that the income tax would not dip below the poverty level. With inflation and price rises, we now have people below the poverty line being required to pay income tax. I think the first order of business is to restore the prior policy. My guess is that this could be accomplished by increasing the low income allowance. Most of the revenue involved would go to people around and above the poverty level.

The next question is whether income tax relief should be given to people with up to \$15,000 income or so because inflation has pushed them into higher brackets and thus increased their tax burdens. If the answer is "yes", then we come down to a choice of method. One way is granting a vanishing credit as an alternative to the exemption, which is your approach. Another way is to raise the exemption itself. The second way is simpler and more traditional. The credit approach may be in a sense too generous to large families. I gather the economists feel that each additional child is not entitled to the same tax offset as the preceding child. On the other hand, I can understand that large families have problems and you may want to do something about that. Once we have straightened out the starting point of the income tax, the real utility of personal exemptions (or credits) is to achieve the proper tax relationship among different households—single people, married couples, married couples with one child, two children, etc. It is possible that the personal exemption does this better than the tax credit.

Of course the tax credit approach does cut off tax reduction at some point whereas an increase in the personal exemption runs all the way up the scale. The choice may thus come down to what one desires to focus on—stopping tax reduction at some point or, on the other hand, giving more attention to the relative tax burdens among different family compositions at the same income tax level.

I would suggest that you ask the people at Brookings to score out three alternatives—an increase in the low income allowance (and perhaps a change in exemption) to get the starting point back to the poverty level; after that, comparing your credit approach with any straight increase in exemptions. If this is done one can see the differences among income groups and the choice would become somewhat easier.

This obviously is a hasty letter. If you do get further information from Brookings I would be glad to look it over.

Sincerely,

STANLEY S. SURREY.

NORTHWESTERN UNIVERSITY,
Evanston, Ill., February 8, 1974.

Hon. WALTER F. MONDALE,
U.S. Senate,
Washington, D.C.

DEAR SENATOR MONDALE: I believe that your proposed legislation for an optional \$200 per dependent credit is an excellent step in the direction of stimulating the economy and redressing inequities in the tax law. As you point out, the \$750 exemption offers large tax savings to the rich and little or nothing to the poor. Ideally, the exemption should be replaced entirely by a flat credit. I can understand, though, that the credit will prove politically more acceptable if it is made optional so that no opposition need develop from upper income taxpayers who would find themselves worse off with the credit than the exemption.

I do believe, however, that there is a serious deficiency in your proposal in failing to provide tax relief for really low income earners whose income taxes are less than \$200 per dependent or who pay no income taxes at all. For many of these individuals and families lose substantial parts of their income in social security taxes. I should like to see your proposal enlarged to let the income tax credit be taken against social security taxes to the extent the taxpayer does not have income tax liabilities equal to the amount of the credit. This could presumably be done by having the social security account credited with the amount of the income tax credit and the taxpayer in turn refunded the amount that has been withheld for social security.

Even this amendment would not offer relief to the very poor who are not earning income on which social security payments are made. However, it would move a con-

siderable way in the direction in which you are headed of eliminating tax benefits that help the rich and give much lesser relief if any to middle and low income households.

On the matter of where to make up the revenue loss when this proves necessary, I would urge that the "long-overdue reform of foreign and domestic tax loopholes," to which you refer is much better than a tax directed towards excess profits. I think it folly to try to take away more in direct profits taxes while refusing to eliminate the huge give-aways in tax credits for foreign payments for oil, along with the benefits from depletion allowances, current charging of development and drilling costs, and equipment tax credits and accelerated depreciation throughout the economy.

Sincerely,

ROBERT EISNER,
Professor of Economics.

WASHINGTON UNIVERSITY,
St. Louis, Mo., February 11, 1974.

HON. WALTER F. MONDALE,
U.S. Senate,
Washington, D.C.

DEAR SENATOR MONDALE: This is in reply to your letter of January 31, with reference to your proposal for a \$200 tax credit. As you may know, I have been urging the substitution of credits for deductions on the personal income tax as a way of increasing the progressivity of the Federal tax structure. The enclosed article presents some of the reasoning.

However, I am concerned that the \$6.5 billion estimated revenue loss would add to inflationary pressures which remain so very strong. In this environment, I would suggest that a more effective way of combatting unemployment would be to redirect government spending to the creation of jobs for the unemployed.

Perhaps your approach can be combined with a more comprehensive tax reform proposal that would not yield a large net loss of revenue.

With all best wishes,

Sincerely,

MURRAY L. WEIDENBAUM.

(The article referred to is entitled "Shifting from Income Tax Deductions to Credits", and appears in the August, 1973, issue of TAXES—The Tax Magazine.)

HARVARD UNIVERSITY,
Cambridge, Mass., February 11, 1974.

Senator WALTER F. MONDALE,
U.S. Senate,
Washington, D.C.

DEAR SENATOR MONDALE: Thank you for the opportunity to take a look at your proposal of a \$200 personal income tax credit for each dependent as an alternative option to the existing \$750 exemptions. Here is my reaction.

(1) Is the tax cut needed now?

The economy is headed for recession but a tax cut would come too late. The economy is likely to be moving up at a pretty good rate by the end of the year. The economic impact of a tax cut, even if action were taken immediately, would barely be felt before then. This has always been the problem with using taxes to fight recession—it is just too slow. The major current problems of policy are not to find a fiscal stimulus, but to handle the energy situation more skillfully. If the driving situation remains in its present state, there will be major damage to retail sales and to the housing industry.

If a tax cut is undertaken, it should be in the general form of your proposal. An across-the-board tax cut would mainly benefit middle income families; it would have a very low multiplier because they are not likely to spend the cuts on automobiles and other durables.

My feeling against a tax cut is mainly based on the longer-term needs for resources by the federal government. We have cut taxes too much in the last four years, and we will need the taxbase to meet future social goals.

Also, the current flush financial condition of the states and localities will be short-lived. Strong income growth and revenue sharing have been of tremendous benefit to local governments. But there is no plan to expand revenue sharing, and the economy will soon be producing less revenue growth. In one way or another, the federal government will be asked to pick up more of the financial burdens.

(2) Pros and Cons of the proposal

Your tax credit proposal would improve the fairness of our tax system. There is little reason why the value of an exemption—which is meant to help defray the living costs of each family member—should rise with income. Indeed, at the low tax rates of the lower brackets, the tax benefit of the exemption has become so small that it no longer bears any relation to the cost of supporting a dependent.

I would not make the tax credit an optional feature. While I recognize that this approach assures that no family will have to pay more, the use of optional features in the tax system hurts taxpayer morale. We now have options for income averaging, for itemized versus standardized deductions, and for other features. Each option leads to extra calculations and opportunities for the tax services. The present proposal would create this kind of option for the entire low- and lower-middle income taxpaying population.

While there are other tax changes that could accomplish the same goal, particularly the "vanishing exemption" or changes in rate structure, there is a simplicity to the optional tax credit which may make it more acceptable. Given the choice of the present system versus the Mondale proposal, I would favor the Mondale proposal.

I am very pleased to see that you are taking initiatives in the tax and economic policy areas.

With best wishes,

Sincerely,

OTTO ECKSTEIN.

UNIVERSITY OF MICHIGAN,

Ann Arbor, Mich., February 19, 1974.

HON. WALTER F. MONDALE,
U.S. Senate,
Washington, D.C.

DEAR FRITZ: I am certainly sympathetic with the purposes of your proposal for an optional \$200 tax credit as an alternative to the existing personal exemption.

My reservations are essentially three. First, the Budget presented by the President is a fairly stimulative one, in my judgment. Moreover, I tend to be more optimistic than some others about the prospects for the economy. My own forecast sees a quite healthy expansion occurring beginning about mid-year and continuing through at least the first half of 1975. I am not sure that further stimulus—which could certainly not be effective for a number of months—is needed. However, there is enough uncertainty about that, that it is probably useful for tax-cut proposals to begin to be discussed and warmed up for use if extra stimulus should become necessary.

Second, I find it difficult to become committed to individual pieces of a tax reform program without knowing what the other pieces will be. While I favor making the personal tax more progressive, especially at the lower end, there are many other variables, including rate structure, standard deductions, credit for payroll taxes, etc. which could achieve this and which could be even more useful elements in a total tax reform package. However, I assume that the various elements need to be traded off against each other in the effort to secure a balanced and enactable package. Giving away the goodies of tax reductions one at a time, may not be the best way to achieve an effective reform, which needs to include a great many tax increase elements.

My feeling is that for the long run we are going to need a Federal tax system which will take at least as much out of the economy as our present system. I therefore would not support other than temporary and easily reversible tax cuts for fiscal policy reasons unless there were no alternative. You, of course, are in a far better position than I am to know what is feasible.

In any case, I congratulate you for getting some of these issues on the fire, and wish you every success in this as in your other endeavors.

Sincerely,

GARDNER ACKLEY,
Professor of Economics.

HARVARD UNIVERSITY,

Cambridge, Mass., February 20, 1974.

Senator WALTER F. MONDALE,
U.S. Senate,
Washington, D.C.

DEAR FRITZ: I am away in Switzerland composing a book—appropriately on money and its history. Do forgive me for not commenting at length on your proposal. Certainly yours is the right way to reduce taxes. The effect on lower income families is more favorable than to raise the exemption.

However, I am very doubtful about a tax reduction. Inflation is still a major problem. It's a tough fact that tax reduction is the wrong medicine for that. And were there need for more fiscal stimulation, I would respond to the pressure of social need with higher spending and public service employment.

All the best.

Yours faithfully,

JOHN KENNETH GALBRAITH.

ROBERT R. NATHAN ASSOCIATES, INC.,
Washington, D.C., February 25, 1974.

HON. WALTER F. MONDALE,
U.S. Senate,
Washington, D.C.

DEAR FRITZ: Please forgive me for not replying promptly to your letter of January 31st. I have been away from the office quite a bit lately.

I have read the statement you made in the Congressional Record on January 28th and have looked through the tables and comments very carefully. There are several questions, one which relates to the desirability of a tax cut as compared with an increase in expenditures as a means of stimulating the economy. The second concerns the question of the kind of tax cut which will be most equitable and which would have the greatest economic impact. The third question relates to basic tax reforms and the element of progressivity. Let me take these up in some separate but related order.

I think we are definitely in a recession and I have grave doubts about the basis for believing, as many of my good friends and liberal economists believe, that the economy

will pick up in the second half of the year. Maybe it will but I do not see the basis for such optimism as yet. Therefore, something ought to be done about stimulating the levels of economic activity. I personally would prefer at least some increase in expenditures for mass transit and for improved rail transit and for rapidly exploring and exploiting alternative sources of energy. I do think we could spend an awful lot of money on buses and the Federal Government could give these buses to local transit authorities on the understanding that the fares would be maintained where they are, or preferably reduced. We would be a lot better off if we subsidized bus fares and railroad cars for the transportation of coal and the like. Such expenditures could, I think, be stimulating to recovery or they would at least cushion the declines in business activity that appear to be imminent.

There are other expenditures in terms of public employment, which was the subject of proposal you submitted some weeks ago, and that would make a lot of sense.

A tax cut always worries me as a measure for stimulation of economic activity. Almost every time we get a tax cut we end up with a less progressive system. If we are going to have a general tax cut I think your proposal is excellent because it really does help the lower income groups much more than the middle or higher income groups, and that is very necessary. I know most of the people pay some income taxes but there are still quite a number at the lower levels who do not pay and they would not be benefitted. Therefore, from an equity point of view your proposal goes quite a long way but I don't think it would be quite as helpful to the really low income groups as some moderation in the payroll tax. As far as stimulating the economy is concerned, I am sure some of the tax savings which would be achieved through your measure would be spent, but we haven't much of an idea of what the marginal spending habits are going to be in a recession that is generated by shortages of an input which is as pervasive as power and fuels. It is hard for the economist to figure just how to stimulate this economy to get us back toward full employment without accelerating the rate of inflation and also with some sense of confidence that certain measures are going to really be effective. This is one of the reasons why any stimulating activity should, in my judgment, include expenditures such as mass transit because this we know would be helpful to the middle and lower income groups because it would keep their transit fares down and they do ride a great deal.

As far as alternatives in tax reductions are concerned, I still would like to see some of the reduction in the payroll taxes. In my judgment we have worshiped the concept of actuarial purity for much too long because social security really is not a true actuarial system and I think we should have had a third source of revenue in addition to the payroll taxes on employers and on employees and that the third source should be general revenues. Just to placate those who keep wrapping themselves up in the actuarial mythology, we could have general revenue contributions for cost of living adjustments and for improvement factors in social security benefits. I can't think of another tax which is as regressive as the payroll tax because the higher the income the lower the proportion subject to the payroll tax. I would love to see us put some general revenue into the reserve and reduce payroll taxes in employees by a similar amount, and that would certainly be the biggest help one could give to the lower income groups.

Again, I do like the principle you are pursuing and it certainly is one devil of a lot more equitable than raising the exemptions. I suspect what I would push for would be a part of the stimulation in the form of increases that would be spent quickly and would help the nation's economy and a part through your method and then another part in the form of reduced payroll taxes. Of course this then raises a political question as to which is the more feasible or more salable. I don't like to go for pure proposals which have no chance of achievement and I think that if the increased spending or the cut in payroll taxes were unlikely to succeed then I would go overboard on your proposal. I would at least like to see us start part way with that and part in the other direction.

I hope these observations are of some interest. If you ever have a few moments and would like to talk about them let me know and I will be glad to come down.

Best wishes,

Sincerely,

ROBERT R. NATHAN.

UNIVERSITY OF MICHIGAN,

March 4, 1974.

HON. WALTER F. MONDALE,
U.S. Senate,
Washington, D.C.

DEAR FRITZ: I have your letter of February 21 concerning your Bill S. 2906 to convert the present deduction for personal exemptions to a tax credit.

I strongly support the idea of a tax credit for the personal exemptions. A tax credit is an important tax reform which should have extremely high priority.

In my opinion, the tax credit should be limited to three children and two adults. Moreover, I believe that there should be a higher credit for the first child.

These suggestions would fit very appropriately into your ideas concerning strengthening family and child life.

I do not see why we should continue to give deductions or credits for more than three children except in the case where the child was not a natural child and was adopted. I believe that it would strengthen our family planning policies to limit any tax credits normally to three children. I would, however, continue to permit credits for a natural or adopted child who was totally disabled (utilizing the definition of disability under title II of the Social Security Act) irrespective of the age of the child.

My justification for a higher amount for the first child is that this is where the major financial burden arises for a young family. In the case of the first child there is usually a need for additional space and expenditures which are somewhat less per person for the second and third child. My preference is a \$300 tax credit for the first child; \$200 for the second child; and \$100 for the third child.

In passing, I would also like to bring to your attention that the federal matching payment to the states for dependent children under title IV of the Social Security Act has not been increased since 1965. There has been approximately a 50 percent increase in the price level since that date without any additional federal financing of the cost. I believe it is important that a cost of living adjustment be added to the program so that these children will not be penalized by inflation.

Quite frankly, I would like to see you couple these two ideas together so that families with children would be helped whether they were children in families where the parent was an earner or was on welfare. This would truly be a program that would improve family life and the welfare of children.

With best personal wishes,

Sincerely,

WILBUR J. COHEN,
Dean.

ARTHUR M. OKUN,
Washington, D.C., March 11, 1974.

HON. WALTER F. MONDALE,
U.S. Senate, Washington, D.C.

DEAR SENATOR MONDALE: In response to some questions you raised, I should like to explain my position on the general desirability of a tax cut for consumers in 1974, and my views on the particular proposal for a \$200 tax credit in lieu of the usual personal exemption.

Output and employment in the U.S. economy are sagging today. Our real GNP for this quarter is registering a market decline—one of the sharpest declines in sixteen years. Many initial features of the decline—such as the collapse of new car sales—are just beginning to exert their damaging secondary effects on other industries. The outlook for consumer demand is particularly bleak, reflecting the anxieties of American families associated with the combination of job layoffs and rapid inflation, and the drain on their budgets from food and fuel inflation. In 1974 the American consumer will be spending directly and indirectly for fuel about \$20 billion more than last year to get less product. This drain on the budget is bound to have serious effects on the experience of other consumer industries—what the consumer spends on oil is not available for spending on other discretionary items ranging from movie tickets to television sets. Indeed, if the oil embargo ends and the availability of gasoline increases while its price remains high, the drain on the consumer budget will be even greater. This spending will not create jobs or output in the United States for the foreseeable future.

In view of the bleak outlook for consumer expenditures (which represent nearly two-thirds of our GNP), the prospects for an early upturn are very speculative. There is considerable risk that the sag could continue all year in the absence of policies to bolster activity. On the other hand, there is little risk of a self-generating upsurge in the economy that would make additional fiscal support inappropriate. Thus, a well-timed cut in consumer taxes would be an important insurance policy against a prolonged and sharp slide in employment and output.

According to the best historical evidence, widespread small increases in consumer take-home pay get into the spending stream. The excellent results in stimulating economic growth that followed the 1964 tax cut demonstrates that. In the present context, the provision of a consumer tax cut may help prevent the kind of retrenching in consumer living standards that might otherwise take place in response to layoffs and fuel and food inflation.

The vast bulk of the additional consumer spending will go into areas where the economy has available labor and plant capacity to meet and greet added demand. In the present situation, one can feel particularly confident that the response will increase output and employment rather than add to inflation. While a number of shortage areas remain in our economy, those except for food and fuel will be vanishing during the first

half of 1974 as rapidly as they emerged during the first half of 1973. The economy's operating rates will be lower by mid-year than they were late in 1972, when lumber was the only significant product with a shortage. In the case of food, only a trivial part of additional consumer income adds to the demand for food and thus a tax cut will have virtually no effect on food prices. In the case of petroleum, the system of price controls should ensure that any increment in demand is not converted into additional inflation. Indeed, by evidencing concern and effort by the government to make up for the acute cost-of-living squeeze on the worker, a tax cut could have beneficial effects in preserving the recent moderate behavior of wages.

The best type of tax cut would put income rapidly into the hands of lower income and middle-income groups. From that point of view, the \$200 credit option for the personal exemption seems ideally suited to meet the economy's needs. It could be promptly reflected in withholding schedules and would provide relief to those who have suffered most as a result of the food and fuel price explosion of the past year. By concentrating the benefits in the tax cut in income groups with marginal tax rates under 26 percent, it improves the progressivity and equity of the tax system.

I do hope that the Congress will give serious and prompt consideration to this constructive measure.

Sincerely,

ARTHUR M. OKUN.

[From the Wall Street Journal, Mar. 11 1974]

THE CASE FOR FISCAL STIMULUS

(By Walter W. Heller)

Once again, the battle between anti-recessionists and anti-inflationists is joined. Without differing very much on the 1974 economic scenario—downturn and double-digit inflation in the first half followed by an upturn and some ebbing of inflationary pressures in the second—the antagonists run the gamut from "ease up" to "hold tight" in their prescriptions for fiscal-monetary policy in 1974.

Part of this division reflects conflicting diagnoses of the nature of this year's recession and inflation. Partly, it grows out of divergent appraisals of how much of any given demand stimulus will translate into jobs and output and how much into more inflation (either now or later). And in no small part, it goes beyond positive economics to a conflict of values.

Nothing throws the issues into bolder relief than the proposal for a quick income tax cut in the form of an increase in personal exemption. A tax reduction of \$5 billion to \$6 billion a year could be effected either by boosting the per capita exemption from \$750 to \$900 or by adopting Senator Mondale's proposal to give the taxpayer the option of taking a \$200 credit against tax or continuing to deduct \$750 from income.

The equity case for this move is obvious:

Before the year is out, inflation will have eroded the real value of the \$750 exemption by more than 20% since it went into effect at the beginning of 1972.

Even more important, boosting exemptions would concentrate the bulk of the tax benefits at the middle and lower end of the income scale where recent inflation, especially in the form of surging food and fuel prices, has exacted a particularly heavy toll. (To reach the lowest incomes calls for further action, e.g., a step-up in social service programs and relief from Social Security payroll taxes on the poor.)

Indeed, the social rationale for income and payroll tax relief in the lower brackets is so compelling that it would make sense even if it were matched by simultaneous tax increases elsewhere.

But equity aside, can a broad-based income tax cut stand on its economic merits? Those who say it can't—Messrs. Shultz, Burns, Feltner, McCracken and Stein somehow come to mind—cite such arguments as these:

Our current economic downturn is mainly the result of supply restraints, of shortages and bottlenecks; such demand deficiencies as exist will soon correct themselves.

Any further stimulus will simply increase the ferocity and tenacity of inflation.

Mr. Nixon's fiscal 1975 budget already contains all the stimulus the economy can stand. And besides, cutting income taxes today robs us of vital revenue-raising power we need for tomorrow.

Straw men? Hardly. But neither are they holy writ.

SOME UNMISTAKABLE SIGNS

First, as to the nature of recession. Though supply shortages get the headlines, a close look reveals unmistakable signs of a shortage of demand. The weary consumer, whiplashed by tight money and fiscal restraint and whipsawed by runaway food and fuel prices, has pulled in his horns:

For nearly a year, his consumption of durables other than autos has fallen in real terms, while his consumption of non-durables and services has kept only a trifle ahead of inflation.

As to autos, the gasoline shortage has converted an expected decline into an actual disaster. Lying behind the 27% drop in overall sales of domestic cars last month was a plunge of nearly 50% in demand for standard and larger models.

Tight money has cut the rate of residential construction outlays from \$60 billion a year ago to around \$47 billion today.

For consumers, January was perhaps the cruelest month. While personal income dropped \$4 billion, consumer prices raced upward at a 12% annual rate. Real spendable earnings of non-farm workers, after taxes, were down 4% from a year earlier, the largest drop in 10 years.

Nor is any early rebound in sight. It will be months before exploding oil prices have worked their way through the economy, soaking up \$15 billion to \$20 billion of consumer purchasing power in the process. For that's the amount of tribute the American consumer has to pay foreign and domestic producers of oil—and in the short run, very little of the funds thus siphoned off will reappear in the economy as demand for exports or increased dividends and capital spending by the U.S. oil industry. So even with an end to the Arab embargo, the U.S. economy will continue to suffer the paradox of "oil drag"—a cost-inflation of prices and a tax-like deflation of demand.

Contrary to the Alice-in-Wonderland reasoning in Mr. Nixon's veto message on the energy bill, a rollback in domestic crude oil prices could materially ease that drag. For example, a cutback in new oil prices to \$8 and old oil prices to \$4.25 (as against \$7.09 and \$5.25 in the energy bill), while maintaining strong incentives for boosting output of new oil and oil substitutes, would serve to:

Cut oil-cost inflation by \$5 billion.

Restore \$5 billion of real purchasing power to consumers.

Stop that amount of excess profits at the source.

It isn't often that a single measure promises to cut cost inflation, bolster aggregate demand, curb profiteering, and still maintain vital incentives. Yet doctrinaire pursuit of market ideology coupled with a paralyzing fear of further inflation seems to be blinding policy makers to the opportunities for simultaneously serving different objectives of policy. Not all demand stimulants aggravate inflation on net balance.

That brings us to the second major charge against the proposed tax relief, namely, that much or even most of it will run off into added inflation. No one can deny that added dollars in consumers' hands will elicit some price increases. But in 1974, a year in which deficient demand will persist even after recovery replaces recession, the trade-off will be highly favorable. Consider the nature of today's inflation:

Above all, it reflects price pressures born of the food and fuel shortages of yesteryear which, as Arthur Burns cogently pointed out last fall, "hardly represent either the basic trend in prices or the response of prices to previous monetary or fiscal policies." After this year, those pressures will begin to burn themselves out, leaving a legacy of high but less rapidly rising prices.

In part, it is a lagged response to the boom in world commodity prices in general. And these pressures too will ebb even as demand recovers, much as they did after the price explosion set off by the Korean boom in 1951.

Further, it is a result of a sharp rise in unit labor costs, which moved ahead at a 9% annual rate in the last quarter of 1973 and will get worse in recession before getting better in recovery.

Upward price adjustments as industries are freed from controls will also give inflation a jolt, largely a one-shot phenomenon.

In other words, inflation in 1974 has a life of its own, nourished not by excess demand but mainly by a variety of cost factors beyond the reach of fiscal and monetary management. The great bulk of the stimulus of a prompt tax cut would therefore express itself in higher output, jobs, and income, not in higher prices.

It can be argued—indeed, George Perry of Brookings has argued—that a well-tempered tax cut can help relieve cost-push pressure by redressing labor's cost-of-living grievances in part through tax relief rather than wage escalation. Labor leaders keep an eye closely cocked on that critical barometer, "real spendable earnings after taxes." Cut income and payroll taxes and real earnings rise. If a fiscal bargain could be struck with labor to substitute this paycheck sweetener in part for wage hikes, less of the 1973-74 food and fuel price upsurge will be built into wage bargains.

But what about the legacy of a weakened tax system in 1975 and later years? Won't the inflationary chickens come home to

roost? Not if responsive fiscal and monetary policies head off renewed excess demand when it again threatens the economy.

For that matter, the Congress should build in a large part of the protection by coupling its exemption boost with a firm commitment to enact compensating revenue-raising tax reforms to become effective in and beyond 1975. The necessary funds could be raised simply by a substantial hike in the minimum tax plus a phasing out of most of the tax shelters for petroleum as oil price curbs are progressively relaxed. (It is worth noting that with appropriate pricing policies, one can both avoid punitive excess profits taxes and phase out the distorting and inequitable tax preferences for petroleum—thus serving both equity and efficiency.)

THE THIRD QUESTION

But one still has to confront the third question: Isn't Mr. Nixon's new budget already offering plenty of stimulus to a sagging economy? And besides, shouldn't we be reassured by Mr. Ash's promise to "bust the budget" if Mr. Nixon's exercise in exorcism fails and the economy is by recession repossessed? The answer is "no" on both counts.

True, the fiscal 1975 budget gives the appearance of stimulus. Spending is scheduled to rise \$30 billion, and the deficit to double from \$4.7 billion to \$9.4 billion. But as this most realistic of Mr. Nixon's budget messages makes clear, "the recommended budget totals continue [the] policy of fiscal restraint as part of a continuing anti-inflation program." Indeed, the unified budget surplus on a full-employment basis would rise from \$4 billion to \$8 billion.

On a national income accounts basis, the rise in the full-employment surplus would be even greater. Even without fully accepting the St. Louis Federal Reserve Bank numbers showing a rise in the full-employment surplus from a rate of \$2 billion in the first half of 1974 to nearly \$13 billion in the first half of 1975, and even allowing for the inevitable slippage in the budget process, one can safely conclude that the fiscal 1975 budget, contrary to surface appearances, offers no substantial stimulus to the economy.

But what of the assurances that contingency plans will be rolled out to step up spending in case recession rears its ugly head? Given the typical lags in policy action and economic reaction, one can only say that the time to act is now. When a man is drowning, one should not deny him a life preserver on grounds that one can always resort to mouth-to-mouth resuscitation.

[From the Washington Post, Mar. 10, 1974]

RECESSION CHARADE

President Nixon keeps reiterating, in his stubborn way, that "there will not be a recession in 1974," as if the repetition of that hopeful thought will, like magic, wash all the nation's economic troubles away.

The hard fact is that the economy is suffering a contradiction which is clearly evident in rising unemployment, lower factory output and rising prices. Whether, in the end, it qualifies for the technical definition of a recession is not much of a point.

However, many reputable economists believe that the nation is already in at least the third month of a recession which will lower real gross national product for the first half of 1974.

A survey of 62 leading forecasters, as reported in the Washington Post Friday, sees at least a mild decline in real GNP for the first half of 1974. The Wharton School, and Prof. Otto Eckstein's Data Resources Institute, among others, see a somewhat sharper dip, with inflation a serious problem.

The more serious fall-off could arise if the first-quarter slide reaches the annual rate of 3 to 4 per cent now considered possible by statisticians within the Nixon administration itself, as was reported in this space last week.

The recession charade Mr. Nixon has been playing could be ignored as the natural reflex of a politician already in deep trouble if it did not imply the absence of a program to contain the damage.

By saying that there will be no recession, that, if everyone is patient, food and fuel prices will come down, leading to a recovery by the end of 1974, Mr. Nixon is also saying that his government isn't called on to take positive steps to stimulate the economy.

Economic Council Chairman Herbert Stein, a perennial optimist, reassured the Governors' Conference here the other day that although there is "no prospect of instant relief" from unemployment and inflation problems, there will be "a strong revival" around mid-year.

Stein expects a resurgence of auto sales, a "clarification" of the gasoline situation, a gain in new housing starts, a strong expansion of private capital investment, and boosted federal, state and local spending.

In an interview with The Washington Post, Treasury Secretary George Shultz adds that he expects a break in inflated world commodity market prices, and counts once again on the maturity of union leadership to keep wages from going through the roof.

A series of questions put to Stein at the Governors' Conference indicates that the chief executives of the states are much more concerned about inflation, fuel allocation problems, oil company profits, and high unemployment than the government here in Washington appears to be.

The problem with the Stein-Shultz analysis—on which Mr. Nixon bases his "no-recession" promise—is that it is predicated on getting all the breaks in a very uncertain and unstable world.

Not the least of current anxieties relates to the continuing Watergate mess. Although they know that an impeachment process would be a traumatic experience for the nation, big businessmen (Republicans as well as Democrats) now say openly that the best course now would be an impeachment proceeding that will settle the issue as quickly as possible.

Avoiding a significant recession will require good and plentiful crops to hold down food prices, the absence of a protracted decline in the rest of the industrialized countries, a reduction in the extortionate oil prices set by the cartel, a rapid conversion of the auto industry to smaller cars, assurance of steady gasoline supplies so that consumers are willing to buy cars, a good flow of funds to the savings institutions that finance private housing, a reduction of general inflationary pressures which already have reached the highest levels since the first World War, actual wage settlements which do not generate a new wage-price push and, above all, a reversal of consumer uneasiness about the health of the economy which will make them spenders instead of savers.

And beyond that, it will require an active federal government policy designed to give the economy a well-timed monetary and fiscal push.

But as Stein indicated, the administration will be cautious about "pumping up the economy" too far. To Republican Gov. Jack Williams of Arizona, worried about rising unemployment, Stein said that "we must endure a period of restraint in our ambitions" to cut back the jobless rate because inflation is such an overwhelming problem.

The contrary point of view was presented by Arthur Okun, former chairman of the Johnson Council of Economic Advisers. Okun, who believes we are several months into a real recession, told the governors that counter-recession moves should be made now, even though he agrees that the economic slide will be modest, rather than 1930s style.

Okun would roll back domestic crude oil prices which, along with other inflated prices, "have been draining some \$20 billion from consumer budgets." He also would cut income and payroll taxes in a way designed to benefit lower- and middle-income groups by \$5 billion to \$6 billion a year. Sen. Edward F. Kennedy (D-Mass.) and Walter F. Mondale (D-Minn.), among others, have proposed legislation along such lines.

"The time to act is now," Okun says. "A little preventive medicine would go a long way."

Nixon, Shultz and Stein aren't convinced. They fear an oil price rollback would be costly in the long run, and argue that a tax cut should be the last medicine to be prescribed. But if the economists' reading as shown by the ASA poll turns out to be right, tax cutting may gain a popularity that crosses party lines by mid-summer.

EXHIBIT 1

THE BROOKINGS INSTITUTION,
ECONOMIC STUDIES PROGRAM,
Washington, D.C., February 28, 1974.

HON. WALTER F. MONDALE,
U.S. Senate,
Washington, D.C.

DEAR FRITZ: In response to your recent request, I have examined the revenue loss and distributional impact of four alternative tax credit or exemption reform plans, including your proposal. The findings are summarized in the five tables accompanying this letter. The revenue estimates are based on a projection to the years 1974 and 1975 of data in the Brookings 1970 federal income tax file.

Plan I in the enclosed table, which is provided for comparison purposes, is present law (that is, \$750 per capita exemption plus the \$1,300 low-income allowance). Plan II is your proposal to offer a \$200 tax credit in lieu of the usual personal exemption. Plan III would raise the personal exemption to \$850 in 1974 and \$900 in 1975 and later years. Plan IV, which would reduce revenues by as much as Plan II, would maintain the current \$750 exemption and add an across-the-board tax credit of \$22 in 1974 and \$33 in 1975 and later years. Plan V would raise the low income allowance to \$1,400 and personal exemptions to \$850 in 1974, and to \$1,500 and \$900, respectively, in 1975.

Table 1 compares each plan with estimated poverty levels for 1974 and 1975. The results indicate that Plan V is the most successful in approximating the poverty levels for 1974 and 1975 if the poverty lines are assumed to

be the standard. Plan II would be excessively generous in raising the minimum taxable levels (particularly for large families). Plans III and IV are much closer to the poverty levels than Plan II, but they do not do nearly as well as Plan V.

The revenue loss under the various proposals and their distributions by income levels are given in Tables 2-5. All of the plans concentrate the tax reductions largely in the adjusted gross incomes below \$25,000. Under Plan II, however, over one-half of the 1974 tax reduction accrues to persons with incomes below \$10,000 and almost all of the deduction goes to taxpayers with incomes below \$25,000. At the other end (though the distance is not very far) only about one-quarter of the 1974 tax reduction under Plan III accrues to the under \$10,000 group and over 80 percent goes to taxpayers with AGI below \$25,000. Plan IV is more nearly similar to Plan II in its distributional effect, while Plan V is more nearly similar to Plan III.

On balance, my preference is for Plan V which approximates the 1974 and 1975 poverty lines most closely, but I am sure that judgments will differ on the relative merits of the various approaches.

Sincerely,

JOSEPH A. PECHMAN,
Director of Economic Studies.

PS.—These calculations were supported by a grant from the RANN program of the National Science Foundation.

TABLE 1.—LEVEL AT WHICH INCOME BECOMES TAXABLE UNDER VARIOUS EXEMPTION AND TAX CREDIT PLANS COMPARED WITH POVERTY LEVELS IN 1974 AND 1975¹

Family size	Projected poverty level budget ²	Plan I ³ (Present law)		Plan II ⁴		Plan III ⁵		Plan IV ⁶		Plan V ⁷	
		Income level	Difference	Income level	Difference	Income level	Difference	Income level	Difference	Income level	Difference
1974:											
1	\$2,409	\$2,050	-\$359	\$2,644	+\$235	\$2,150	-\$259	\$2,207	-\$202	\$2,250	-\$159
2	3,101	2,800	-301	3,988	+887	3,000	-101	2,957	-144	3,100	-1
3	3,807	3,550	-257	5,182	+1,375	3,850	-43	3,707	-100	3,950	+143
4	4,871	4,300	-571	6,247	+1,376	4,700	-171	4,457	-414	4,800	-71
5	5,748	5,050	-698	7,300	+1,552	5,550	-198	5,207	-541	5,650	-98
6	6,461	5,800	-661	8,353	+1,892	6,400	-61	5,957	-504	6,500	+39
1975:											
1	2,554	2,050	-504	2,644	+90	2,200	-354	2,286	-268	2,400	-154
2	3,287	2,800	-487	3,988	+701	3,100	-187	3,036	-251	3,300	+13
3	4,035	3,550	-485	5,182	+1,147	4,000	-35	3,786	-249	4,200	+165
4	5,163	4,300	-863	6,247	+1,084	4,900	-263	4,536	-627	5,100	-63
5	6,093	5,050	-1,043	7,300	+1,207	5,800	-293	5,286	-807	6,000	-93
6	6,849	5,800	-1,049	8,353	+1,504	6,700	-149	6,036	-813	6,900	+51

¹ Assumes joint returns are filed by families of 2 or more persons.² Projected from the official poverty lines for 1972 on the basis of the actual increase in the Consumer Price Index from 1972 to 1973 and assumed increases of 8 percent for 1973-74 and 6 percent for 1974-75.³ Plan I: Present law (i.e., \$750 exemption and \$1,300 low-income allowance).⁴ Plan II: Option to elect either a \$200 credit for each exemption or \$750 exemption, whichever yields the lower tax.⁵ Plan III: \$850 personal exemption for 1974, \$900 for 1975.⁶ Plan IV: For 1974: \$22 credit, which has the same revenue effect as an \$850 exemption for 1975; a \$33 credit, which has the same revenue effect as a \$900 exemption.⁷ Plan V: For 1974: low income allowance of \$1,400 and personal exemption of \$850; for 1975: low income allowance of \$1,500 and personal exemption of \$900.

TABLE 2.—TAX REDUCTION UNDER PLAN II: OPTION TO ELECT EITHER A \$200 TAX CREDIT OR A \$750 EXEMPTION, WHICHEVER PRODUCES THE LOWER TAX

Adjusted gross income class	1974			1975		
	Number of returns (thousands)	Tax reduction due to plan (millions)	Distribution of reduction (percent of total reduction)	Number of returns (thousands)	Tax reduction due to plan (millions)	Distribution of reduction (percent of total reduction)
Less than 0	392.6			393.7		
0 to \$5,000	22,198.9	\$718.4	12.2	21,189.8	\$702.9	12.4
\$5,000 to \$10,000	18,794.5	2,304.0	39.1	18,393.8	2,198.6	38.8
\$10,000 to \$15,000	16,532.0	2,113.8	35.9	15,474.0	1,916.2	33.9
\$15,000 to \$20,000	9,773.1	684.1	11.6	10,783.0	747.4	13.2
\$20,000 to \$25,000	4,807.1	58.7	1.0	5,823.8	90.2	1.6
\$25,000 to \$50,000	4,279.1	6.4	.1	5,439.7	5.0	.1
\$50,000 and over	863.9	.2	0	997.4	.2	0
Total	77,641.3	5,885.6	100.0	78,495.3	5,660.6	100.0

TABLE 3.—TAX REDUCTION UNDER PLAN III: \$850 PERSONAL EXEMPTION IN 1974, \$900 IN 1975

Adjusted gross income class	1974			1975		
	Number of returns (thousands)	Tax reduction due to plan (millions)	Distribution of reduction (percent of total reduction)	Number of returns (thousands)	Tax reduction due to plan (millions)	Distribution of reduction (percent of total reduction)
Less than 0	392.6			393.7		
0 to \$5,000	22,198.9	\$207.2	5.2	21,189.8	\$296.8	4.7
\$5,000 to \$10,000	18,794.5	792.3	19.9	18,393.8	1,132.0	18.1
\$10,000 to \$15,000	16,532.0	1,051.4	26.4	15,474.0	1,440.6	23.0
\$15,000 to \$20,000	9,773.1	789.9	19.9	10,783.0	1,284.6	20.5
\$20,000 to \$25,000	4,807.1	448.5	11.3	5,823.8	819.1	13.1
\$25,000 to \$50,000	4,279.1	516.6	13.0	5,439.7	980.4	15.7
\$50,000 and over	863.9	172.1	4.3	997.4	299.5	4.8
Total	77,641.3	3,978.0	100.0	79,495.3	6,253.1	100.0

TABLE 4.—TAX REDUCTION UNDER PLAN IV: \$22 CREDIT IN 1974, \$33 IN 1975

Adjusted gross income class	1974			1975		
	Number of returns (thousands)	Tax reduction due to plan (millions)	Distribution of reduction (percent of total reduction)	Number of returns (thousands)	Tax reduction due to plan (millions)	Distribution of reduction (percent of total reduction)
Less than 0	392.6			393.7		
0 to \$5,000	22,198.9	\$285.8	7.2	21,189.8	\$404.8	6.6
\$5,000 to \$10,000	18,794.5	982.4	24.6	18,393.8	1,386.8	22.7
\$10,000 to \$15,000	16,532.0	1,157.6	29.0	15,474.0	1,588.5	26.0
\$15,000 to \$20,000	9,773.1	762.3	19.1	10,783.0	1,245.0	20.4
\$20,000 to \$25,000	4,807.1	380.1	9.5	5,823.8	700.9	11.5
\$25,000 to \$50,000	4,279.1	346.1	8.7	5,439.7	656.5	10.7
\$50,000 and over	863.9	72.7	1.8	997.4	126.0	2.1
Total	77,641.3	3,987.0	100.0	78,495.3	6,108.6	100.0

TABLE 5.—TAX REDUCTION UNDER PLAN V: LOW INCOME ALLOWANCE OF \$1,400, PERSONAL EXEMPTION OF \$850 IN 1974; LOW INCOME ALLOWANCE OF \$1,500, PERSONAL EXEMPTION OF \$900 IN 1975

Adjusted gross income class	1974			1975		
	Number of returns (thousands)	Tax reduction due to plan (millions)	Distribution of reduction (percent of total reduction)	Number of returns (thousands)	Tax reduction due to plan (millions)	Distribution of reduction (percent of total reduction)
Less than 0	392.6			393.7		
0 to \$5,000	22,198.9	\$330.4	7.7	21,189.8	\$530.3	7.7
\$5,000 to \$10,000	18,794.5	973.6	22.7	18,393.8	1,504.6	21.9
\$10,000 to \$15,000	16,532.0	1,051.4	24.6	15,474.0	1,440.6	21.0
\$15,000 to \$20,000	9,773.1	789.9	18.4	10,783.0	1,284.6	18.7
\$20,000 to \$25,000	4,807.1	448.5	10.5	5,823.8	819.1	11.9
\$25,000 to \$50,000	4,279.1	516.6	12.1	5,439.7	980.4	14.3
\$50,000 and over	863.9	172.1	4.0	997.4	299.5	4.4
Total	77,641.3	4,282.5	100.0	78,495.3	6,859.1	100.0



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Senate

ANNALS OF INDUSTRY: CASUALTY OF THE WORKPLACE

Mr. MONDALE. Mr. President, I wish to call the Senate's attention to part III of Mr. Paul Brodeur's series of articles entitled "Annals of Industry: Casualty of the Workplace." The November 12, 1973, issue of New Yorker magazine contains the third installment in his revealing documentary on the manufacture of asbestos. The article is especially noteworthy and deserves the attention of my colleagues for it brings to light some of the ways in which Government has compromised the well-being of the Nation's workers for the interests of industry. This installment of Mr. Brodeur's article deals with the Government's issuance of safety standards in the asbestos industry.

Medical research has indicated that asbestos is a health hazard both to the workers who deal with it, and to the community at large. Investigations have revealed that cancer accounts for approximately 75 percent of the excess deaths among asbestos-industrial workers. Furthermore, exposure to even the slightest amount of asbestos places the worker in jeopardy from amebiosis—pulmonary scarring resulting from the inhalation of asbestos fibres—mesothelioma, and other malignant tumors. Because of these startling findings, advocates of stronger regulation consider asbestos dust "the most devastating environmental disaster yet perpetrated by any industrial nation."

However, despite these known hazards, industry has frequently sought to perpetuate lax governmental enforcement. Industry representatives maintain that death due to asbestos exposure is nominal and that, if all safety standards were met, it would mean financial suicide for the asbestos industry. Strict regulation, they argue, would price the American asbestos product out of the market, ruin the industry in America, and, consequently, eliminate thousands of jobs. The issue seems to have become, as Sheldon Samuels of the AFL-CIO's Industrial Union Department has said—

Whether a human life can be traded off in the marketplace and whether workers must really face death on the job.

Throughout Mr. Brodeur's article are frightening examples of industry's efforts to hamper the development of safe working conditions, to hide the facts about asbestos disease, and to prevent State job safety agencies from taking effective action. One soon learns, in Mr. Brodeur's words—

How deeply the medical-industrial complex has succeeded in penetrating the workings of the government in matters relating to the prevention of industrial disease.

Mr. President, I ask unanimous consent that the article entitled "Annals of Industry: Casualty of the Workplace" by Mr. Paul Brodeur from the November 12, 1973, issue of New Yorker be printed in the Record.

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

ANNALS OF INDUSTRY: CASUALTIES OF THE WORKPLACE

When the Pittsburgh Corning Corporation shut down its asbestos-insulation plant in Tyler, Texas, in February of 1972, it did so because of determined and courageous ac-

tion taken by Dr. William M. Johnson and Dr. Joseph K. Wagoner, who had joined the Division of Field Studies and Clinical Investigations of the Department of Health, Education, and Welfare's National Institute for Occupational Safety and Health in the summer of 1971. Shortly after coming to the division as its chief medical officer, Dr. Johnson discovered data showing grossly excessive and dangerous levels of asbestos dust in the Tyler plant—data that had been buried in the files of Dr. Lewis J. Cralley, the former director of the division, for years. Dr. Johnson and Dr. Wagoner, the new director, set out to make sure that this information would be properly disseminated and used to benefit the workers, whose terrible jeopardy from asbestosis (pulmonary scarring resulting from the inhalation of asbestos fibres), lung cancer, mesothelioma, and other malignant tumors it described. By daring to release the government's dust counts at the Tyler factory to Anthony Mazzocchi and Steven Wodka, of the Oil, Chemical, and Atomic Workers International Union; by expressing their concern to Dr. Lee B. Grant, the medical consultant to Pittsburgh Corning, for the plight of the men who worked in the plant; by inspecting the factory and writing a report stating that a critical occupational-health situation existed there; and by insisting to their superiors in the National Institute for Occupational Safety and Health or NIOSH—that action must be taken to remedy it, and that pressure be brought to bear upon Secretary of Labor James D. Hodgson to promulgate a safe standard for industrial exposure to asbestos, Dr. Johnson and Dr. Wagoner had done something almost unheard of in the annals of occupational medicine in the United States: They had taken steps to force the federal government from its position of self-imposed neutrality and had placed the well-being of workers before the self-interests of industry. In so doing, not only had they become apostates against the old policy of suppressing occupational-health data that were embarrassing to industry but they had also introduced a revolutionary new concept at NIOSH by showing how the organization could actively carry out the primary mission assigned to it by Congress in the Occupational Safety and Health Act of 1970—that of preventing occupational disease. In addition, they had helped to crack the cornerstone of the medical-industrial complex of company doctors and industry consultants, whose triangular structure had come to rest largely upon an unspoken alliance with a number of key occupational-health officials at various levels of state and federal government.

For several years, Mazzocchi had been gathering evidence to show that industrial disease was rampant in the United States and that knowledge of it was being suppressed by the medical-industrial complex, and since the situation at the Tyler plant provided a quintessential example of the workings of this complex, he decided to draw public attention to it. In the meantime, he and Sheldon W. Samuels, who is the director of Health, Safety, and Environmental Affairs for the AFL-CIO's Industrial Union Department, had aroused the concern of other trade-union leaders over the asbestos hazard, and had been urging Secretary Hodgson to declare an emergency standard for occupational exposure to asbestos of two asbestos fibres per cubic centimeter of air, which would replace the totally inadequate twelve-fibre standard then in effect. The unions were strongly supported in this effort by Dr. Irving J. Selikoff, who is the director of the Mount Sinai School of Medicine's Environmental Sciences Laboratory and a pioneer in the field of modern asbestos epidemiology. However, in spite of the fact that Dr. Selikoff and Dr. E. Cuyler Hammond, vice-president for epidemiology and statistics of the American Cancer Society, had provided indisputable evidence that one out of five asbestos-insulation workers was dying of lung cancer and that almost half of these men were dying of some form of asbestos-related disease, Secre-

tary Hodgson, apparently searching for some middle ground that might be satisfactory to both industry and labor, declared a temporary emergency standard of five fibres per cubic centimetre. A further indication that the government was seeking a compromise between the well-being of the nation's asbestos workers and the interests of industry came late in November of 1971, when the Department of Labor's Occupational Safety and Health Administration, which has the responsibility of enforcing the provisions of the 1970 Act, inspected the Tyler plant as a result of Dr. Johnson's report that a critical occupational-health situation existed there. Although major deficiencies in the factory's ventilation system constituted serious violations of the Act—those likely to result in disability or death—the Administration chose to consider them nonserious and fined Pittsburgh Corning just two hundred and ten dollars. At the same time, it gave the company a deadline for making extensive improvements in the ventilation system—improvements that were considered too costly by Pittsburgh Corning's managers, who decided to shut the plant.

All this provided a tense buildup for the public hearings that the Occupational Safety and Health Administration was required by law to hold as part of the process of replacing the temporary emergency standard for asbestos with a permanent standard. Since the permanent standard for asbestos was to be the Administration's first ruling under its mandate to redefine occupational-health regulations, industry and labor were prepared to look upon the ruling as an indication of whether the Administration would be determined or lenient in setting new standards for other hazardous substances. Thus, the public hearings on asbestos, which were scheduled for the middle of March, loomed as a crucial contest between the independent medical and scientific community, most of whose members were backing labor's demand for a two-fibre standard, and that part of the medical-industrial complex supported by the asbestos industry, whose members were preparing testimony to contend that a five-fibre standard was adequate to protect workers. In weighing the evidence and deciding upon a safe level of exposure, the Administration obviously needed to approach the problem impartially. The way things stood, however, the Administration's impartiality was open to question, because of its previous failure to enforce even the inadequate twelve-fibre standard at the Tyler plant and at hundreds of other factories across the land. Speaking at a press conference in Washington, D.C., on February 10, 1972, Mazzocchi condemned this failure as bitterly as he did the blatant disregard shown by the managers of Pittsburgh Corning and its medical consultant, Dr. Grant, who, he claimed, had for years known about and ignored the excessive dust in the Tyler plant and the awful peril it held for the workers.

During the first week in March, I spent several days in Tyler talking with men who had been employed at the plant and with other people who were involved in the situation that had developed there. Shortly after I returned to New York, I arranged to fly to Cincinnati and spend a day with Dr. Johnson and Dr. Wagoner. I also telephoned Dr. Grant, who, in addition to being the medical consultant to Pittsburgh Corning, is the medical director of PPG Industries (formerly known as the Pittsburgh Plate Glass Company), which, together with the Corning Glass Works, had established Pittsburgh Corning. When I reached him, at his office at PPG Industries, in Pittsburgh, I ask him if he could spare an hour or so to talk with me about the Tyler plant. Dr. Grant was extremely cordial, but he declined to give me an interview unless I first obtained the permission of James H. Bierer, the president of Pittsburgh Corning. I then called Bierer, and he, too, was very cordial, but was somewhat hesitant regarding my request. He said that he would have to look into the matter before giving me permission to talk with Dr.

Grant. "I'll get back to you as soon as possible," he said.

On Monday, March 13th, I took a morning flight to Cincinnati, and arrived at the offices of the NIOSH Division of Field Studies and Clinical Investigations shortly before noon. Dr. Johnson turned out to be a tall, pale, bespectacled man of thirty-one, with a quiet way of speaking and a serious demeanor. His boss, Dr. Wagoner, was a boyish-looking blue-eyed man of thirty-six; like Johnson, he is extremely soft-spoken, but his manner is more intense. I had a lot of questions for them about the survey they had conducted at the Tyler plant, in October of 1971, and by the time we had finished with these we were in the middle of lunch at a nearby restaurant. At that point, I told them something about my recent trip to Tyler, and how I had met several men who had become ill and stopped working in the plant even before it was shut down. When I finished giving them my impressions of these men, Dr. Johnson put down his fork and shook his head.

"As you know, Dr. Selikoff and Mr. Hammond have conducted a study of the mortality experience of nine hundred and thirty-three men who worked between 1941 and 1945 at the Union Asbestos & Rubber Company's plant in Paterson, New Jersey, which was the predecessor factory to the one in Tyler," he said. "Because of their findings, we're awfully depressed about the future of many of the eight hundred and ninety-five men who worked at the Tyler plant during the seventeen years it was in operation. And what is even more depressing is that the Paterson and Tyler tragedies are being repeated over and over, from one end of this country to the other. Last summer, as Joe and I were unearthing the environmental data on Tyler, we came across some mortality data on men who had worked in asbestos-textile plants throughout the United States. Like the Tyler data, this information had been accumulating willy-nilly in the division for years, and, incredible as it may sound, no one had seen fit to do anything about it. Just from the most cursory look at those data, almost anyone would know there had been a tragedy of immense proportions in many, if not all, of those factories. Why, the men working in them were dying of asbestosis and cor pulmonale—a form of heart failure that often accompanies the disease—right on the job! Men in their fifties! And some only in their forties! Recently, Joe and I pulled together the figures on just one of those plants and analyzed them. It manufactures asbestos-textile, friction, and packing products, predominantly from chrysotile asbestos, and that's interesting, because the segment of the asbestos industry that mines and uses this particular variety of asbestos has been trying to claim that chrysotile is not as biologically harmful as other types of asbestos, including amosite, which was the type the Tyler men worked with.

Between January 1, 1940, and December 31, 1962, thirty-three hundred and sixty-seven men and women worked in the chrysotile-asbestos plant, and, using the data that we found in the files, and more that we developed, we made a followup study of them from the time their employment ceased until January of 1968. As of that date, twenty-four hundred and eighty-one of these workers were known to be alive, six hundred and fifty-five were known to have died, and two hundred and thirty-one could not be traced. Death certificates were obtained for six hundred and twenty-six of the dead. According to the standard mortality tables, there should have been approximately five hundred and twenty-seven deaths among these thirty-three hundred and sixty-seven people instead of six hundred and fifty-five. Of the excess of a hundred and twenty-eight deaths, the vast majority—one hundred, to be exact—were caused by diseases of the cardiopulmonary system. Approximately nineteen deaths from lung cancer were to be expected, but there were actually forty-six. Seventy-two deaths occurred from chronic lung disease, mostly asbestosis, whereas there should have been only about thirty-five. Two hundred and thirty-nine of the workers died of heart disease—many with cor pulmonale and congestive heart failure—as opposed to two hundred and two expected deaths from these causes. Among the eighty-three other deaths whose causes were known, sixteen resulted from malignancies of the lymphatic and blood systems."

Dr. Wagoner told me that he and Dr. Johnson had also evaluated the distribution of the cardiopulmonary deaths according to the elapsed time since termination of employment. "We did this partly to shed light on the consequences of a common practice in the asbestos industry, as well as in many other industries, of using respirators in the absence of strict environmental controls," he said. "Our findings tell a depressing story. The majority of the lung-cancer and asbestosis deaths occurred within five years of termination of employment. In fact, fourteen of the forty-six lung-cancer deaths occurred within six months of termination of employment, and the average age of those fourteen people was only fifty-three and a

half. And of the forty-one asbestos deaths that occurred within five years after termination of employment, a majority took place within the first year, including seventeen deaths that happened within six months, at an average age of fifty-four."

Dr. Johnson broke in to say, "Which means that a lot, if not most, of these people had advanced lung disease, malignant or nonmalignant, even as they were working. Now, what kind of medical program did that factory have, to allow men to be dying of pulmonary disease right on the job?"

Dr. Wagoner then continued, "During our medical survey of the Tyler plant, we found that almost fifty per cent of the men with ten or more years of employment showed X-ray, pulmonary-function, and clinical findings consistent with asbestosis. The routine use of respirators, which are often difficult to breathe through, in such a population of men is extremely hazardous, because it puts them at an excess risk of cardiopulmonary death. For that reason, the Secretary of Labor's Advisory Committee on the Asbestos Standard, of which I am a member, has recommended that the use of respirators during periods of excessive asbestos dust be preceded by strict medical evaluation."

I had heard previously of the existence of the Advisory Committee on the Asbestos Standard, and when we returned to the office at NIOSH, I asked Dr. Wagoner to tell me about it. He explained that the committee was part of a long and complicated procedure by which criteria are developed for the recommendation of occupational-health standards. "The primary source of medical evidence and information about asbestos was provided in the NIOSH asbestos-criteria document, which I helped to write," Dr. Wagoner said. "This document included a critical evaluation of all known research on asbestos disease and a recommended standard based on this evaluation, and it was sent to Secretary Hodgson on February 1st. The document recommends that airborne asbestos dust be controlled so that no worker is exposed over an eight-hour working day to an average of more than two fibres greater than five microns in length per cubic centimetre of air. It proposes that the two-fibre standard become effective two years after its promulgation, in order to permit manufacturers of asbestos products to install the necessary engineering controls, and that in the meantime the temporary emergency standard of five fibres remain in effect. It urges that medical surveillance, including periodic pulmonary-function tests and X-rays, be required for all workers exposed to more than one asbestos fibre per cubic centimetre of air, and that these examinations be conducted at the employer's expense. It also recommends that warning labels be affixed to containers of raw asbestos and to finished asbestos products stating that asbestos is harmful, that it may cause delayed lung injury, including asbestosis and cancer, that its dust should not be inhaled, and that it should be used only with adequate ventilation and approved respiratory devices."

Dr. Wagoner went on to tell me that in proposing a permanent two-fibre standard for asbestos dust he and the other authors of the NIOSH document gave great weight to the fact that that standard had been recommended in 1968 by the British Occupational Hygiene Society and had been adopted by Her Majesty's Inspectorate of Factories the same year. "However, we took care to point out that the British standard was designed only to reduce the early signs of asbestosis, and not to prevent asbestos-induced cancer, which may occur after exposure to levels of asbestos dust that are low enough to prevent lung scarring," he added.

Continuing, Dr. Wagoner said that the Advisory Committee on the Asbestos Standard had been set up by Secretary Hodgson two months before, in January, to provide additional evidence and information as to what the permanent standard should be. "The committee has five members, representing industry, labor, government, and the independent medical and scientific community," Dr. Wagoner said. "In addition to me, it includes Isaac H. Weaver, corporate director for environmental control of Raybestos-Manhattan, Inc.; Andrew Haas, the president of the International Association of Heat and Frost Insulators and Asbestos Workers; Jack Baliff, the chief engineer of the Division of Industrial Hygiene of the State of New York's Department of Labor; and Edwin Hyatt, of the University of California's Los Alamos Scientific Laboratory, who is the chairman. We held meetings in Washington for five days in February, and, by majority vote, we supported the two-fibre standard and all the recommendations of the NIOSH criteria document. In fact, in certain areas we made recommendations to the Secretary of Labor that were even stronger than those of the criteria document. For example, as I said, we recommended that before respirators could be issued to workers for any reason, each worker must have a complete physical examination to determine whether he could wear a respirator without endangering his health. We took this action to avoid the recurrence

of conditions like those at Tyler, where respirators were slapped onto men who already had pulmonary problems as a result of exposure to asbestos."

That night, I had dinner with Dr. Johnson and his wife, who lived, with their two children, in an apartment in the suburbs of Cincinnati. I had been told that Dr. Johnson was fulfilling his military obligation by serving with NIOSH, and as he was driving me to my hotel later in the evening I asked him if he intended to remain there when his two-year tour of duty was over.

For a few moments, Dr. Johnson was silent; then he shook his head and said he really didn't know. "I am greatly troubled by the question of respectability in the field of occupational medicine," he told me. "There's very little peer pressure among the doctors who are in it, either in industry or in government, and now that I find myself faced with the problem of defining myself professionally for the next thirty years or so, I'm afraid of becoming frustrated and fatigued in this field, and of becoming part of the fabric of how things are done in a huge bureaucracy. You see, the way things are set up in occupational health these days, it's all too easy for a man to look at the welter of problems awaiting solution, to realize the lack of any real intention on the part of many people in government and in industry to take any significant action to remedy them, and to say to himself, 'Well, I can't do anything on my own, so I might just as well sit back and fit into the mold.'"

"But you did do something about it," I said. "You and Dr. Wagoner did something that could be the beginning of turning the whole thing around."

"Yes, we did something," Dr. Johnson replied quietly. "But will they let us keep on doing it?"

Early the next morning, I flew to Washington to attend the opening session of the Department of Labor's public hearings on the proposed permanent standard for occupational exposure to asbestos. They were held in a large conference room in the Interdepartmental Auditorium, at Twelfth Street and Constitution Avenue, and when I arrived there, shortly after nine o'clock, the place was filling up with some hundred-odd representatives of industry, labor, government, and the independent medical and scientific community.

The morning was given over to scheduling and rescheduling appearances of people wishing to give testimony during the rest of the week, and this complicated business was accomplished with wit and dispatch by Arthur M. Goldberg, a diminutive, bearded man, who was a hearing examiner for the Department of Labor.

After Goldberg had arranged the agenda for the four days of hearings, a tall man in his early forties, with dark hair and white sideburns, got to his feet, introduced himself as Bradley Walls, and said he represented the Asbestos Information Association of North America. "We have a number of questions asking for rulings from you, Mr. Goldberg," he said. "I preface them by saying that, in light of the number of witnesses, we concur with you that cross-examination might delay the hearings beyond our endurance and possibly yours, and that if clarifying questions be required they best come from you, sir. Secondly, we would like your ruling on your position with regard to physical evidence, either living or photographic. We would prefer that it not be presented, inasmuch as we do not think it would be helpful to this hearing."

With a puzzled frown, Goldberg inquired, "May I ask what you mean?"

"Either basket cases or X-rays," Walls said, with a grin. "We feel that their introduction would turn the hearings into a circus."

"The only thing I can say now is that evidence must be submitted in duplicate," Goldberg said dryly.

Walls grinned again. "Thank you, sir," he replied. "We will accept that."

When Mr. Walls sat down, a slight man in his early thirties rose at the rear of the room and, in a voice full of emotion, introduced himself as Colin D. Neal, the administrative assistant to the president of the United Papermakers and Paperworkers Union, which represents twenty-one hundred workers at the Johns-Manville Corporation's asbestos plant in Manville, New Jersey. "Sir, the United Papermakers and Paperworkers would like to express our indignation at Mr. Wall's characterization of those who may suffer the effects of asbestos-dust disease as 'basket cases,'" he said. "Using his terminology, however, we have a 'basket case' we would like to present to you sometime today."

Goldberg looked at Neal and nodded slightly. Then he said, in a quiet voice, "We will hear all witnesses who are presented, sir," and adjourned for lunch.

On my way out, I encountered Sheldon Samuels of the A.F.L.-C.I.O.'s Industrial Union Department, whom I had previously met and talked with on several occasions. Samuels, a stocky man in his middle forties, is ordinarily mild-mannered, but he was now flushed with anger. When I asked him to explain what had happened between Walls and Neal, he shook his head grimly. "We're hold-

ing a press conference at the Hotel Washington in a few minutes," he said. "Come on over and you'll find out."

The press conference was conducted by the Industrial Union Department in conjunction with the United Papermakers and Paperworkers, and was attended by a dozen or so journalists from various newspapers and magazines and by a Metromedia television camera team. Seated from left to right behind a long table at the front of the room were Samuels; Dr. William J. Nicholson, assistant professor of community medicine at the Mount Sinai School of Medicine and a member of the Mount Sinai Environmental Sciences Laboratory; Dr. Maxwell Borow, a thoracic surgeon from Bound Brook, New Jersey, which is near Manville; Jacob Clayman, administrative director of the Industrial Union Department; Colin Neal; Joseph Mondrone, president of Local 800 of the Papermakers' union in Manville; Robert Klingler, Local 800's vice-president and the chairman of its Health and Safety Committee; Daniel Maciborski, a member of the local; and Marshall Smith, the local's international representative.

Samuels got the press conference under way by reminding his listeners that it had long been known that the inhalation of asbestos dust could scar and destroy the lungs. "For the past thirty years, asbestos has been a proven cause of cancer of the lungs, and of the stomach and intestines of the workers who breathe it," he went on. "Usually, exposure over a long period of time is necessary to produce asbestos-related disease, but there is now evidence that even a single day of breathing large amounts of asbestos dust will harm the lungs. Contamination in the community, especially in the homes of asbestos workers, has been shown to cause cancer in women and children who have never been in an asbestos factory. Indeed, no one who has been or who is being exposed is safe from the effects of asbestos, and tens of thousands of workers and their families may already have had their lives shortened by exposure to asbestos dust."

Samuels went on to say that the development of safe methods of working with asbestos had been hampered for years by the efforts of management to hide the facts about asbestos disease, to suppress government and private studies of the subject, and to prevent state job-safety agencies from taking effective action. He then declared the temporary emergency standard of five fibres per cubic centimetre of air to be totally inadequate. "The Industrial Union Department will recommend at the hearings this week that a standard of two asbestos fibres per cubic centimetre of air go into effect within six months, and that within two years the standard be lowered to one fibre per cubic centimetre," he said. "Moreover, since constant monitoring of fibre levels in hundreds of plants is obviously impossible, we are calling for the installation of engineering controls and work practices designed to bring asbestos exposures ultimately to a zero level."

Samuels then introduced Clayman, who has been with the Industrial Union Department since its formation, in 1956, and had been its administrative director since 1960. Clayman, a soft-spoken man in his middle sixties, has spent a lifetime in the labor movement, first as a steelworker, then as a member of the Ohio state legislature fighting for improved workmen's-compensation laws, and, just before joining the Industrial Union Department, as secretary-treasurer of the Congress of Industrial Organizations in Ohio. Speaking in measured tones, Clayman told his audience that the press conference had been called to bring to public attention what might well be the most devastating environmental disaster yet perpetrated by any industrial nation. "Today, millions of American workers, their families, and their neighbors may be exposed to toxic concentrations of asbestos," Clayman said. "God only knows how many thousands of workers have died, and how many will die or be terribly sick, because of the routine way this country has dealt with the problem of occupational exposure to asbestos for so many years. We cannot bring dead workers back to life or prevent pain long since experienced, but we can and must bring an end to this inexcusable environmental crime of huge proportions that afflicts workers and totally unaware victims in the plant community."

Dr. Borow was then introduced, and he described the cases of malignant mesothelioma that he and his associates at the Somerset Hospital, in Somerville, New Jersey, had begun to find in 1964, and said that he had witnessed a sharp rise in the incidence of the disease since then. He quoted from a letter he had written on October 12, 1967, to Marshall Smith, then president of the Papermakers' Local 800. The letter stated that Dr. Borow and his associates were planning an exhibit on the rising incidence of mesothelioma in the Manville area, which they had hoped to display in 1968 at four major medical conventions throughout the country and at various hospitals in New Jersey, but that, though they had applied to forty different sources for funding, they had been unable to obtain money for this purpose. "We were told frankly that local industry would not support this project for fear of upsetting the Johns-Manville Corporation," the letter continued. "Johns-Man-

ville themselves, after six weeks of deliberation, refused support, as they were not ready to acknowledge the association between asbestosis and mesothelioma."

Dr. Borow's letter to Smith concluded by asking the union to provide the three thousand dollars that would be necessary to assemble and transport the exhibit, and after he had finished reading it, Dr. Borow said that the union had supplied the money and the exhibit had been widely displayed.

Dr. Borow then introduced Daniel Maciborski, a patient in whom he had discovered an abdominal mesothelioma a few months earlier. Maciborski, a gaunt man in his middle fifties, told the audience with calm and dignity that he had contracted mesothelioma while working for Johns-Manville, and that he hoped his personal misfortune would encourage government officials to act promptly so that it would not be shared by other workers.

The hearings had begun by the time I had had some lunch and returned to the conference room. As I took a seat, I saw that Maciborski and Dr. Borow had been giving testimony at a witness table at the front of the room—to the right of Goldberg, the hearing examiner, and directly opposite a cross-examination panel consisting of Nicholas DeGregorio, an attorney with the Department of Labor's Office of the Solicitor, and Gerald Scannell, acting director of the Occupational Safety and Health Administration's Office of Standards. Toward the end of his remarks, Dr. Borow said that he had now encountered fifty-two cases of mesothelioma in the Manville area, and that all the victims of the disease had worked for Johns-Manville with the exception of two, who had simply lived in the community.

Dr. Borow and Maciborski were followed at the witness table by Dr. Nicholson, of the Mount Sinai Environmental Sciences Laboratory, who began his testimony by stating that the health experience of American asbestos workers could be described only as a national tragedy. Referring to a mortality study Dr. Selikoff and Dr. Hammond had made of insulation workers in the Newark-New York area, Dr. Nicholson reminded his listeners that two in ten of those men had died of lung cancer, one in ten of gastrointestinal cancer, nearly one in ten of mesothelioma, one in ten of other cancers, and almost one in ten of asbestosis. "Past standards are not an appropriate reference in setting a new permanent standard for occupational exposure to asbestos, simply because all past standards were conceived only for the purpose of preventing asbestosis," Dr. Nicholson continued.

"But asbestosis is obviously not the major problem among asbestos workers. Cancer is the major problem. Cancer accounts for seventy-five per cent of the excess deaths among the asbestos-insulation workers studied by Dr. Selikoff and Dr. Hammond, and this asbestos-cancer hazard is not appropriately covered by the proposed asbestos standard," Dr. Nicholson went on to say that no knowledge now existed of a safe working level of exposure to asbestos which would prevent the occurrence of cancer, and he urged that asbestos not be used in the workplace except with approved techniques and methods designed to remove asbestos dust from the working environment. "There is evidence that a standard of two fibres per cubic centimetre of air will be inadequate for the prevention of asbestos disease," he said. "The recently measured long-term exposure of the asbestos-insulation workers, whose disastrous disease experience has been documented by Dr. Selikoff and Dr. Hammond, was approximately three fibres per cubic centimetre, even prior to the implementation of improved control measures."

Another of the afternoon's witnesses was Dr. Sidney Wolfe, who is the director of Ralph Nader's Health Research Group and a former medical researcher on the staff of the National Institutes of Health. Dr. Wolfe testified that "if workers were guinea pigs and asbestos were a food additive, the Delaney Clause of the Food and Drug Act [which prevents the introduction into the marketplace of any substance known to cause cancer in test animals] would have mandated the elimination of this carcinogenic dust from the environment long ago. However, in 1972, twelve years after the publication of data showing the relationship between asbestos exposure and mesothelioma in humans, and at a time when there are now hundreds of cases of this cancer in workers exposed to asbestos, the slaughter continues. Under these circumstances, regulations which do not ultimately reduce the fibre count to zero fail to comply with the Occupational Safety and Health Act of 1970, which clearly states that 'no employee will suffer diminished health, functional capacity, or life expectancy' as a result of his work experience."

Dr. Wolfe was succeeded at the witness table by Anthony Mazzocchi, who was accompanied by his assistant, Steven Wodka, and who stated the position of the Oil, Chemical, and Atomic Workers International Union in blunt language.

"The proposed Labor Department standard for exposure to asbestos dust is a very sad document," he said. "It serves to confirm what many members of our international union already fear—that the [Occupational Safety and Health] Administration is frivolous with the health and rights of working

people." Mazzocchi went on to say that there were far more people exposed to asbestos in the workplace than one was usually led to believe. "The often quoted Labor Department figure of two hundred thousand workers isn't conservative, it's ridiculous," he declared. "In our international union, which represents one hundred and eighty thousand workers in the oil, chemical, and atomic-energy industries alone, almost every shop and plant uses asbestos in one form or another. For example, in a major oil refinery on the East Coast—Mobil Oil in Paulsboro, New Jersey—asbestos has captured our concern as the single most serious industrial-health hazard in that facility. We had nineteen workers who handle asbestos-insulation materials in that refinery examined by Dr. Irving Selikoff, of the Mount Sinai School of Medicine. Dr. Selikoff's tests revealed a very serious occupational-health problem resulting from their exposure to asbestos. Now our concern is that two to three hundred other workers—pipefitters, boilermakers, welders, bricklayers, and others who work in and around this insulation—may also have been overexposed. Asbestos turns up in the most unexpected situations. Recently, I was touring a plant in northern New Jersey where Prestone antifreeze is made. At one point in the tour, I caught a completely unprotected worker dumping asbestos into a vat of antifreeze. He told me that asbestos is what gives Prestone its anti-leak quality. If that was an unexpected situation, then what has been our experience in a primary asbestos plant—for example, one that manufactures asbestos-insulation products? Up until recently, the O.C.A.W. [Oil, Chemical, and Atomic Workers International Union] represented workers at the Pittsburgh Corning Corporation's asbestos plant in Tyler, Texas. This plant was the sister to the Union Asbestos & Rubber Company's factory in Paterson, New Jersey, where Dr. Selikoff conducted his now famous mortality study of amosite-asbestos workers."

At the Paterson plant, Dr. Selikoff found that total deaths were more than twice the number anticipated, and now at the Tyler plant the National Institute for Occupational Safety and Health has already found that even out of eighteen workers with ten or more years of employment meet at least three of four criteria for asbestosis. Worse yet, H.E.W. studies of the plant dating back to 1967 have found grossly excessive levels of asbestos dust throughout the plant. While this particular factory employed only sixty or so people at its peak, the turnover was such that nearly nine hundred men had worked there for varying periods of time from 1954 to 1972. The story of Tyler is sadly filled with episodes of corporate indifference and governmental secrecy."

Mazzocchi went on to say that, because even very small quantities of asbestos were known to cause cancer, the union was recommending that all exposure to asbestos ultimately be reduced to zero by the enforcement of strict equipment-performance standards. "All manufacturing, maintenance, and other industrial and construction processes using asbestos must be reengineered so that they perform at zero exposure," he declared. "We propose that industry be put on notice, as soon as possible, that within six months of the effective date of this standard, no worker shall be exposed to more than two fibres per cubic centimetre of air; that within two years this level shall be reduced to one fibre; and that within three years of June of 1972 zero exposure shall be the law. As for respirators, they should be authorized only when the employer has a definite abatement plan to reduce the exposure to asbestos through engineering means. The other situation in which respirators would be allowed is where there is no feasible technology for controlling asbestos dust." Mazzocchi added that the Occupational Safety and Health Administration's proposed standard on medical examinations of asbestos workers would truly allow the fox to guard the chickens. "The medical community, like many other professional groups in this country, has physicians that industry can rely on to deny valid occupational-disease claims of workers," he said. Therefore, we recommend that workers be allowed to have annual physical examinations performed on them by doctors of their own choice, but at the employer's expense. Furthermore, the records of these examinations should not be sent to the employer but to a central record-keeping facility at NIOSH, where such records could be kept intact and confidential.

NIOSH would then send each employer an annual statistical summary on the examinations of all his employees. It has been our sad experience, in case after case, that as soon as management finds out how badly it has injured the health of a worker, management does its best to get rid of him. Thus these records need to be kept intact for at least forty years." Mazzocchi concluded by declaring that a deficient standard for protection from the hazards of asbestos would legislate sickness and an early death for thousands of people. "Faced with this prospect, I would seek no new rule at all, rather than be held responsible for the cases of asbestos disease that will surface thirty years from now," he said.

One of the final witnesses of the afternoon was Alex Kuzmuk, a governor of the Asbestos Textile Institute—which in 1964

had sent a letter to the New York Academy of Sciences urging caution in the public discussion of medical research into asbestos disease in order "to avoid providing the basis for possibly damaging and misleading news stories." Kuzmuk now testified that the Asbestos Textile Institute was opposed to the NIOSH criteria document and to the recommendations of the Secretary of Labor's Advisory Committee on the Asbestos Standard. "We find that even the five-fibre standard is not feasible for us," he said. "Indeed, it will price American-made asbestos-textile products right out of the world and domestic markets, with the result that imports from nations where workers are under no such protection will flood the country. We feel that the proposed standard is based upon incomplete studies and that new evaluations are needed. Pending more comprehensive studies, we respectfully urge the Secretary of Labor to reconsider the establishment of asbestos standards, to reinstate the threshold limit value for asbestos dust at twelve fibres per cubic centimetre, and to provide for representation of the Asbestos Textile Institute on future advisory and study committees."

When Goldberg recessed the first day's session, I flew back to New York, where business kept me during the second day of the hearings. The day after that—Thursday, March 16th—I took an early plane to Washington to be present for what Goldberg had referred to previously in the proceedings as the Johns-Manville "scenario."

The conference room of the Interdepartmental Auditorium was almost full when I arrived, just before 9 A.M., and the hearings got underway promptly, with John B. Jobe, Johns-Manville's executive vice-president for operations, sitting down at the witness table and stating that the asbestos industry had first supported research on asbestos disease during the nineteen-twenties, at the Saranac Laboratory of the Trudeau Foundation, in Saranac Lake, New York, and was at present supporting such research at more than half a dozen medical schools in the United States and Canada. He went on to say that although the asbestos industry recognized its responsibility to support the intent of the Occupational Safety and Health Act, there was no credible evidence demonstrating the necessity for a standard lower than five fibres per cubic centimetre of air.

Jobe was followed by Dr. George W. Wright, a longtime paid medical consultant for Johns-Manville, who was also director of medical research of the Department of Medicine of St. Luke's Hospital in Cleveland. Dr. Wright began his testimony by saying that he had been conducting research on asbestosis since 1939, first as a member of the Saranac Laboratory of the Trudeau Foundation and then, since 1953, at St. Luke's Hospital. After reviewing the various standards for occupational exposure to asbestos that had been in effect over the years, Mr. Wright told the hearings that no evidence had been found to indicate that the present asbestos standard should be changed. "Moreover, since I believe that the five-fibre standard will certainly prevent asbestosis, I am in complete disagreement with the NIOSH criteria document with respect to its expressed opinion that the data relating asbestos exposure to biological reaction are inadequate to establish a meaningful standard at this time," he said. "While the evidence may not be as far-reaching as we would like, it is scientifically valid, and adequate to support as a first approximation the opinion that the present standard of five fibres per cubic centimetre should not be lowered, but left as it is."

According to Dr. Wright, a recent study conducted by Dr. John Corbett McDonald, of the Department of Epidemiology and Health of McGill University, in Montreal, furnished strong support for not lowering the asbestos standard below five fibres per cubic centimetre or air, and proof that mesothelioma was virtually absent in people who were exposed only to chrysotile asbestos—a type of the mineral that accounts for ninety-five per cent of the world's production, and the type that Johns-Manville mines, uses, and sells almost exclusively. "Mesothelioma appears to be predominantly linked with exposure to crocidolite or amosite," Dr. Wright declared. "Therefore, both of these types of asbestos should be controlled more stringently than is chrysotile."

Dr. Wright then criticized certain aspects of Dr. Selikoff's and Dr. Hammond's mortality studies of the asbestos-insulation workers; the studies did not include adequate control populations, he said, and the incidence of mesothelioma among these workers was caused not by their exposure to chrysotile but by their dual exposure to chrysotile and amosite. He ended, by reiterating his support of the five-fibre standard, because, as he put it, "This is a correct standard and constitutes a level of exposure that will protect against the development of asbestosis and bronchogenic cancer."

Thus far in the hearings, there had been very little cross-examination, but when Dr. Wright concluded his remarks a number of people made it known that they had questions to ask and points to make concerning his testimony. Among them was Nicholas DeGregorio, of the Department of Labor, who pointed out with some asperity that he had

never heard the validity of Dr. Selikoff's and Dr. Hammond's study of the asbestos-insulation workers questioned by any of the leading epidemiologists in the field.

After a short recess, the Johns-Manville testimony continued with the appearance at the witness table of Dr. Thomas H. Davison, who introduced himself as the medical director of the corporation. Dr. Davison's testimony was very brief, and was chiefly concerned with his objections to the proposed frequency of medical examinations for asbestos workers. When he completed his remarks, he was succeeded at the witness table by Edmund M. Fenner, the corporation's director of environmental control. Fenner testified that Johns-Manville had worked diligently to lower dust levels in all its plants. He also criticized the two-fibre standard proposed in the document, on the ground that adequate monitoring and dust-sampling equipment was not available to measure such a level.

Then Dr. Fred L. Pundsack, Johns-Manville's vice-president for research and development, came to the witness table. "Perhaps nowhere else in the asbestos standards being considered today is the opportunity to bring about bad changes so clearly evident as it is in some of the proposed label requirements," Dr. Pundsack said. "If these label requirements are adopted in their proposed form, they will in our opinion destroy large amounts of the industry and eliminate thousands of jobs."

Dr. Pundsack went on to declare that warning labels need only indicate that precautionary steps should be taken when handling asbestos, and that labels need not contain terrifying language, such as the word "cancer." He pointed out that asbestos is not an acutely toxic chemical or drug that reacts within minutes or hours, nor is it an explosive, nor can it be absorbed through the skin. "Therefore, the application of frightening labels to asbestos is inappropriate," he said. "Instead, we recommend that a caution or warning label with the following type of text be used on bags or containers of asbestos fibre: 'Caution—This bag contains chrysotile asbestos fibre. Inhalation of asbestos in excessive quantities over long periods of time may be harmful. If proper dust control cannot be provided, respirators approved by the United States Bureau of Mines for protection against pneumoconiosis - producing dusts should be worn.'"

When Dr. Pundsack finished his remarks, there was an hour's recess for lunch. The first afternoon witness was Henry B. Moreno, senior vice-president for the Industrial and International divisions of Johns-Manville, who said that the company's dust-control programs had already cost twenty million dollars. "For us to achieve a standard of two fibres per cubic centimetre would require capital expenditures of twelve million dollars, and additional dollars per year," Moreno declared. "It would simply not be economically feasible to operate at this level in five of our plants, which, if closed down, would put sixteen hundred employees out of work. This and similar closings across the country would have a substantial effect upon the nation's economy, and would result in higher costs reflected all across the board. In addition, Japan, Taiwan, India, other Asian countries, and nations in South America would come on strong and flood the American market with asbestos products. For these reasons, we believe that it would be nothing less than complete social irresponsibility to adopt a two-fibre standard for occupational exposure to asbestos without stronger medical evidence than that which presently exists."

When questioned by Dr. Nicholson, Moreno, like Dr. Wright before him, sought to place chrysotile asbestos above suspicion as a cause of mesothelioma, and, like Dr. Wright, he implicated amosite. Moreno declared that from 1930 until 1960 all high-temperature-insulation materials contained amosite, that since 1960 there had been a trend away from amosite, and that for the past five years almost no amosite had been used.

Knowing that Johns-Manville had long been attempting to absolve chrysotile by blaming crocidolite and amosite asbestos for the occurrence of mesothelioma, and that most members of the independent medical and scientific community consider such efforts to be self-serving, I was not surprised to hear Dr. Nicholson strongly question Moreno about his statement that amosite asbestos had been a major constituent of insulation materials between 1930 and 1960. Later, I learned that Dr. Nicholson reinforced this refutation by sending an addendum to Goldberg on March 24th for inclusion in the record of the hearings. Dr. Nicholson's accompanying letter referred Goldberg to two tables of information he had included in his addendum. The first table, which listed the quantity of asbestos used in the manufacture of insulation materials in the United States between 1920 and 1965, had been furnished by Dr. Pundsack himself to Dr. Selikoff for presentation at the Fourth International Pneumoconiosis Conference of the International Labor Office, held in Bucharest, on September 29, 1971. The second table,

compiled from the *United States Minerals Yearbook*, listed imports of amosite asbestos into the United States during those same years. Since a comparison of the two tables showed that only a few hundred tons of amosite was imported each year between 1920 and 1940, and that this amount was only a small fraction of the total amount of asbestos used in the manufacture of insulation materials during that period, Dr. Nicholson pointed out, "clearly, amosite could have been only a minor constituent of insulation material until World War II," and even through 1950 "it could only represent a small fraction of the asbestos used in non-marine commercial and industrial insulation, if one considers the extensive use in shipbuilding." Dr. Nicholson concluded his letter by calling Goldberg's attention to a table showing that the disease experience (including mesothelioma) of shipyard insulation workers was not significantly different from the disease experience of non-shipyard insulation workers. "It is not possible to assign an important role to amosite in the insulation workers' experience," he wrote.

After Dr. Nicholson's cross-examination of Moreno, the seat at the witness table was taken by Dr. McDonald, who stated at the outset that he was a professor of epidemiology and the chairman of the Department of Epidemiology and Health of McGill University, and that he had specialized in epidemiology for twenty-four years. "I would now like to add one or two points not in my written submission, in order to clarify my position here," Dr. McDonald continued. "The first point is that I am a full-time employee at McGill University, and an independent research worker. I do not work, nor am I associated, with any asbestos producer or manufacturer. The research I shall be describing is supported by grants, not to me but to McGill University, from a number of sources—the Institute of Occupational and Environmental Health, the Canadian government, the British Medical Research Council, and the United States Public Health Service. I am not here to support the testimony or position of Johns-Manville or any other body affected by the proposed regulations."

Dr. McDonald went on to quote at length from a report entitled "The Health of Chrysotile Asbestos Mine and Mill Workers of Quebec," which he and some colleagues were preparing for publication in the near future. Dr. McDonald said that he and his associates had begun an epidemiological study of miners and millers in 1966, using records of the Quebec asbestos-mining companies to identify all persons known to have worked in the industry since its inception, in 1878. He explained that the mortality aspect of the study was limited to those men who had worked for a month or more, and who were born between 1891 and 1920, adding that he and his colleagues had already published an initial analysis of the mortality experience of these workers. Dr. McDonald then said that about eighty-seven per cent of the 11,572 persons included in the mortality study had been traced by the end of December, 1969, and that 3,270 of them had died. "Cancer of the lung showed a rising death rate with increasing dust exposure, particularly in the two highest dust-exposure groups," he continued. "Of one hundred and thirty-four deaths from respiratory cancer, there were five from pleural mesothelioma. These cases, however, showed no clear relationship with dust exposure."

Later in his presentation, Dr. McDonald assessed the results of his mortality study by declaring that the number of excess deaths related to asbestos exposure among the workers he had investigated probably constituted no more than two per cent of the total of 3,270 deaths; that most of these deaths were caused by lung cancer and pneumoconiosis (by which he presumably meant asbestosis); and that almost all of these excess asbestos-related deaths occurred among workers employed in the highest dust-exposure categories. After pointing out that the death rates from cancer and mesothelioma among the chrysotile-asbestos miners and millers he had studied were very low compared with the death rates from those diseases found among the insulation workers studied by Dr. Selikoff and Dr. Hammond, Dr. McDonald concluded that only high levels of exposure to chrysotile asbestos during mining and milling operations had an appreciable effect on mortality. Dr. McDonald ended his presentation by further concluding, from the findings of his study, that a reasonable standard for chrysotile mines and mills would be somewhere between five and nine fibres per cubic centimetre.

When Dr. McDonald finished his testimony, he was questioned at some length by Dr. Nicholson and by DeGregorio. Dr. Nicholson's questioning elicited a statement from Dr. McDonald that in a previously published report on mortality among the Quebec asbestos miners and millers, he had concluded that among those workers in his cohort who were exposed to the highest level of chrysotile dust the incidence of lung cancer was five times that of the workers exposed to the lowest level. He also obtained an admission from Dr. McDonald that his recommendation of a standard of between five

and nine fibres was based upon a total of only thirty-two fibre counts made in mines and mills of Quebec in the summer of 1971. DeGregorio, too, asked Dr. McDonald a series of pointed questions about the scientific validity of his study. He expressed open skepticism of Dr. McDonald's ability to substantiate the accuracy of chrysotile-exposure levels that workers were exposed to during the nineteen-fifties and the nineteen-sixties. He also obtained an admission from him that not all the effects of whatever exposures there may have been were observed directly by Dr. McDonald and his associates—through, for example, the examination of autopsy material—but that they had been observed by other people and recorded by them in reports and death certificates, which he and his associates had then included in their study as valid.

I was not surprised to hear Dr. McDonald questioned in this manner, for several members of the independent medical and scientific community had previously expressed grave reservations to me about the accuracy of the conclusions he and his colleagues had drawn in a report of their study which had appeared in June of 1971, in Volume XXII of the *Archives of Environmental Health*, under the title "Mortality in the Chrysotile Asbestos Mines and Mills of Quebec." Some people had pointed out that many, if not most, of the workers studied by Dr. McDonald could have had little or no exposure to airborne asbestos fibres, because they had worked in open-air pits, extracting asbestos in wet-rock form. Others deplored the fact that Dr. McDonald and his associates had conducted very little pathological review, such as the examination of autopsy material and lung-tissue slides, in arriving at their conclusions. Still others pointed out that ninety per cent of the lung cancers and mesotheliomas found in insulation workers occurred twenty years or more after the onset of exposure to asbestos—as, for example, in the cases of men who began working with asbestos at the age of twenty, and who died of cancer at fifty—and that by omitting persons born before 1891 Dr. McDonald and his associates had excluded from their calculations precisely the people who might be expected to show the effects of asbestos inhalation. (It was as if in studying the total occurrence of gray hair one refused to look at anyone born more than forty or fifty years ago.) In addition, a number of people pointed out that by including only deaths

that occurred twenty years or less after the onset of exposure, Dr. McDonald had perforce diluted the major disease effect of asbestos in his study. Perhaps the most telling criticism of Dr. McDonald's study, however, was made in a letter sent to Dr. Selikoff on January 7, 1972, by Herbert Seidman, who is chief of statistical analysis in the Department of Epidemiology and Statistics of the American Cancer Society. Seidman's critique was included in the addendum for the hearing record that was submitted by Dr. Nicholson. It described some of Dr. McDonald's methods of computing death rates as "ill-advised." It pointed out the lack of consideration that Dr. McDonald and his associates had given to the importance of the long latency period in the development of asbestos tumors, and it described the methodology used in the study to assess separately the importance of cumulative dust exposure and duration of exposure in relation to lung cancer as "inappropriate," because of the "paucity of basic data." In conclusion, Seidman wrote, "I think that the data have been collected fairly well but analyzed quite poorly."

As a layman, I had little way of judging the scientific validity of Dr. McDonald's work except through the observations of those members of the independent medical community who had communicated their opinions of it to me. However, I had brought with me to the hearings a copy of Volume XXII of the *Archives of Environmental Health*, containing Dr. McDonald's article on mortality among the chrysotile-asbestos miners and millers of Quebec, which had been sent to me some months earlier by William P. Raines, a vice-president and director of public affairs for Johns-Manville. Since Dr. McDonald had referred to this mortality study during the course of his testimony, and since anyone attending the public hearings had the right to cross-examine witnesses, including members of the press, I decided to ask him some questions about it. After receiving permission from Goldberg to address Dr. McDonald, I reminded him that in his opening remarks he had declared that all his research had been performed independently.

"That is correct," Dr. McDonald replied. "All things are relative."

I then reminded Dr. McDonald that John Jobe, the executive vice-president for operations of Johns-Manville, had testified at the morning session that his company was supporting research on asbestos disease, and asked him if that was research other than what he had performed.

"I guess what Mr. Jobe is referring to is the fact that Johns-Manville, together with other mining companies, helps support the Institute of Occupational and Environmental Health, which is granting body that receives research applications, and which therefore indirectly supports our research," Dr. McDonald

replied. "Now, it is a very indirect relationship."

I then pointed out to Dr. McDonald that at the end of his article in the *Archives of Environmental Health*, a credit was listed in small type: "This work was undertaken with the assistance of a grant from the Institute of Occupational and Environmental Health of the Quebec Asbestos Mining Association."

"That is correct," Dr. McDonald said.

With that, I took my seat. Dr. McDonald had just indirectly admitted that Johns-Manville, together with other asbestos-mining companies, supported the Institute of Occupational and Environmental Health, and that the institute, in turn, had helped support his study. Moreover, the credits at the end of his article, which listed no financial support other than that supplied by the institute, had given the full and correct title of this organization—the Institute of Occupational and Environmental Health of the Quebec Asbestos Mining Association. It seemed unnecessary to point out to the representatives of industry, labor, government, and the independent medical and scientific community who were gathered in the conference room something that many of them already knew—that Johns-Manville is, and for the past quarter of a century has been, the dominant member of the Quebec Asbestos Mining Association.

When the hearings were adjourned that afternoon, Ivan Sabourin, former attorney for the Quebec Asbestos Mining Association, came up to me and introduced himself. We talked briefly, and then I took a plane back to New York. I had never met Sabourin before, but I remembered reading something about him in connection with McGill University in a copy of the minutes of a 1965 meeting of the Asbestos Textile Institute. The following day, I took the minutes from my files and read them again. They informed me that a meeting was held on June 4, 1965, at the Motel Le Provence, in Thetford Mines, Canada, and they quoted Sabourin as saying that a recent article associating asbestos and cancer in the *Journal of the American Medical Association* was not convincing, and expressing regret over the adverse publicity that resulted from such articles. Sabourin then told the meeting that the Quebec Asbestos Mining Association wished to study respiratory diseases related to chrysotile asbestos, and that it was seeking "alliance with some university, such as McGill, for example, so that authoritative background for publicity can be had."

According to the minutes, the next speaker at the meeting was Dr. Lewis J. Cralley, of the United States Public Health Service, "who for the past several years has been supervising the extensive environmental study of asbestos employees in textile plants in the U.S.A." Dr. Cralley told the meeting that "the study was going well," that the Public Health Service was now extending its work into other asbestos industries, and that "the results to date certainly justify the program and its further expansion."

Dr. Cralley did not elaborate on what these results had been, nor, for that matter, did he ever see fit to officially warn any segment of the asbestos industry, least of all the workers, that the data he was collecting showed that men employed in asbestos factories across the land were being exposed to grossly excessive levels of asbestos dust, and that excess mortality from asbestos disease among workers in asbestos-textile factories had reached tragic proportions. (Indeed, six years passed before Dr. Johnson and Dr. Wagoner unearthed the data buried in Dr. Cralley's files and undertook to do something to rectify the appalling situation they discovered.) In this connection, I found it interesting to note that out of the seventy-odd people listed in the minutes as attending the 1965 meeting of the Asbestos Textile Institute, Dr. Cralley was the only invitee from any government, and the only one who did not represent an asbestos company or a related organization.

At the same time, I also reread a paper sent to me some months before by Johns-Manville, which gave a history of the company's health-research programs. Referring to Dr. McDonald's study of the Quebec asbestos miners and millers, the paper had this to say:

"This study is being funded by the Institute of Occupational and Environmental Health, the scientific research arm of the Quebec Asbestos Mining Association (QAMA). As mentioned before, Johns-Manville is a principal member of the QAMA. The Institute of Occupational and Environmental Health plays a vital role in the Johns-Manville health research effort. Besides allocating QAMA funds for research projects, the seven-man scientific advisory committee of the Institute also reviews requests J-M receives from scientists and scientific organizations for money to conduct research in the asbestos/health field."

The paper then listed the chairman of the Institute's seven-man scientific advisory committee as Dr. George W. Wright, Director of Medical Research, St. Luke's Hospital, Cleveland, Ohio.

I did not return to Washington for the final day of the hearings, but during the following week, thanks to Gershon Fishbein, editor of the *Occupational Health & Safety*

Letter, and as a result of reading the *Occupational Safety & Health Reporter*, a newsletter published by the Bureau of National Affairs, Inc., I was able to keep abreast of most of the testimony that had been delivered during the two days of hearings I missed. By and large, this testimony ran true to form, in that it reflected the beliefs and self-interest of those who delivered it. Representatives of the asbestos industry, on the one hand, stated that an asbestos standard of two fibres per cubic centimetre of air either could not be achieved technically or would be prohibitive in cost, and that it would surely result in the shutting down of many asbestos-manufacturing plants, with an attendant loss of jobs and an influx of foreign asbestos products into the United States. Representatives of labor unions, on the other hand, urged that the safety and health of workers be placed ahead of any economic considerations, that the two-fibre standard be adopted, and that efforts be made to reduce occupational exposure to asbestos to zero. In a way, much of this testimony tended to be misleading, for the hearings on the asbestos standard had become far more than just a disagreement between industry and labor over whether the standard should be five or two fibres. The introduction—by Dr. Selikoff and his associates at the Mount Sinai Environmental Sciences Laboratory, by the authors of the NIOSH criteria document, and by the Secretary of Labor's Advisory Committee on the Asbestos Standard—of proposals for performance standards that would a priori reduce dust levels in the manufacturing and installation of asbestos products by requiring the use of proper equipment, efficient exhaust and ventilation systems, and safe work practices was of crucial importance, for the carrying out of performance standards would obviously put the horse before the cart, where it belonged. In short, effective performance standards would be bound to lessen the importance of and reliance upon the laborious and time-consuming process of taking air samples and counting asbestos fibres beneath a microscope in order to determine whether the asbestos standard was being complied with. Thus, performance standards would go a long way toward obviating the kind of cooperation between industry and government that in factories such as Pittsburgh Corning's Tyler plant had for so many years reduced the taking of air samples and the counting of asbestos particles and fibres to a farce of tragic proportions and fatal consequences.

Two pieces of testimony delivered at the sessions I had missed were of particular interest to me in this respect, so a few days after the hearings were concluded I obtained full texts from the men who had presented them. The first was given on the second day by Duncan A. Holaday, research associate professor at the Mount Sinai Environmental Sciences Laboratory and formerly a senior industrial-hygiene engineer with the United States Public Health Service, where he had been instrumental in developing standards for protecting uranium miners against radiation exposure. (For this work, he had been given the Distinguished Service Award of the Health Physics Society.) Holaday addressed himself at the hearings to the problem of how best to control asbestos dust:

"The use of procedural standards, by which I mean regulations requiring the use of specified methods of treating and packing material, and work rules that reduce dust production and dispersion, is the best means of preventing overexposures to harmful substances. It is based upon the knowledge that certain operations and processes will release contaminants in the work area unless they are controlled. It is also known from experience that certain control measures will markedly reduce or eliminate these emissions. Therefore, the prudent course is to require that control procedures be instituted without waiting for information obtained by air samples and dust counts to demonstrate that contamination has, in fact, occurred."

The second piece of testimony that I found of special interest was delivered on the final day of the hearings by Sheldon Samuels. He began by saying that there were certain advantages in appearing at the end of the prolonged hearings. "As you know, Mr. Goldberg, I did not plan it that way, but it has provided me with an important overview, which I intend to exploit," he declared. "The basic issue before us was made crystal clear at your prehearing conference, when Mr. Walls, of the Asbestos Information Association, attempted to prevent Daniel Maciborski from being heard, and referred to him in a disgustingly unmentionable manner. Daniel Maciborski did not ask to be heard at these hearings for dramatic effect. He was trying to tell you that more than the company's admittedly advanced environmental-control and medical-surveillance programs were needed to reduce the risk to other workers. The issue before us is whether human life can be traded off in the marketplace, and whether workers must really face death on the job."

Samuels continued his testimony by urging the adoption of performance standards that would require equipment and work practices designed for zero emission of asbestos. "For a six-month transitional period the In-

dustrial Union Department recommends a two-fibre level," he said. "Within two years, this level should be lowered to one fibre per cubic centimetre of air, and, ultimately, there should be a zero exposure to asbestos dust." Samuels also urged the adoption and strengthening of the NIOSH recommendations for labelling asbestos, for monitoring airborne asbestos dust, for conducting periodic medical examinations of asbestos workers, and for guaranteeing that the records of such examinations be the property of the employee, and not the employer. "Most important of all, any employee who lacks confidence in the judgment of a physician who is directly responsible to the employer should have the right to choose another source of medical service," Samuels declared, adding that Daniel Maciborski had passed a medical examination provided by a Johns-Manville physician only a few weeks before his own physician had diagnosed him as suffering from terminal mesothelioma.

Most of the members of the independent medical and scientific community with whom I spoke seemed pleased by what had taken place at the hearings, and thought it likely that a two-fibre level would be adopted by the Occupational Safety and Health Administration as a permanent standard for occupational exposure to asbestos. Their optimism was based largely upon the reasoning that except for the testimony of Dr. Wright and Dr. McDonald—neither of whom could be considered completely independent medical researchers—the asbestos industry had set forth no real data to refute the conclusions and recommendations of the NIOSH criteria document and the Secretary of Labor's Advisory Committee on the Asbestos Standard. Mazzocchi, Samuels, and other union people, however, expressed a skepticism concerning the Department of Labor's motives and intent which was based upon long and bitter experience. In any event, once the hearings were concluded, nobody involved in the matter could do much but wait until June 6th, when, having presumably weighed all the evidence, the Department of Labor was required by law to promulgate a permanent standard for asbestos.

On Monday morning, March 20th, I received a long-distance call from James Blerer, the president of Pittsburgh Corning. Blerer started out by apologizing for not getting back to me sooner concerning my request to interview Dr. Grant about the Tyler plant. Then he told me that, upon the advice of legal counsel—because of the recent hearings in Washington and on account of possible litigation inherent in the Tyler situation—Pittsburgh Corning could not authorize me to conduct an interview with Dr. Grant, or, for that matter, with anyone else in its employ.

During the first week of April, I drove out to Paterson, New Jersey, and spent a day at the offices of the Mount Sinai School of Medicine's Paterson Asbestos Control Program, where Dorothy Perron and several aides (among them Shirley S. Levine, Rayla Margoles, and Charles Nolan) have been working since 1968 to trace the nine hundred and thirty-three men who had worked for at least a year between 1941 and 1945 at the Union Asbestos & Rubber Company's plant there. I learned that, pressed by its insurance company, Union Asbestos had paid its workers five cents an hour extra to wear respirators, and had threatened in editorials published in the plant newspaper to fire them if they refused. I also discovered that the workers had lodged numerous complaints about the respirators, saying that they were difficult to breathe through. Indeed, some of the men had complained that, unable to work with the respirators, they had coated their nostrils with Vaseline and drunk large quantities of milk in an attempt to protect their respiratory tracts from the irritating amounts of airborne asbestos dust that filled the plant. (Obviously, such measures were pitiful protection against the pervasive nature of asbestos fibres, for when Dr. Selikoff and Dr. Hammond conducted their study of mortality among the men who had worked in the plant, they found a gross number of excess deaths resulting from asbestosis, lung cancer, mesothelioma, and other malignant tumors. Moreover, the asbestos-disease hazard extended far beyond workers directly involved in the production of insulation materials. For example, Rudolph Wild, the engineer who had developed the product manufactured in the Paterson and Tyler plants, died of mesothelioma. He may have had ample occupational exposure to asbestos, but his daughter also died of mesothelioma, and her only known exposure to asbestos had occurred when as a child she had played with samples of asbestos products her father had brought home from work.

In addition to the engineer and his daughter, Robert E. Cryor, who had been manager of the Paterson plant between 1941 and 1944, died of mesothelioma in April of 1970). During my visit to the Paterson Asbestos Control Program, I went through nearly fifty separate reports of medical examinations conducted by the company's physician which either told of abnormal lung X-rays or contained such notations as "This man is a poor risk" and "This man should not be put into a dusty area." I also discovered that during the war all blacks hired at the Union Asbestos

plant in Paterson were automatically assigned to the shipping department, where dust levels were considerably lower than on the production lines, because of a belief—widely held at the time—that the lungs of black people were somehow more susceptible to dust than the lungs of whites.

While I was in Paterson, I called Thomas Callahan, of Waldwick, New Jersey, who had been a foreman in charge of the asbestos-block department of the Paterson plant. Callahan had been sent to Tyler in October of 1954 to help set up machinery for the new factory that Union Asbestos was opening there and that was later purchased by Pittsburgh Corning. "I stayed a couple of months in Tyler, and then I was sent to the Union Asbestos plant in Bloomington, Illinois, where I worked for the next eight years," Callahan told me. "As far as I was concerned, our biggest problem was health. I always wore a respirator at Paterson, at Tyler, and up in Bloomington, and on one occasion I discharged a man who refused to wear his. A lot of men hated to wear them, you know. None of them seemed to understand the hazard."

Callahan went on to tell me that he felt that the Union Asbestos people had been concerned about the safety and health of the workers in the Paterson plant. "The company doctor X-rayed all the men continually to detect asbestosis, and, once he suspected it, he would always tell a fellow to get himself a job out-of-doors," Callahan said. "In addition, the company used to pay its workers an extra five cents an hour to wear their masks, but the men were human beings, you see, and a lot of them wouldn't conform to regulations. Believe me, the company did everything it could in those days, but there was no way it could improve the ventilation system. In any case, we were a lot more humane than other people in the business. I remember going one day in the early fifties with Edward Shuman—he was then the general manager of the plant—to see some Johns-Manville people in New York. We asked them if they knew of any way we could improve the dust situation in our factory.

My God, they were brutal bastards! Why, they practically laughed in our faces! They told us that workmen's-compensation payments were the same for death as for disability. In effect, they told us to let the men work themselves to death! Afterward, we went to the Metropolitan Life Insurance people. Only one doctor over there knew anything about asbestosis. He told us that the only solution was to spot it early and tell the guy to run for his life. We did our best, you understand, but a lot of the men wouldn't wear their respirators, and our engineers told us it was impossible to improve the ventilation."

The next day, I dropped by the Mount Sinai Environmental Sciences Laboratory to see what progress Dr. Selikoff and Dr. Hammond had made in their investigation into the mortality experience of the Paterson workers. Dr. Selikoff told me that as of December 31, 1971, Mrs. Perron and her associates had been able to trace eight hundred and seventy-seven of the nine hundred and thirty-three men who had worked at the Paterson plant during the war years. "It was a remarkable job of detective work, and Charles Nolan in particular has been incredibly adept at tracking down men who appeared to have dropped from sight," Dr. Selikoff said. "On the basis of the standard mortality tables, Dr. Hammond has calculated that in a normal population of that size, two hundred and ninety-nine deaths were to be expected. Instead, there were four hundred and eighty-four. As with the studies we conducted of the asbestos-insulation workers, the reason for the excess deaths—eight hundred and eighty-five, in this case—was not hard to come by. There should have been about fifty deaths from cancer of all sites. Instead, there were a hundred and forty-three. Only eleven of the men could have been expected to die of lung cancer, but there were actually seventy-three—a rate that is almost seven times as high as that of the general population. And though virtually none of these workers could have been expected to die of mesothelioma according to the mortality tables for the general population, there were seven deaths from the disease. Moreover, in this group of men the death rate from cancers of the stomach, colon, and esophagus were twice as high as they should have been. And though none of the men could have been expected to die of asbestosis, twenty-seven of them did."

When I asked Dr. Selikoff how he felt these statistics for the Paterson workers applied to the eight hundred and ninety-five men who had worked at the Tyler factory between 1954 and 1972, he shook his head. "I can only say that for the younger men—those who could be expected to live from twenty to fifty years after their first exposure to asbestos—the future looks awfully dismal," he replied.

Dr. Selikoff then told me that in 1971 Local 800 of the United Papermakers and Paperworkers Union had asked him and Dr. Hammond to review the medical histories of its members to help evaluate the effectiveness of Johns-Manville's dust-control measures at its Manville plant. "We have since completed this study, which, sadly,

serves to corroborate our previous findings," he said, adding that he would call Dr. Nicholson in and let him describe the actual results, since he had headed the field team that developed the information.

Dr. Nicholson told me that out of a total of three thousand and seven employees at the Manville complex of factories, Dr. Selikoff, and Dr. Hammond had decided to review the histories of the six hundred and eighty-nine production workers who were actively at work on January 1, 1959, and had by that time had at least twenty years' exposure to asbestos. "We studied the mortality experience of these men from January 1, 1959, until December 31, 1971," Dr. Nicholson said. "Unhappily, the results were at least as depressing as those for the Newark-New York asbestos-insulation workers and for the men employed in the Paterson plant. Using standard mortality tables of the National Center for Health Statistics, Dr. Hammond calculated that one hundred and thirty-four deaths were to be expected in this group of people. Instead, there were a hundred and ninety-nine."

Dr. Nicholson went on to say that the reasons for this large number of excess deaths among the Johns-Manville workers were, unfortunately, all too familiar. "Only eight deaths from lung cancer should have occurred, but there were twenty-seven," he told me. "And though no deaths from mesothelioma could normally be expected, there were fifteen. Cancers of the stomach, colon, and rectum were two and a half times what they should have been. In addition, though virtually no deaths from asbestosis would have been expected among the general population, twenty-four of the Johns-Manville employees died of this disease."

When I asked Dr. Selikoff if he thought it likely that the proposed two-fibre level would be adopted by the Department of Labor as a permanent standard for occupational exposure to asbestos, he shrugged. "I have no idea," he replied. "There has been a strange development in the past week that leads me to wonder, but before I tell you about it, I'd like Dr. Nicholson to give you his outlook on number standards in general, for I wholeheartedly concur with it."

"I tend to think of number standards in this way," Dr. Nicholson said. "A standard specified as two fibres per cubic centimetre of air or five fibres per cubic centimetre of air sounds fairly innocuous. However, it is well to remember that a worker may inhale eight cubic metres, or eight million cubic centimetres, of air in a working day. Leaving aside the fact that there are many more fibres smaller than five microns in length in any environment containing airborne asbestos dust, a five-fibres-per-cubic-centimetre standard thus becomes, in terms of a man's lungs, a forty-million-fibre-a-day standard, and by the same token the proposed two-fibre standard would allow a worker to inhale sixteen million fibres a day. This, you see, is why we testified at the hearings in favor of performance standards designed not only to control asbestos emissions but to reduce them as close as possible to zero."

When Dr. Nicholson had concluded, I asked Dr. Selikoff to tell me about the recent development that had caused him to wonder whether the Department of Labor would promulgate the proposed two-fibre standard. By way of reply, he handed me a set of documents that included a page with this heading:

"Enclosure A
"Expert Judgments: Asbestos
"Medical & Industrial Hygiene

Beneath this was a request: "Return as soon as possible to Arthur D. Little, Inc., 35 Acorn Park, Cambridge, Massachusetts, 02140. Retain a copy for reference during Phase II." Beneath the request was a space for the name and affiliation of the person to whom the documents were sent, and beneath that, under the words "Exposure-Response Judgments," was a table of boxes that asked the recipient to estimate what might be the incidence of asbestosis, lung cancer, and mesothelioma in a hundred workers after forty years of exposure, on the basis of an eight-hour working day, to two, five, twelve, and thirty asbestos fibres per cubic centimetre of air. Dr. Selikoff had filled in the boxes, and these were his estimates: At two fibres per cubic centimetre, fifty-five of a hundred workers would contract asbestosis, twelve of a hundred would develop lung cancer, and four of a hundred would be afflicted with mesothelioma.

At five fibres per cubic centimetre (basing his judgment on what had happened to the asbestos-insulation workers), eighty-five of a hundred would develop asbestosis, twenty of a hundred would contract lung cancer, and seven of a hundred would develop mesothelioma. Dr. Selikoff's estimates were, of course, higher for workers exposed to twelve fibres per cubic centimetre of air, and for workers exposed to thirty fibres he estimated that ninety-five of a hundred would be afflicted with asbestosis, twenty of a hundred would be afflicted with lung cancer, and five of a hundred would develop mesothelioma. The reason Dr. Selikoff estimated fewer mesotheliomas at the highest level of exposure to asbestos dust was simply that previous study had indicated that there would be more

early deaths from asbestosis at such levels, and that fewer individuals would, therefore, survive long enough to develop mesothelioma.

The Arthur D. Little Phase I questionnaire also asked for a judgment on how frequently asbestos workers should be examined, and it stated that all the estimates and judgments solicited would be synthesized and included in a Phase II questionnaire, which would be sent out later. The front page of the questionnaire, which was headed "Health & Asbestos, Phase I Judgments, Background," explained what the Arthur D. Little people had in mind:

"The formulation of public policy for coping with an occupational hazard such as asbestos will necessarily rely upon judgment until a great deal more research evidence is available than now exists. In particular, judgment concerning the relationship between exposure and response will be implicit in health standards for asbestos established by the Occupational Safety and Health Administration in the near future. But judgments, possibly different ones, on the same issue will be implicit in the response of labor and of industry to the proposed standards. As long as judgments on the response to exposure relationships are implicit rather than explicit and as long as groups affected by the standard lack needed data to buttress their judgments, protracted conflicts are inevitable and difficult to resolve. Moreover, the absence of a clearly defined and credible set of judgments makes it difficult, if not impossible, to identify the various costs and benefits associated with policies for reducing the hazard. This is so because the benefits of candidate standards depend upon projections of lives saved or illnesses eliminated at various exposure levels.

"So crucial a matter should not depend upon implicit judgment or even the explicit view of a single expert. We are led to a search for a consensus that will make explicit and credible the necessary judgments on the exposure-response relationship for asbestos. Such a consensus is sought through the participation of 12 to 15 qualified experts whose judgments will be obtained, combined, and refined in a systematic way—a variant of the Delphi process that has been used extensively to apply expertise to important issues not yet open to analysis."

When I told Dr. Selikoff that I had never heard of the Delphi process, and asked him what it meant, he shook his head and smiled. "I've never heard of it, either," he said. "But I'm pretty sure I know what it means. It means guesswork. And what's the point of guessing about the biological effects of asbestos when mortality studies of asbestos workers have already shown exactly what the effect has been?"

Dr. Selikoff now handed me a letter he had written on April 3rd to Mrs. Sonja T. Strong, of Arthur D. Little, Inc., concerning the Phase I questionnaire. Regarding the effectiveness of dust-counting as a method of insuring safe working conditions, Dr. Selikoff wrote:

"As matters now stand, meager use of performance standards seems to be intended. In this case, nothing in our experience indicates that the threshold limit values listed in your questionnaire will provide any effective safeguard against the occurrence of disease.

"An obvious rejoinder might be: 'Yes, but what if they were enforced? How much disease might then occur?' Following you into this never-never land, in which one-tenth of the workmen wear personal samplers on their coveralls and the rest of us are at the phase microscopes in the laboratory, the results would still not be very much different, although perhaps somewhat better, since peak excursions would not necessarily have been engineered out.

"I have previously commented on the sorry state our nuclear-reactor industry would be in if radiation control had depended upon 'threshold limit value' rather than engineering criteria. Can you imagine such regulation depending upon an army of inspectors with Geiger counters?"

After describing some of the data developed in his studies of asbestos disease, Dr. Selikoff told Mrs. Strong that it was impossible to answer with any degree of accuracy the questions posed by her firm. He went on to point out that the weight of medical and scientific evidence concerning the occurrence of mesothelioma in non-occupational circumstances, such as in families of asbestos workers and in people living in the vicinity of asbestos factories, bore heavily on the advisability of reaching a level of exposure as close to zero as possible. "The numerous instances of mesothelioma among workmen presumably exposed to asbestos as a result of indirect occupational exposure in shipyards, even in the absence of fibre counts thirty years ago, strongly points to asbestos disease at low levels of exposure," his letter continued. "Literally hundreds of cases of mesothelioma are now known to have occurred in such circumstances."

When I had finished reading the letter, I asked Dr. Selikoff why the Arthur D. Little

company should be soliciting exposure-response judgments at this time.

"It is my understanding that A. D. Little has been awarded a contract by the Occupational Safety and Health Administration to formulate a consensus regarding exposure-response for asbestos disease," Dr. Selikoff replied.

"But the NIOSH criteria document and the Advisory Committee on the Asbestos Standard have already covered this ground by reviewing all the literature concerning asbestos disease," I said. "Not to mention the testimony given during four days of public hearings."

"True enough," Dr. Selikoff replied. "However, the A. D. Little people appear to have been specifically charged with determining the economic impact of the proposed permanent standard for occupational exposure to asbestos."

"Then why a questionnaire focussed solely upon medical judgments?" I asked.

"That is a question I have been asking myself," Dr. Selikoff dryly. "I don't know the answer. If you find out, please tell me."

During the next few days, I made dozens of telephone calls to people in various agencies of the Department of Health, Education, and Welfare, in the independent medical community, and in a number of labor unions, trying to ascertain what lay behind the involvement of Arthur D. Little, Inc., in the process of promulgating a permanent standard for occupational exposure to asbestos. The people I spoke with at NIOSH were clearly unhappy over the fact that a private consulting firm had been asked, in effect, to duplicate (if not amend) in the space of a few weeks all the effort that over a period of years had gone into the assessments, conclusions, and recommendations of the NIOSH document.

"Look," one of them told me. "Our recommendation for a two-fibre standard and our conclusion that it is technically feasible were upheld by the Secretary of Labor's own Advisory Committee on the Asbestos Standard. However, A. D. Little is up to something that has no basis in science and no specific authorization in the Occupational Safety and Health Act. It's trying to form a consensus for what is sometimes called the 'socially acceptable risk' involved in occupational exposure to hazardous substances. In other words, it's trying to determine how much society is, or should be, willing to pay to avoid the loss of lives. The Act, however, clearly states that 'each employer shall furnish to each of his employees employment and a place of employment which are free from recognized hazards, that are causing or are likely to cause death or serious physical harm to his employees.'"

When I called Sheldon Samuels, at the Industrial Union Department, however, I was able to gain a new perspective on the matter. "The whole concept of economic-impact studies, as they now exist, began back in 1968 with the President's Task Force on Government Reorganization, which was headed by Roy L. Ash," Samuels told me. "The Ash commission called for an assessment of all government programs in terms of their effectiveness, and this has since been made by the Nixon Administration's Office of Management and Budget through a whole series of cost-benefit analyses that are conducted under the guise of environmental-impact studies. The present A. D. Little study has some extremely serious ramifications. Congress to the contrary, and throwing its Occupational Safety and Health Act to the winds, the executive branch of government has decided on its own that the cost to the employer of meeting any new occupational-health standard must fall within an economic range that is acceptable to industry. The major point, of course, is the government's order of priorities in this whole matter. I mean, how in the name of God can a serious, in-depth cost-benefit study of the proposed asbestos standard fail to assess as one of its first priorities, the cost to the worker and the whole community of the terrible incidence of asbestos disease?"

When I ask Samuels if the Industrial Union Department had heard from the Arthur D. Little people, he told me that two representatives of the firm had visited him the previous week. "A Dr. Donald W. Meals and an engineer spend a whole day here," Samuels said. "They indicated that they had been brought into the picture to mediate between labor and industry, and to come up with a standard for occupational exposure to asbestos that would make everybody happy, and they asked for our help. During the past few days, I polled the members of our ad-hoc Committee on the Asbestos Hazard, and we have decided to stand firm on the recommendations we made at the public hearings, and not to participate in the A. D. Little economic-impact study. We have good reasons for believing that the A. D. Little people were brought into the standard-setting process not just to satisfy the Office of Management and Budget but to justify the asbestos industry's position. We have learned, for example, that in the economic-feasibility part of their study the A. D. Little

people are relying almost entirely on guess-estimates from the asbestos industry—particularly from the shipbuilding industry, in which the government has an enormous stake."

I asked Samuels if he was aware that the A. D. Little study was also seeking medical judgments on the incidence of asbestos disease.

"Indeed I am," he replied. "In fact, just the other day I heard that A. D. Little's so-called panel of medical experts is loaded with doctors who are or have been connected with the asbestos industry. It'll be interesting to see this roster when the final report of the study comes out."

In the second week of May, I visited Dr. Selikoff again and asked if he knew of any further developments in the involvement of Arthur D. Little in the standard-setting process. He told me that the firm had sent him the Phase II questionnaire of its economic-impact study. He also showed me a letter he had written on May 9th to Dr. Meals. The letter said, in part, "I have carefully considered the asbestos data forms sent me and am returning them to you unanswered. To have completed them, in my opinion, would only contribute further to an inappropriate exercise; my original misgivings (see my letter of April 3, 1972) are now amplified." In conclusion, Dr. Selikoff told Dr. Meals that the methodology upon which the A. D. Little study was based "could lead to serious misconceptions and misdirected advice."

The following morning, I telephoned Samuels to find out if he had any new information about the Arthur D. Little study, and he said he did.

"Have you looked at your mail today?" he asked.

I told him that I had not yet had time to do so.

"Well, see if there's a letter from me."

I went through the envelopes on my desk and saw that there was.

"Well, open it up and talk to me later," Samuels said. "You aren't going to believe what's inside."

After hanging up, I opened Samuel's letter and pulled out three documents that had been stapled together. The first was a press release for Monday, May 8th, sent out by the Connecticut Development Commission, in Hartford. The second was a letter written on May 4th by Mark Feinberg, managing director of the Commission, to Jack Cawthorne, executive director of the National Association of State Development Agencies, in Washington, D.C. The third document was a letter written on Arthur D. Little stationery on January 25, 1972, by one John E. Kent. The letter from Feinberg to Cawthorne read:

"DEAR JACK: We have learned that a Massachusetts-based consulting firm, Arthur D. Little Inc., is attempting to sell a Connecticut manufacturer on moving its plant to Mexico. That information in itself is not startling, but what is startling is the fact that Arthur D. Little Inc. has a consulting contract from the U.S. Department of Labor to measure the impact of the standards being set for the asbestos industry under the recently enacted Occupational Safety and Health Act. And the company which Arthur D. Little is trying to move from Connecticut to Mexico is also in the asbestos industry. Thus it appears to me that at the same time as Arthur D. Little is carrying out a federal contract dealing with the asbestos industry and its problems, Arthur D. Little is also attempting to take one of our companies in that same industry to Mexico.

"This activity by Arthur D. Little in my opinion looks like a Trojan horse which I feel is highly improper. On the one hand, Arthur D. Little is accepting federal funds and on the other hand, it is attempting to help Mexico attract a firm directly involved in the federal project. Furthermore, it is shocking to me that a New England consulting company which has so frequently put forth the doctrine of helping economic development here would 'raid' a company in our state. As you know, we are certainly advocates of competition, free enterprise, and profit, but when a consultant presumably making a profit with federal dollars is at the same time attempting to take jobs away from our state and out of the country, it is a most serious matter.

"I do not know what other companies in other states are being approached as our company was, and I feel strongly that the development directors of the other states should be warned about this Trojan-horse operation which certainly seems to be against the best interest of the people in the various states which may have similar situations. This operation by Arthur D. Little also seems to be contrary to all the efforts which we state development directors are making in cooperation with the U.S. Government to improve the national balance of payments and the economic development of our individual states.

"Therefore, I am enclosing, for your use, the copy of the letter on Arthur D. Little stationery which was sent to the Connecticut company being 'raided.' I have taken

out the company name and address in order to avoid embarrassment for the firm. I strongly urge you to send a bulletin to all our members alerting them to this serious problem as soon as possible.

"Sincerely yours,

"MARK FEINBERG,
"Managing Director.

"P.S. You don't suppose there could be a relationship between the health and safety standards Arthur D. Little sets and the success of efforts to relocate American asbestos companies to Mexico?"

After several phone calls, I learned that the corporation Arthur D. Little had attempted to relocate in Mexico was Raybestos-Manhattan, Inc., whose factory in Stratford, Connecticut, is a major producer of asbestos brake linings, clutch facings, and gaskets. A few weeks later, when I was able to examine a copy of Arthur D. Little's first report to the Department of Labor, which was entitled "Impact of Proposed O.S.H.A. Standard for Asbestos," I saw listed among its panel of experts John H. Marsh, who is the director of planning for Raybestos-Manhattan, and who had testified at the public hearings in Washington against the NIOSH recommendation requiring warning labels on asbestos products. Meanwhile, I had discovered that the asbestos industry was taking a hard look at the feasibility of moving some of its plants and facilities to Taiwan and Korea, where, presumably, it could operate unhindered by occupational-safety-and-health regulations. It was already becoming clear, however, that by involving Arthur D. Little, Inc., in the standard-setting process, the Department of Labor was attempting to counter the recommendations of the NIOSH criteria document, of the Secretary of Labor's Advisory Committee on the Asbestos Standard, and of the members of the independent medical and scientific community who had testified at the public hearings. It was also becoming clear how deeply the medical-industrial complex had succeeded in penetrating the working of the government in matters relating to the prevention of industrial disease.



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