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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 Senator 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 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 relief			
	Percent of tax-able returns	\$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	.2		.1	.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 exempt 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 President 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 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. 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 would, 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 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 ⁴		Plan IV ⁴		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	5,285	-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

By Mr. MONDALE (for himself, Mr. HART, Mr. BROOKE, Mr. JOHNSTON, Mr. HUMPHREY, Mr. EAGLETON, Mr. KENNEDY, Mr. HATHAWAY, and Mr. ABUOUREK):

S. 3200. A bill to provide emergency relief with respect to home mortgage indebtedness, to refinance home mortgages, to extend relief to the owners of homes who are unable to amortize their debt elsewhere, and for other purposes. Referred to the Committee on Banking, Housing and Urban Affairs.

Mr. MONDALE. Mr. President, I am today introducing legislation which attempts to anticipate a possible tragedy for thousands of Americans and, most importantly, to avoid it. I am talking of the heartbreak of losing one's home. And, for literally thousands of Americans, that heartbreak may become a reality over the next several months. As the rate of inflation continues to rise, unemployment continues to increase, and the energy crisis takes its toll in both prices and jobs, many Americans may find it increasingly difficult, and eventually impossible, to meet home mortgage payments. For these unfortunate citizens, a major investment—quite possibly the largest investment of their lifetime—will vanish, and their shelter will be suddenly gone.

So that the Federal Government in anticipation of this possibility, may be ready to cope with this tragedy and aid those families faced with mortgage foreclosure, I am today introducing standby legislation which would reactivate the Home Owners' Loan Corporation. The legislation is designed to become operative only when the foreclosure situation reaches crisis proportions and provides real help to those American families faced with the loss of their homes.

THE ORIGINAL HOMEOWNERS' LOAN CORPORATION

During 1932 and 1933, this Nation experienced a period of high unemployment. At the same time, the public exhibited a serious lack of confidence in existing property values. As a result of these two forces, the annual rate of real property foreclosures climbed to nearly 250,000. Most of the foreclosed properties were owner-occupied homes. And, surely, the foreclosures resulted from the inability of families, with the head of the household unemployed, to meet mortgage payments.

The foreclosures obviously exacerbated the economic hardships of the affected families. In addition, they had a domino effect by collapsing real estate values and making lenders reluctant to finance new housing. The resultant inactivity in the construction industry further contributed to the depression of the entire economy.

Against this background, Congress enacted the Home Owners Loan Act of 1933. It directed the members of the Federal Home Loan Bank Board to establish the Home Owners' Loan Corporation and to serve as the Board of Directors of the HOLC. The HOLC represented an attempt to counteract mortgage foreclosures by allowing the HOLC to purchase mortgages from private lending institutions and to refinance the mortgages of homeowners faced with foreclosure because of temporary financial hardship.

The HOLC was authorized to issue stock of up to \$200 million and up to \$2 billion in bonds. The bonds had the full faith and credit of the United States behind them, were tax-exempt, and were to bear interest at a rate of 4 percent or less.

The HOLC was authorized to exchange its bonds for home mortgages and other liens—such as tax liens—secured by real estate. A \$14,000 limitation—or 80 percent of the value of the property—was placed on the mortgage or lien to be refinanced. The HOLC could rewrite the mortgage loan balance to be amortized over a 15-year period and could grant such extensions of time for payment as might prove necessary. The maximum interest rate on the refinanced mortgage would be 5 percent, which was significantly lower than the prevailing rate. The HOLC could also make cash loans to homeowners with debt-free homes who were faced with financial difficulties and possible loss of the home. Such loans could not exceed 50 percent of the appraised value of the property and bore an interest rate of 6 percent or less.

The Home Owners' Loan Corporation was established in June of 1933 and eventually liquidated in March of 1951. It made, or acquired and refinanced about 1,016,000 mortgage loans; most during the first 3 years of its existence. The original aggregate amount of these loans totaled \$3,093 billion. Only about 19 percent of the original loans ended in foreclosure. In the process of its operations, the HOLC helped about 800,000 homeowners save their homes. It also helped innumerable lending institutions from whom it acquired mortgages. By stemming the tide of foreclosures, it was also influential in stabilizing property values and in restoring the necessary confidence which led to an upturn in residential construction.

THE NEED FOR THE HOLC TODAY

During the fourth quarter of 1973, the economy grew at a rate of only 1.3 percent. The unemployment rate is over 5 percent, and leading economists are predicting a rise in unemployment to 7 percent. The energy crisis is estimated to have displaced more than 200,000 workers already, and more energy-crisis unemployment can be anticipated as the automobile manufacturing industry, the plastics industry, and the construction industry feel the effects of the energy shortage.

Against the backdrop of high unemployment, we find a situation where, for millions of American homeowners families, mortgage payments are high in relation to income and savings. This predicament is particularly acute for young workers who acquired their homes in recent years at high prices with mortgage interest rates high. Unemployment rates among this group will be even higher than the national average, and their savings are frequently too small to permit them to meet mortgage payments over any extended period of unemployment.

There are also millions of elderly American homeowners who, although their homes may be debt-free, will find it extremely difficult to meet the cost of property taxes during a period of inflationary living costs. Their fixed in-

comes will simply be squeezed too far. Many will lose their homes to tax liens.

For millions of homeowners of all ages, the equity invested in their homes represent their greatest asset. Furthermore, almost all would have to pay more for housing in today's inflated market, if they were forced to live elsewhere. When the cruel arm of unemployment reaches into their homes, literally millions of Americans will find their shelter seriously threatened. They will have nowhere to turn, and nowhere to hide. Although many mortgages are insured, they are insured to protect the lender-mortgagee against loss, not usually the homeowner-mortgagor.

There are between 30 and 35 million owner-occupied, one-to-four family homes in this country. More than 20 million of these homes are subject to outstanding mortgages. According to a quarterly index published by the Federal Home Loan Bank Board, the mortgage foreclosure rate on all properties for the first three-quarters of 1973 was about four-tenths of 1 percent. But, the mortgage delinquency rate on one-to-four family properties—the most accurate measure of potential mortgage foreclosures on this class of properties—was 4.26 percent at the close of the third quarter of 1973 and rose to 4.7 percent—the highest rate in 20 years—at the close of 1973. In addition, seriously delinquent loans—those with two or more payments past due—rose to a record high of 1.26 percent at the end of the third quarter. We are already seeing a trend—an ominous trend toward mortgage foreclosure on a widespread basis for one-to-four family dwellings.

When the mortgage foreclosure rate on all properties reaches a level of five-tenths of 1 percent, it is estimated that the rate of foreclosures on one-to-four family properties would be approximately 100,000 per year—surely a critical situation. When and if such a situation occurs—and we have every reason to believe that it might—we should be prepared to help those families who face the possibility of a loss of their home.

A NEW HOLC

Mr. President, I am today introducing legislation designed to help these homeowners who face the possibility of the loss of their homes during a serious economic downturn. The bill establishes a new Home Owners' Loan Corporation; to come into being when and if the Federal Home Loan Bank Board Index reaches the critical five-tenths of 1 percent level. The board of directors of the corporation will be members of the Federal Home Loan Bank Board, the Secretary of Housing and Urban Development, the Secretary of Agriculture, and the Administrator of Veterans' Affairs. The corporation will be empowered to issue stock and bonds at levels sufficient to serve its needs.

The Corporation will be empowered to acquire, in exchange for bonds issued by it, home mortgages and other obligations and liens secured by real estate. It is limited to one-to-four family properties of a value of \$40,000 or less. The Corporation may refinance the mortgage over a 30-year period at an interest rate not to exceed 6 percent. In addition, the Corporation may make cash advances, up to 50 percent of the property value, to home-

owners whose obligations cannot be secured by the Corporation. Finally, the Corporation may refinance the mortgage over a 30-year period at an interest rate not to exceed 6 percent. In addition, the Corporation may make cash advances, up to 50 percent of the property value, to homeowners whose obligations cannot be secured by the Corporation. Finally, the Corporation will be able to help homeowners redeem homes already lost to foreclosure.

It is important to note that the HOLC will not become operative—and will cost nothing—until we are faced with a national foreclosure crisis. When and if that crisis comes, we will be ready with a mechanism for helping thousands of American families from losing their homes.

I ask unanimous consent that the text of the bill be printed in the Record at this point.

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

S. 3200

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 "Home Owners' Loan Act of 1974".

DEFINITIONS

SEC. 2. As used in this Act—

(1) The term "Corporation" means the Home Owners' Loan Corporation created under section 3 of this Act.

(2) The term "home mortgage" means a first mortgage on real estate in fee simple or on a leasehold under a renewable lease for not less than 99 years upon which there is located a dwelling for not more than four families, which is, or was for at least one month during the preceding year, used by the owner as a principal residence, and which has a value not exceeding \$40,000.

(3) The term "first mortgage" includes such classes of first liens as are commonly given to secure advances on real estate under the laws of the State in which the real estate is located, together with the credit instruments, if any, secured thereby.

ESTABLISHMENT AND CAPITALIZATION OF HOME OWNERS' LOAN CORPORATION

SEC. 3. (a) There is established a corporation to be known as the Home Owners' Loan Corporation, which shall be an instrumentality of the United States, which shall have authority to sue and to be sued in any court of competent jurisdiction, Federal or State, and which shall be under such bylaws, rules, and regulations as it may prescribe for the accomplishment of the purposes and intent of this section. The board of directors of the Corporation (hereinafter referred to as the "board") shall consist of the members of the Federal Home Loan Bank Board, the Secretary of Housing and Urban Development, the Secretary of Agriculture, and the Administrator of Veterans' Affairs, all of whom shall serve as such directors without additional compensation.

(b) The board shall determine the minimum amount of capital stock of the Corporation and is authorized to increase such capital stock from time to time in such amounts as may be necessary, but not to exceed in the aggregate \$1,000,000,000. Such stock shall be subscribed for by the Secretary of the Treasury on behalf of the United States, and payments for such subscriptions shall be subject to call in whole or in part by the board and shall be made at such time or times as the Secretary of the Treasury deems advisable, and for the purpose of making such payments, the Secretary is authorized to use as a public debt transaction the proceeds of the sale of any securities hereafter issued under the Second Liberty Bond Act, and the purposes for which securities may be issued under the Second Liberty Bond Act are extended to include such payments. The Corporation shall issue to the Secretary of the Treasury receipts for payments by him for or on account of such stock, and such receipts shall be evidence of the stock ownership of the United States. The Secretary of the Treasury may sell, upon such terms and conditions and at such price or prices as he shall determine, any of the stock acquired by him under this subsection. All purchases and sales by the Secretary of the Treasury of such stock under this subsection shall be treated as public debt transactions of the United States.

(c) The Corporation is authorized to issue bonds in an aggregate amount not to exceed \$10,000,000,000, which may be sold by the Corporation to obtain funds for carrying out the purposes of this section, or exchanged as hereinafter provided. Such bonds shall be issued in such denominations as the board shall prescribe, shall mature within a period of not more than 18 years from the date of their issue, shall bear interest at a rate not to exceed a rate determined by the Secretary of the Treasury taking into account the average yield on outstanding marketable obligations of the United States as of the close of the preceding month, and shall be fully and unconditionally guaranteed as to interest only by the United States, and such

guaranty shall be expressed on the face thereof. In the event that the Corporation shall be unable to pay upon demand, when due, the interest on any such bonds, the Secretary of the Treasury shall pay to the Corporation the amount of such interest, which is hereby authorized to be appropriated out of any money in the Treasury not otherwise appropriated, and the Corporation shall pay the amount of such interest to the holders of the bonds. Upon the payment of such interest by the Secretary of the Treasury the amount so paid shall become an obligation to the United States of the Corporation and shall bear interest at the same rate as that borne by the bonds upon which the interest has been so paid. The bonds issued by the Corporation under this subsection shall be exempt, both as to principal and interest, from all taxation (except surtaxes, estate, inheritance, and gift taxes) now or hereafter imposed by any State, county, municipality, or local taxing authority. The Corporation, including its franchise, capital, reserves and surplus, and its loans and income, shall likewise be exempt from such taxation; except that any real property of the Corporation shall be subject to taxation to the same extent, according to its value, as other real property is taxed.

FUNCTIONS

SEC. 4. (a) The Corporation is authorized, for a period of three years after the date of enactment of this Act, but only during any calendar quarter in which the Federal Home Loan Bank Board determines that the foreclosure rate (stated as an annual percentage rate of all mortgaged structures) exceeds one-half of one per centum, (1) to acquire in exchange for bonds issued by it, home mortgages and other obligations and liens secured by real estate (including the interest of a vendor under a purchase-money mortgage or contract) recorded or filed in the proper office or executed prior to the date of the enactment of this Act, and (2) in connection with any such exchange, to make advances in cash to pay the taxes and assessments on the real estate, to provide for necessary maintenance and make necessary repairs, to meet the incidental expenses of the transaction, and to pay such amounts, not exceeding \$50, to the holder of the mortgage, obligation, or lien acquired as may be the difference between the face value of the bonds exchanged plus accrued interest thereon and the purchase price of the mortgage, obligation, or lien, except that the aggregate of such advances and payments shall be reduced by an amount determined by the board to be equal to the amount of costs which would have been incurred in foreclosure proceedings in connection with the mortgage, lien, or other obligation. The face value of the bonds so exchanged plus accrued interest thereon and the cash so advanced shall not exceed in any case \$40,000. In any case in which the amount of the face value of the bonds exchanged plus accrued interest thereon and the cash advanced is less than the amount the home owner owes with respect to the home mortgage or other obligation or lien so acquired by the Corporation, the Corporation shall credit the difference between such amounts to the home owner and shall reduce the amount owed by the home owner to the Corporation to that extent. Each home mortgage or other obligation or lien so acquired shall be carried as a first lien or refinanced as a home mortgage by the Corporation on the basis of the price paid therefor by the Corporation, and shall be amortized by means of monthly payments sufficient to retire the interest and principal within a period of not to exceed 30 years; but the amortization payments of any home owner may be made quarterly, semiannually, or annually, if in the judgment of the Corporation the situation of the home owner requires it. Interest on the unpaid balance of the obligation of the home owner to the Corporation shall be at a rate not exceeding 6 per centum per annum. The Corporation may at any time grant an extension of time to any home owner for the payment of any installment of principal or interest owed by him to the Corporation if, in the judgment of the Corporation, the circumstances of the home owner and the condition of the security justify such extension, and no payment of any installment of principal shall be required during the period of three years from the date this Act takes effect if the home owner shall not be in default with respect to any other condition or covenant of his mortgage. As used in this subsection, the term "real estate" includes only real estate held in fee simple or on a leasehold under a lease renewable for not less than 99 years, upon which there is located a dwelling for not more than four families used by the owner as a home or held by him as a homestead and having a value not exceeding \$40,000. No discrimination shall be made under this Act against any home mortgage by reason of the fact that the real estate securing such mortgage is located in a municipality, county, or taxing district which is in default upon any of its obligations.

(b) The Corporation is further authorized, during any quarter referred to in subsection (a) in any case in which the holder of a home mortgage or other obligation or lien eligible for exchange under subsection (a) of this section does not accept the bonds of the Corporation in exchange as provided in such

subsection and in which the Corporation finds that the home owner cannot obtain a loan from ordinary lending agencies, to make cash advances to such home owner in an amount not to exceed 50 per centum of the value of the property for the purposes specified in such subsection (a). Each such loan shall be secured by a duly recorded home mortgage and shall bear interest at a rate of interest which shall be uniform throughout the United States, but which in no event shall exceed a rate of 6 per centum per annum, and shall be subject to the same provisions with respect to amortization and extensions as are applicable in cases of obligations refinanced under subsection (a) of this section.

(c) The Corporation is further authorized, during any quarter referred to in subsection (a), to exchange bonds and to advance cash, subject to the limitations provided in subsection (a) of this section, to redeem or recover homes lost by the owners by foreclosure or forced sale by a trustee under a deed of trust or under power of attorney, or by voluntary surrender to the mortgagee within two years prior to such exchange or advance.

(d) The board shall issue such rules and regulations as may be necessary, including rules and regulations providing for the appraisal of the property on which loans are made under this section so as to accomplish the purposes of this Act.

(e) Any person indebted to the Corporation may make payment to it in part or in full by delivery to it of its bonds which shall be accepted for such purpose at face value.

ADMINISTRATIVE PROVISIONS

SEC. 5. (a) The Corporation shall have power to appoint and fix the compensation of such officers, employees, attorneys, or agents as shall be necessary for the performance of its duties under this Act, without regard to the provisions of other laws applicable to the employment or compensation of officers, employees, attorneys, or agents of the United States. No such officer, employee, attorney, or agent shall be paid compensation at a rate in excess of the rate provided by law in the case of the members of the Federal Home Loan Bank Board. The Corporation shall be entitled to the free use of the United States mails for its official business in the same manner as the executive departments of the Government, and shall determine its necessary expenditures under this Act and the manner in which they shall be incurred, allowed, and paid, without regard to the provisions of any other law governing the expenditure of public funds.

(b) The board is authorized to make such bylaws, and issue such rules and regulations, not inconsistent with the provisions of this section, as may be necessary for the proper conduct of the affairs of the Corporation. The board is further authorized and directed to retire and cancel the bonds and stock of the Corporation as rapidly as the resources of the Corporation will permit. Upon the retirement of such stock, the reasonable value thereof as determined by the board shall be paid into the Treasury of the United States and the receipts issued therefor shall be canceled. The board shall proceed to liquidate the Corporation when its purposes have been accomplished, and shall pay any surplus or accumulated funds into the Treasury of the United States. The Corporation may declare and pay such dividends to the United States as may be earned and as in the judgment of the board it is proper for the Corporation to pay.

PENALTIES

SEC. 6. Whoever makes any statement, knowing it to be false, or whoever willfully overvalues any security, for the purpose of influencing in any way the action of the Home Owners' Loan Corporation or the board upon any application, advance, discount, purchase, or repurchase agreement, or loan under this Act, or any extension thereof by renewal, deferment, or action or otherwise, or the acceptance, release, or substitution of security therefor, shall be punished by a fine of not more than \$5,000, or by imprisonment for not more than two years, or both.

FHA AUTHORITY

SEC. 7. During any period when the Corporation is carrying out its function pursuant to section 4, the Secretary of Housing and Urban Development may not make cash expenditures in connection with default proceedings under any provision of the National Housing Act, except as provided in the second sentence of section 207(j) of such Act.

AUTHORIZATION

SEC. 8. There are authorized to be appropriated such sums as may be necessary to carry out the provisions of this Act.



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Senate

CASUALTIES OF THE WORKPLACE

Mr. MONDALE. Mr. President:

According to recent estimates there were at least 390,000 new cases of disabling occupational disease in the United States each year . . . [T]here may be as many as 100,000 deaths per year from occupationally caused diseases.

These alarming words of former Secretary of Health, Education, and Welfare Elliot Richardson reflect the theme of part IV of Paul Brodeur's series of articles entitled, "Annals of Industry: Casualties of the Workplace." The article, which appears in the November 19, 1973, issue of the New Yorker magazine, is an excellent study of industrial health and safety, and is worthy of the Senate's attention.

In the article, Mr. Brodeur reviews the history of health standards pertaining to industrial exposure to toxic materials such as asbestos. It was not until 1970, when Congress passed the Occupational Safety and Health Act, that any significant legislative action was taken to protect our Nation's workers from workplace hazards. And it was not until June 6, 1972, that, over strong industry protest, a safety standard was created for asbestos fibers. To say the least, in view of the fact that investigations have revealed that cancer accounts for approximately 75 percent of the excess deaths among asbestos-industrial workers and that even slight exposure has been proven to cause asbestosis, mesothelioma, and other malignant tumors, the 1972 ruling was long overdue.

The article also explores the potential conflict between governmental regulation and the attempts of industry to suppress medical data. The article reveals how deeply the tentacles of the medical industrial complex have penetrated the workings of the Government in matters relating to industrial disease. Dr. Irving J. Selikoff, the director of the Mount Sinai School of Medicine's Environmental Science Laboratory, has predicted that—

Tens of thousands of workers would die because of the inadequate regulations issued by the Occupational Safety and Health Act and . . . that if the Administration showed the same disregard for essential precaution in setting standards for other toxic substances we face an unparalleled disaster to the working people of our country.

Throughout Mr. Brodeur's article are alarming examples of industry's efforts to hinder the development of safe working conditions, to hide the facts about industrial disease, and to prevent State job-safety agencies from taking effective action. The article represents a sad commentary on the state of occupational safety and health enforcement in this country.

I ask unanimous consent that the article entitled, "Annals of Industry: Casualties of the Workplace," by Mr. Paul Brodeur from the November 19, 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

IV. NO TANGIBLE EFFECT ON SALES AND EARNINGS

Under the provisions of the Occupational Safety and Health Act of 1970, Congress authorized the Secretary of Labor to promul-

gate mandatory standards for exposure to toxic materials, so that no employee would suffer diminished health or life expectancy as a result of his work experience—a considerable undertaking, since American workers were being exposed to thousands of toxic substances, and since federal standards, often inadequate, existed for fewer than four hundred and fifty of them. Of all the industrial hazards, none was considered to be more serious than occupational exposure to asbestos. Indeed, mortality studies conducted by Dr. Irving J. Selikoff, the director of the Mount Sinai School of Medicine's Environmental Sciences Laboratory, and by Dr. E. Cuyler Hammond, vice-president for epidemiology and statistics of the American Cancer Society, indicated that one out of every five deaths among asbestos-insulation workers in the United States was due to lung cancer; that almost one out of every ten deaths among these men was due to mesothelioma, an invariably fatal tumor of the linings of the chest or abdomen which rarely occurs without some, even if slight, exposure to asbestos; that another one out of ten deaths among them was due to asbestosis, which is scarring of the lungs resulting from inhalation of asbestos fibres; and that almost half of the men were dying of some form of asbestos disease. In spite of these findings, and in spite of the fact that the insulation workers constituted only a fraction of the total work force exposed to asbestos, no action was taken on the problem until December of 1971. At that time, under intense pressure from the A.F.L.-C.I.O.'s Industrial Union Department—an organization representing labor unions with several million members who had either direct or indirect exposure to asbestos—and partly as a result of disclosures made by Dr. William M. Johnson and Dr. Joseph K. Wagoner, of the Division of Field Studies and Clinical Investigations of the Department of Health, Education, and Welfare's National Institute for Occupational Safety and Health, who had uncovered data long buried in the files of their predecessors that showed extraordinarily high levels of asbestos dust in asbestos factories across the land, Secretary of Labor James D. Hodgson declared a temporary emergency standard of five asbestos fibres greater than five microns in length per cubic centimetre of air to replace the grossly inadequate standard of twelve fibres per cubic centimetre then in effect. (Five microns is one five-thousandth of an inch, and a cubic centimetre of air is the amount that could be contained in a small thimble.)

This, however, was more than double the standard—two fibres per cubic centimetre—than had been urged upon the Secretary by Dr. Selikoff and the union people. It is not known what medical data, if any, prompted Secretary Hodgson to choose the five-fibre standard, or why he chose to disregard data furnished by Dr. Selikoff and other leading epidemiologists indicating that disease could occur at this level of exposure, and that even a two-fibre standard could be expected to prevent only the occurrence of asbestosis, and not the development of asbestos-induced cancer. It is believed, however, that he was seeking some middle ground that he hoped would be acceptable both to industry and to the unions. In any case, the Act required him to replace the emergency standard with a permanent standard within six months, and to hold public hearings before doing so, and since this ruling would be the first he would make under his mandate to redefine occupational-safety-and-health regulations, industry and labor were prepared to look upon it as an indication of how determined or easygoing the federal government would be when it came time to set new standards for other hazardous substances.

The public hearings, which took place in Washington, D.C., in March of 1972, provided a confrontation between those members of the independent medical and scientific community who had been studying the hazards of asbestos and members of the medical-industrial complex who were wholly or partly supported by the asbestos industry. On the

one hand, the independent medical and scientific community strongly endorsed a recommendation made to the Secretary of Labor by the National Institute for Occupational Safety and Health (NIOSH) that the exposure to asbestos be set at two fibres per cubic centimetre—a level that had also been recommended to Secretary Hodgson by the Advisory Committee on the Asbestos Standard, which was made up of five men chosen by the Secretary himself. On the other hand, the major asbestos companies, led by the giant Johns-Manville Corporation, presented testimony at the hearings which purported to show that the five-fibre standard would prevent disease, and put forth economic statistics to demonstrate that the cost of meeting a two-fibre standard would drive them out of business. Since the doctors working for the asbestos industry were unable to furnish any conclusive proof that asbestos disease would not occur at the five-fibre level, many observers felt that in setting a permanent standard the Secretary of Labor would surely follow the advice of NIOSH and his own Advisory Committee.

This view, however, was not shared by Anthony Mazzocchi, the director of the Legislative Department of the Oil, Chemical, and Atomic Workers International Union—the union that had represented employees at the Pittsburgh Corning Corporation's asbestos-insulation plant in Tyler, Texas, where Dr. Johnson and Dr. Wagoner had found an extremely critical health situation because of atrocious working conditions, which eventually led to Pittsburgh Corning's closing the plant. Mazzocchi considered the Tyler situation a prime example of how the medical-industrial complex could for years neglect and even suppress occupational-health data without opposition from key industrial-health officials of state and federal government, and, at a press conference held in Washington on February 10, 1972, he had harshly criticized not only Pittsburgh Corning and its medical consultant, Dr. Lee B. Grant, for having ignored the peril of workers at the factory but also the Department of Labor's Occupational Safety and Health Administration for having failed to enforce at the Tyler plant even the totally obsolete standard of twelve fibres per cubic centimetre. Because of similar failures involving dozens of other hazardous substances in hundreds of factories across the land, Mazzocchi was highly skeptical of the Administration's commitment to carry out the provisions of the 1970 Act. Insofar as the asbestos hazard was concerned, his skepticism was reinforced early in April, shortly after the public hearings were concluded, when word got out that the Administration had hired Arthur D. Little, Inc., a research and consulting firm based in Cambridge, Massachusetts, to perform an economic-impact study of the proposed two-fibre standard. There were several disturbing factors in this development. First, there was no provision in the Act requiring the Department of Labor to undertake a cost-benefit analysis before promulgating a health regulation. Second, the impact study was apparently initiated in response to an executive policy handed down by President Nixon's Office of Management and Budget—an organization notably well disposed toward big business. Third, by sending out questionnaires soliciting "guess estimates" from doctors as to what the incidence of disease might be at various levels of exposure to asbestos over long periods, the Arthur D. Little people not only were questioning the exhaustive research already conducted by NIOSH but also were apparently bent less on collecting scientific data than on arriving at a consensus standard that would be more acceptable to industry than the standard recommended by NIOSH.

However, the most ominous aspect of Arthur D. Little's involvement came to light at the beginning of May, when it was learned that even as the firm had been negotiating a contract with the federal government to conduct the cost-benefit analysis of the two-fibre standard, it had urged Raybestos-Manhattan, Inc., a major producer of as-

bestos products, to move a plant from Stratford, Connecticut, to Mexico, where, of course, asbestos operations would be unhindered by any regulations that might be established in the United States. This obvious conflict of interest was simply another indication of how many tentacles the medical-industrial complex had acquired, and how deeply it had penetrated the workings of the government in matters relating to industrial disease.

While waiting to see what action the Secretary of Labor would take in the first week of June, his deadline for setting a permanent standard for asbestos, I received a copy of "The President's Report on Occupational Safety and Health," which described what had been done to carry out the provisions of the Act during its first year of operation. The report, addressed to Congress, actually consisted of two separate reports, submitted to President Nixon in May by Secretary of Labor Hodgson and by Secretary of Health, Education, and Welfare Elliot L. Richardson. Hodgson's report began by saying that each year, out of eighty million people employed in the civilian labor force, more than fourteen thousand are killed and two million two hundred thousand suffer disabling injuries on the job. He then said that there were no reliable figures on the number of employees who suffer minor, nondisabling injuries or become ill after being exposed to hazardous conditions. Toward the end of his report, however, Hodgson stated that occupational illnesses were "at least as great a problem as injuries" but that "it was much more difficult to develop a special program that would allow O.S.H.A. [the Occupational Safety and Health Administration] to effectively focus on them." He went on to say that, through its Target Health Hazards Program, the Administration would concentrate on five substances—*asbestos, cotton dust, silica, lead, and carbon monoxide*—which were among the most hazardous of more than eight thousand toxic substances currently identified by NIOSH.

Secretary Richardson was considerably more explicit in his assessment of the problem. His report matter-of-factly stated that according to recent estimates there were at least three hundred and ninety thousand new cases of disabling occupational disease in the United States each year. This figure was followed by one that boggles the mind: "Based on limited analysis of violent/non-violent mortality in several industries, there may be as many as 100,000 deaths per year from occupationally caused diseases." Richardson went on to say that at the end of 1971 NIOSH had completed a criteria document for the Secretary of Labor which recommended a two-fibre asbestos standard. According to Richardson, the two-fibre standard proposed by NIOSH would "protect against asbestosis and asbestos-induced [cancer]; be measurable by techniques that are valid, reproducible, and available to industry and official agencies; and be attainable with existing technology."

In appendices to Richardson's report, there were long lists of contracts and grants that had been awarded by NIOSH to various universities, medical schools, corporations, and research institutes for studies relating to occupational safety and health. Among them were two grants and one contract, totalling more than a hundred and forty-six thousand dollars, that had been awarded to the Industrial Health Foundation, Inc., in Pittsburgh, and to Dr. Paul Gross, the director of the foundation's research laboratories, for studies relating to asbestos disease. As it happened, Dr. Gross had testified for Johns-Manville in at least one workmen's-compensation case, and the Industrial Health Foundation, Inc., was none other than the old Industrial Hygiene Foundation of America, Inc., the self-styled "association of industries for the advancement of healthful working conditions," which was hired by Pittsburgh Corning in the summer of 1963 to evaluate the asbestos-dust hazard at its plant, then newly acquired, in Tyler. Moreover, NIOSH's project officer for a contract under which more than fifty-eight thousand dollars had been supplied up to that time was Dr. Lewis J. Cralley, who, when director of NIOSH's Division of Epidemiology and Special Services, had ignored that data showing excessive asbestos-dust counts at the Tyler plant. One of the appendices to Richardson's report also listed a contract for forty-eight thousand nine hundred and seventy-six dollars which had been awarded to Arthur D. Little, Inc., of Cambridge, Massachusetts, to "develop a priority rating system and identify general areas and specific problems where fruitful and necessary research in occupational safety should be undertaken."

In the middle of May, something occurred to shed light on the role of Johns-Manville—the world's largest producer and user of asbestos, with mines, mills, and some sixty manufacturing plants in the United States and Canada—in the public hearings in Washington, where acting as *émigré* grise for the entire asbestos industry, it had mounted strenuous opposition to the proposed two-fibre standard. On May 18th, speaking before the annual meeting of the American Industrial Hygiene Association, in San Francisco, Dr. William J. Nicholson, of the Mount Sinai

Environmental Sciences Laboratory, described a mortality study he, Dr. Selikoff, and Dr. Hammond had conducted which showed that a hundred and ninety-nine deaths had occurred during thirteen years—or sixty-five more than were to be expected according to the standard mortality tables—among six hundred and eighty-nine workers at Johns-Manville's plant in Manville, New Jersey. An examination showed that a vast majority of the excess deaths were the result of asbestos-induced disease. On May 23rd, Johns-Manville issued a press release quoting Wilbur L. Ruff, the manager of the Manville plant, as saying that the asbestos-dust levels that caused the fatal disease among the workers were those of past years, "when conditions were much worse than they are now." After praising the corporation's dedication to medical research and industrial hygiene, Ruff said that "though spending money doesn't mean a thing where human health is concerned, the six and a half million dollars we've spent on dust-control projects since 1949 does show that we're a company with conscience." Ruff also said that a recent dust survey conducted by the Occupational Safety and Health Administration indicated that the Manville plant had "an outstanding record in dust control."

This was the first I had heard of the Administration's inspection at Manville, so I called Robert Kilger, vice-president of Local 800 of the United Papermakers and Paperworkers Union, whom I had met at the public hearings in Washington, and asked him to tell me about it.

"Since April of 1971, when a government survey showed that some dust counts in the Manville textile operation were running as high as twenty fibres per cubic centimetre, there has been considerable improvement," Kilger said. "The 1971 survey and a previous survey that was conducted back in August of 1967 were buried in the files of the old Bureau of Occupational Safety and Health's Cincinnati offices, until Dr. Wagoner and Dr. Johnson brought them to light in the summer of 1971, along with a 1969 medical survey showing that seventeen per cent of a hundred and seventy-nine workers in the Manville textile operation had X-rays that were consistent with asbestosis."

When we learned about these hidden studies, last fall, we requested an immediate inspection of the Manville plant by the Occupational Safety and Health Administration. Its people came in November and December of that year, and returned in April of this year. Their latest survey shows that eighty-one per cent of the dust stations in the plant are operating at between zero and two fibres per cubic centimetre of air; that seventeen per cent are operating at between two and five fibres; and that only two per cent indicate dust counts above the five-fibre level. This has come about simply because J.-M. has expended a great amount of money and effort over the past two years to engineer improved dust-control equipment and install it throughout the Manville plant."

I asked Kilger what had impelled the company to make this expenditure, and he told me that it was probably a combination of things. "We had a long and costly strike here in the autumn of 1970," he said. "As part of the settlement, the company guaranteed to make a real effort to reduce dust levels in the plant. Then, too, in 1969 Johns-Manville paid out nearly nine hundred thousand dollars in workmen's compensation in New Jersey for asbestosis alone, over and above what it may have settled out of court in litigation brought against it by workers, or families of workers, who had contracted asbestos-induced cancer. In addition, the work of men like Dr. Selikoff and Dr. Hammond was by then piling proof upon proof of the association between asbestos and disease. So the J.-M. people simply saw the writing on the wall, and decided they had better act."

At this point, I found myself remembering that without exception the testimony delivered by Johns-Manville officials and their medical associates at the public hearings in Washington had strongly urged the Secretary of Labor not to lower the standard for occupational exposure to asbestos from five to two fibres per cubic centimetre of air. Yet during the previous two years the company had undertaken to accomplish just that in the bulk of its operations in Manville, which has the largest complex of asbestos plants in the world. When I remarked upon this seeming contradiction to Kilger, however, he was not at all surprised.

"There's a simple explanation," he told me. "The Johns-Manville people sell huge amounts of raw asbestos fibre to competitors here and all over the world. In fact, they've pretty well got the chrysotile-asbestos market cornered. For example, according to their own announcement of 1970 earnings before taxes, the mining, milling, and selling of raw asbestos brought in twenty-five million dollars, which was nearly half of their total gross for that year. So, you see, a lower standard might drive the competitors to whom they sell raw fibre out of business, or cause them to look about for asbestos substitutes."

On June 6, 1972, Secretary Hodgson and George C. Guenther, who was the Assistant Secretary of Labor and the director of the Occupational Safety and Health Administration, announced the long awaited decision on a permanent standard for asbestos. It served to confirm the doubts that had been expressed by Mazzocchi and other labor leaders about the Department of Labor's commitment to the provisions of the Occupational Safety and Health Act, for, despite the recommendations of both the Department of Health, Education, and Welfare's National Institute for Occupational Safety and Health and the members of the Secretary's own Advisory Committee on the Asbestos Standard, the new regulations stipulated that the five-fibre standard would remain in effect for four more years, and that a two-fibre level would become effective only on July 1, 1976.

Reaction to the ruling was immediate, and it came from all quarters. On June 7th, John B. Jobe, vice-president in charge of operations for Johns-Manville, issued a statement from the company's headquarters, in Denver, assuring stockholders that the new controls would have "no tangible effect on sales and earnings." On the same day, the *Times* ran a short article on its inside back page that said, "The Occupational Safety and Health Administration ordered today a continuation of asbestos dust exposure limits for four

more years despite the recommendations by a scientific panel that they be cut by more than half." The *Wall Street Journal*, in an article in its June 7th issue, put a slightly different interpretation on the news. "The Occupational Safety and Health Administration announced tough new curbs on asbestos in plants, but gave employers four years to comply," it stated. That same day, Sheldon W. Samuels, the director of Health, Safety, and Environmental Affairs for the A.F.L.-C.I.O.'s Industrial Union Department, told me that, in addition to giving industry two extra years in which to comply, the Administration had rejected recommendations from NIOSH for medical surveillance of asbestos workers, for medical recordkeeping, and for labels on asbestos products warning that inhalation of asbestos could cause asbestosis or cancer. "Moreover, because the Administration has only a handful of industrial hygienists, the determination of actual levels of asbestos dust in workplaces will depend upon tests conducted by the employers," Samuels said. "No controls will be required if an employer finds, or believes, that dust levels do not exceed the standard, which, of course, makes a monstrous joke of the whole business. In fact, the new standard is so appallingly deficient that we plan to fight it in the courts."

Dr. Selikoff was quoted by one source as saying, when he was asked his opinion of the new standard, that his remarks "would have to be written on asbestos-coated paper." Then, in a speech he gave in Washington on June 12th, which was quoted in an article in the *Times*, he predicted that tens of thousands of workers exposed to asbestos would die because of inadequate regulations issued by the Occupational Safety and Health Administration, and added that if the Administration showed the same disregard for essential precautions in setting standards for other toxic substances "we face an unparalleled disaster to the working people in our country." He charged Assistant Secretary Guenther with creating a situation in which "workers exposed to asbestos in any trade are required to work under conditions which permit them to inhale twenty million or even thirty million fibres in a working day."

In the same article, Guenther was quoted as saying that Dr. Selikoff had chosen to overdramatize the matter. "There is no question that exposure to asbestos is most hazardous," Guenther declared. "We believe that the new standards will provide substantial and real protection for exposed workers, and that they provide for reductions in levels of asbestos exposure that are reasonable and, in our judgment, based on tests from any quarters." Guenther did not identify the tests and the many quarters from which they supposedly came, but he certainly would not have been referring to any tests described in a story entitled "Asbestos: Airborne Danger," which appeared in the May-June 1972, issue of *Safety Standards*, the official bi-monthly magazine of his own Occupational Safety and Health Administration. After stating that "asbestos has been recognized as one of the most hazardous of air contaminants," the article described only one test concerning the effects of asbestos exposure. That was the study of the disastrous mortality experience of the asbestos-insulation workers which had been conducted by Dr. Selikoff and Dr. Hammond.

For sheer irony, however, there was an event in the early part of June that rivalled Guenther's contradiction of his own house publication. On June 9th, NIOSH held its first-anniversary celebration and awards ceremony, at the Cincinnati Convention Center. Among the recipients of awards was Dr. Cralley, who was presented with the Public Health Service Meritorious Service Medal, "in recognition of his research into developing safe worker exposure levels to such potential occupational hazards as uranium, as-

bestos, silica, beryllium, and diatomaceous earth dust."

Up to that time, no one knew what conclusions the Arthur D. Little people had drawn in their study of the proposed asbestos standard, because the firm did not receive permission from the Department of Labor to print and distribute a report of the study until June 8th. Within a few days, however, Dr. Nicholson, of Mount Sinai, received his copy of the report and a letter from Dr. Donald W. Meals, of Arthur D. Little, Inc., thanking him for "your support as a member of one of the panels of experts." One indication that the Arthur D. Little people must have put the report together very hastily was that Dr. Nicholson, who had contributed to the study, was not listed in the report as a member of the panel of health experts, while Dr. Selkoff, who had written two letters to the Arthur D. Little people telling them that the methodology of their study had little scientific validity, did not receive a copy of the report or a letter of appreciation from Dr. Meals for his contribution to the study but was listed in the report as a member of the panel of health experts.

No one seems to know what the Arthur D. Little people had in mind in all this, but the possibility that they felt the need to achieve some semblance of balance and impartiality in their panel of health experts presents itself to anyone examining the roster of eleven men listed as its members. In the order in which their names appeared, they were Dr. Edward A. Gaensler, professor of surgery and director of thoracic services at Boston University's Medical Center, who has made useful contributions to the study of asbestos disease, and who has also been retained by Johns-Manville, to examine workers at its asbestos-wallboard plant in Billerica, Massachusetts; Dr. Thomas H. Davison, medical director of Johns-Manville; Dr. John Corbett McDonald, the chairman of the Department of Epidemiology and Health of McGill University, in Montreal, and the author of a study entitled "Mortality in the Chrysotile Asbestos Mines and Mills of Quebec," which was financed by the Quebec Asbestos Mining Association, of which Johns-Manville is a leading member; Dr. Cralley, the former director of the Division of Epidemiology and Special Services, in whose files Dr. Johnson and Dr. Wagoner had uncovered hidden data showing grossly excessive levels of asbestos dust in the Tyler plant and other asbestos factories across the land as well as data showing an appalling rate of deaths from asbestos disease among asbestos-textile workers; Howard E. Ayer, the former assistant director of the division, who, as its senior industrial hygienist, was involved in the interpretation of the dust levels measured over the years at asbestos factories; Dr. George W. Wright, head of medical research at St. Luke's Hospital in Cleveland, and a long-time paid consultant of Johns-Manville, who testified for the corporation at the public hearings in Washington.

Dr. Hans Weill, a professor of medicine in the pulmonary-diseases section of the Tulane University School of Medicine, who had been given financial support by the Quebec Asbestos Mining Association to conduct a study of asbestosis among men working at a Johns-Manville cement-products plant at Marrero, Louisiana; Dr. W. Clark Cooper, a former head of the old Bureau of Occupational Safety and Health and a partner in Tabershaw-Cooper Associates, Inc., a consulting firm in Berkeley, California, which has done research contract work not only for the National Insulation Manufacturers Association, of which Johns-Manville is a member, but also for Pittsburgh Corning; Dr. Philip E. Enterline, a professor in the Department of Biostatistics of the University of Pittsburgh, who was retained by Johns-Manville to study the health experiences of its retired employees; Commander Samuel H. Barbo, an industrial hygienist in the Medical Service Corps of the United States Navy (a large purchaser of asbestos insulation), who had never been involved in any studies concerning the health effects of asbestos; and, lastly, Dr. Selkoff.

Considering the backgrounds of most of the members of the expert health panel, and the fact that two additional panels of experts consisted of a committee of thirteen men representing private shipbuilding companies and a group of twelve men from various asbestos-producing companies (including two executives of Johns-Manville), it was hardly surprising that the Arthur D. Little people concluded in their report that "reduction of the exposure of workers to asbestos dust from present levels to five fibres per cubic centimetre will significantly reduce asbestos-related diseases and achieve more than 99% of the benefits attainable from the control of dust levels." (In talking about a reduction "from present levels," they apparently forgot that an emergency five-fibre standard had been in effect for nearly five months.) Their report went on to say that because of the cost the two-fibre standard very probably could not be met by the asbestos industry within the two-year period recommended by NIOSH; that the standard could not be

achieved at any cost within two years by companies engaged in on-board ship repair in private shipyards (asbestos insulation being used extensively in shipbuilding); and that it would certainly lead to intensified foreign competition in this field and to the imposition of "difficult problems and costly solutions" upon United States Navy shipyards.

In making this statement, the Arthur D. Little people overlooked evidence and statistical tables in the NIOSH criteria document showing that many asbestos plants were already operating at or below a two-fibre level, and that most of the asbestos industry could comply with a two-fibre standard without undue technical hardship. And, piling oversight upon oversight, they went on to say that estimates of when each segment of the asbestos industry could meet various fibre levels "show at a first glance that only a twelve-fibre standard can be met immediately"—an assertion that ignored the fact that a twelve-fibre standard was supposed to have been in effect from 1968 until the temporary emergency standard of five fibres was declared by the Secretary of Labor six months earlier.

Later in their report, in a section that was entitled "Benefits from Asbestos Exposure Control Standards," the Arthur D. Little people got around to defining what they meant by benefits:

"The case against asbestos dust is firm and unquestioned by those familiar with available research data. Selkoff and others have amply demonstrated an association between exposure to asbestos fibres and increased morbidity. It follows that reduction of the hazard will provide increased freedom from disease and longer life for those working with or near asbestos.

"The question of how closely the goal of zero risk to asbestos-related diseases can be approached requires further exploration. The removal of this hazard requires changes that inevitably involve the expenditure of time and money, and in the world of business (including working men when jobs are at stake) the relationship between benefits and costs is an important issue. Numerous examples of the refusal of people individually and collectively to pay even modest inconvenience costs to completely remove risks demonstrate that eliminating a hazard at any cost is not always feasible. However, those who must pay the price for removing the hazard may be willing or able to do so within limits. Finding these limits usually involves comparing less than the maximum obtainable benefits with associated costs. This, of course, is the familiar cost/benefit framework for evaluating alternative courses of action. While we do not believe a purely quantitative cost/benefit analysis is feasible or desirable here, the conceptual scheme is useful. In the next section, we examine the probable costs for various reductions (fibre levels) in the hazard of asbestos dust. To place these costs in a perspective that may be useful in setting policy, it is important to estimate the benefits associated with each of several such levels of risk."

At this point, the Arthur D. Little people drew attention to Table 2 of their report, which incorporated estimates from eight of the eleven listed health-panel members as to the incidence of asbestosis, lung cancer, and mesothelioma among a hundred workers exposed to various levels of asbestos fibres during an eight-hour working day over a period of forty years. A footnote stated that by the time the report went to press two additional responses had been received, which did not change either the median or the range. The footnote did not mention that Dr. Selkoff's responses to this questionnaire were the only ones not included. As a result, Table 2 concluded that not one worker in a hundred would develop asbestosis after being exposed to two fibres per cubic centimetre for forty years, whereas Dr. Selkoff had estimated that fifty-five of a hundred workers would develop the disease under these conditions. In addition, Table 2 concluded that only one worker in a hundred would develop asbestosis after working for forty years in an environment containing five fibres per cubic centimetre, whereas Dr. Selkoff had estimated that eighty-five workers out of a hundred would contract the disease under such conditions. As for mesothelioma, the Arthur D. Little report concluded that only one out of a thousand workers would be afflicted with the disease after forty years of exposure to two fibres per cubic centimetre, whereas Dr. Selkoff had estimated that four out of every hundred workers would develop mesothelioma under these circumstances. And Table 2 concluded that only two out of a thousand workers would develop mesothelioma after forty years of exposure to a working environment containing five fibres per cubic centimetre of air, whereas Dr. Selkoff had estimated that seven out of a hundred workers would be affected with mesothelioma at this level.

Now, using Table 2 as a springboard, the Arthur D. Little people leaped to other unfounded conclusions. "It is apparent from this set of judgments that relatively large

benefits correspond to the reduction of exposure from thirty to twelve fibres, and from twelve to five fibres," they wrote. "The judgments suggest, however, that a further reduction of the exposure level to two fibres is attended by very small benefits—on the order of less than one per cent." They could make such an assertion, of course, only because they had not seen fit to include in Table 2 the responses of Dr. Selkoff, who is widely regarded as one of the world's foremost epidemiologists in the field of asbestos disease, and whose epidemiological investigations of asbestos disease had never been supported by any segment of the asbestos industry. Having made the assertion, however, the Arthur D. Little people bounced along to others:

"Data on bronchogenic cancer and mesothelioma suggest that these diseases are also related to the degree of exposure. The numbers are small, however, and experience more limited than that available for asbestosis. The only inference we are prepared to draw from these data is that their explicit consideration by the panel members very probably yields better estimates than if they had not been included. Continuing studies of these diseases among asbestos

workers should contribute to estimates that better justify interpretation and speculation than these."

All this, of course, overlooked the fact that in their studies of the disastrous mortality experience of six hundred and thirty-two asbestos-insulation workers in New York City and Newark, and of nine hundred and thirty-three men who had worked at an asbestos-insulation factory in Paterson, New Jersey, Dr. Selkoff and Dr. Hammond had furnished incontrovertible proof that two hundred and thirty out of three hundred and nineteen excess deaths among these men were caused by some form of cancer.

The rest of the Arthur D. Little report consisted of analyses of such things as the gross-sales profits of various segments of the asbestos industry and the estimated economic impact of various asbestos standards on shipbuilding companies and on manufacturers of asbestos products. A section entitled "Economic Impact on Manufacturers" contained this passage:

"With regard to technical feasibility, we judge that the five-fibre level is achievable. Even with the best available techniques, however, we do not know whether a two-fibre limit could be met. (In fact, we cannot be completely certain about the five-fibre limit until the best available equipment has been installed and evaluated.) Thus a reliable assessment of the validity of the 'guesstimates' put forth on the cost of compliance to the two-fibre level is not really possible until technical feasibility has been established. In the meantime, the estimates shown in Table Six are the best that have been developed."

The estimates, or "guesstimates," in Table 6 may well have been the best that were available, but to me they were incomprehensible, so I went to Mount Sinai and asked Dr. Nicholson, whose copy of the report I had been reading, to interpret them for me.

Dr. Nicholson shook his head and gave a weavy smile. "The cost estimates obtained by Arthur D. Little from its panel of experts are inappropriate on two counts," he said. "First, the panelists were asked to estimate time and costs to achieve specific dust levels, and not costs to achieve effective worker protection. Second, the cost estimates were obtained by soliciting guesses from representatives of the asbestos industry rather than by reviewing the cost and effectiveness of existing installations. The whole approach is like the old story of asking the fox to guard the chicken coop. Here the fox has been asked how many chickens he would kill. 'Why, hardly any,' he replies. Then the fox is asked how much it would cost to keep him from killing just those few chickens. 'Oh, much too much to consider,' he answers."

Glancing over the names and corporate affiliations of Arthur D. Little's twelve-man expert panel from the asbestos industry, I saw that all eleven of the companies they represented had sent officials to the public hearings to testify against the proposed two-fibre standard. When I pointed this out to Dr. Nicholson, he shook his head again.

"The ins and outs of this whole affair constitute an endless labyrinth that never ceases to amaze me," Dr. Nicholson said. "I just noticed, for example, that both the Certain-teed Products Corporation and Nicolet Industries, Inc., are represented on the panel, and that reminds me of a story I read in the *Wall Street Journal* earlier this month. It was about the old Keasbey & Mattison Company, which used to make milk of magnesia in the town of Ambler, Pennsylvania, near Valley Forge. The article described an incident in the early history of the company, when Dr. Royal Mattison accidentally spilled some milk of magnesia on a hot pipe and found that it adhered. That brought the Keasbey & Mattison people into the insulation business. In 1962, however, the company

went out of business and sold its facilities to Certain-teed Products, which started manufacturing asbestos-cement pipe. Since that time, Ambler has also been the site of a plant operated by Nicolet Industries, which manufactures other asbestos-cement products. In the *Journal* article, there was a description of a large open-air dump that has existed in the town since 1867, that is owned by Nicolet and Certain-teed, and that is still used by Certain-teed, which adds twenty-seven hundred tons of crushed asbestos pipe to the dump each year. Naturally, this aroused my curiosity, so I drove down to Ambler the other day to take a look at it. When I got there, I could hardly believe my eyes.

The dump not only snakes diagonally through the very center of the town, which has a population of about eight thousand, but it is fifty feet high, anywhere from one to two city blocks wide, and about ten city blocks long. In fact, it is estimated to contain some million and a half cubic yards of waste material. I brought back a dozen or so samples of debris to our mineralogy laboratory for analysis, and we found that all of them contained large amounts of chrysotile-asbestos fibre. The incredible thing, however, is that while the townspeople of Ambler want to get rid of the dump—it's an eyesore, of course—almost no one down there seems to be aware of the health hazard it poses. Kids play on an asphalt basketball court that has been built smack on top of material from the dump, and is literally covered with loose asbestos fibre and wads of waste material containing asbestos. Not only that but the dump itself is pockmarked with holes and tunnels dug over the years by kids searching for old milk-of-magnesia bottles, which have become collector's items. As you may already be aware, cases of mesothelioma have been reported among people whose exposure to asbestos was that as children they had played on asbestos dumps.

A few days later, I was reminded of the Ambler dump while looking at an exhibit submitted as evidence during the public hearings by Bruce J. Phillips, a senior vice-president of Certain-teed. "We do not feel that there is sufficient medical justification for a two-fibre limit at this time," Phillips had said. "We propose a five-fibre standard." However, this statement of Phillips' aroused my curiosity less than the next. "We feel that asbestos scrap and waste, including asbestos dust, can be disposed of in quantity only in a landfill, where the waste can be covered each day, and will present no danger to anyone. Furthermore, these disposal problems are solid-waste-management problems to be covered by the Environmental Protection Agency, and not O.S.H.A.," he said. Whether Phillips had the Ambler dump in mind when he made this statement is a matter of conjecture, but it is a matter of record that the Environmental Protection Agency had not then got around to declaring a standard for asbestos dust in the ambient air.

Toward the end of June, Herman Yandle, the former union committee chairman at the Tyler plant, called me from Hawkins, Texas, to inform me that ten thousand-odd bags of asbestos fibre left in the warehouse after Pittsburgh Corning closed the factory, and either buried or otherwise disposed of virtually all of the rest of its innards, had been shipped to Canada during the last part of May. Yandle had been told that the fibre had been bought by a company with facilities on Manitoulin Island, in Ontario.

That piece of information sent me to a map, where I discovered that Manitoulin is a very large island in the northern part of Lake Huron, about a hundred miles east of Sault Ste. Marie. As a result of inquiries I made to find someone who might be able to tell me something about the company, I got in touch with Dr. Ernest Mastromatteo, who is the director of the Environmental Health Services Branch of the Ontario Ministry of Health, in Toronto.

"Manitoulin Island is way up in the wilds, and I've never heard of any asbestos plant up there," Dr. Mastromatteo said. "But I'll have our people look into it, and get back to you as soon as we have something to report."

During July, another intricate tier was added to the labyrinth constructed by the medical-industrial complex in its dealings with the problem of occupation exposure to asbestos, and I heard about it from Dr. Selikoff. I had not seen him since the Department of Labor decided to keep the five-fibre standard for four more years, and I had gone to Mount Sinai to ask him about an article from England which, I had been told, bore on the question of the asbestos standard.

"As you know, the two-fibre standard we had hoped for was designed only for the prevention of asbestosis, and not for cancer," Dr. Selikoff said. "It was first proposed back in 1968 by the British Occupational Hygiene Society's Committee on Hygiene Standards. At that time, the committee reported in the *Annals of Occupational Hygiene*, a respected British medical journal, what appeared to be strong evidence suggesting that a person working with chrysotile asbestos could be exposed for fifty years to a level of two fibres per cubic centimeter with practically no risk of developing asbestosis. The committee therefore recommended a two-fibre level for occupational exposure to asbestos—a proposal I considered to be reasonable, and one which was adopted by the British Inspectorate of Factories that same year.

The British action was one of the chief determining factors in the decision of NIOSH to recommend a two-fibre standard to the Secretary of Labor. The report of the society's committee noted that its recommendation was based entirely upon information provided by two of the committee's members who were employees of the Turner Brothers Asbestos Company, Ltd., of Rochdale, England—one of the largest asbestos companies in Britain. They were Dr. John F. Knox, who was then chief medical officer for Turner Brothers, and Dr. Stephen Holmes, the company's industrial hygienist. Dust counts had been made at the Turner Brothers factory in Rochdale for many years, and in 1966 Dr. Knox and Dr. Holmes had undertaken to correlate the health status of current employees with past exposure levels. Accordingly, they had reviewed chest X-rays of two hundred and ninety workers at the factory who had been employed for ten years or more after January 1, 1933, and were still employed there as of June 30, 1966. They then reported to the committee that among these employees they had found only eight whose X-rays could be diagnosed as asbestotic. Among the eighty-one men exposed to levels of somewhat more than ten fibres per cubic centimetre for twenty years or more, they found only six with relevant X-ray changes, and out of thirty-seven workers exposed over a twenty-to-thirty-year period to levels of about four fibres per cubic centimetre, they found only one man with a possibly asbestotic X-ray abnormality. This was comforting information indeed, and the committee, after providing a safety margin by halving the four-fibre level, recommended the two-fibre standard in the full assurance that it would prevent the occurrence of asbestosis."

I was reminded by Dr. Selikoff's remarks that Dr. Holmes had flown to the United States in March to testify in behalf of the American asbestos industry at the Department of Labor's public hearings, and had stated his opinion that workers could safely inhale air containing four or five fibres per cubic centimetre. When I mentioned this to Dr. Selikoff, he told me that not long after the hearings ended, the April, 1972, issue of the *Royal Society of Health Journal* arrived in the United States. "It contained an article by Dr. Hilton C. Lewinsohn, a young South African physician, who had replaced Dr. Knox as chief medical officer of Turner Brothers," Dr. Selikoff said. "Dr. Lewinsohn wrote that in December of 1970 he had given chest X-rays to workers employed at the Turner Brothers Rochdale factory. Although some workers had left the firm or had died, and although others had only recently completed ten years of employment, the men with long-term exposure who were examined by Dr. Lewinsohn were in large part the same men who had been studied four and a half years before by Dr. Knox and Dr. Holmes.

However, Dr. Lewinsohn's assessment of X-ray findings among them was quite different from that of his predecessor, Dr. Knox. He reported that more than half of those men X-rayed twenty years or longer after first exposure to asbestos showed some abnormal lung changes. Moreover, upon analyzing these changes he determined that almost forty per cent of the men who had been employed at the factory for twenty years or more had lung scarring consistent with asbestosis. Unfortunately, our hearings were concluded by the time the *Royal Society of Health Journal* arrived, so there was no opportunity to ask Dr. Holmes about the apparent gross discrepancy between the two sets of findings."

I asked Dr. Selikoff how he explained the startling discrepancy, and he replied that it must lie in the interpretation of the X-rays, since it was highly unlikely that there could have been such a marked increase in detectable lung disease in four and a half years. He added that Dr. Nicholson had prepared a statistical analysis of the dose-disease responses that could be derived from these two conflicting sets of data, and had determined that they showed as much as a tenfold difference in the incidence of X-ray changes characteristic of asbestosis among the workers at the Turner Brothers Rochdale factory.

"Do you mean that Dr. Lewinsohn found ten times as much disease among some Turner Brothers workers as Dr. Knox and Dr. Holmes had found four and a half years earlier?" I asked.

"Yes," Dr. Selikoff replied. "At least, that is what the data published so far suggest."

"So the two-fibre standard, even if it had been adopted without the four-year delay, is not sufficient," I said.

"Until the discrepancy is resolved, it would appear useful only as an interim measure for the prevention of asbestosis," Dr. Selikoff replied. "Further, one should remember that when the British Occupational Hygiene Society recommended the two-fibre standard in 1968, it took the prudent position that the standard was intended only for the prevention of lung scarring, since it was not possible at that time to specify a concentration of asbestos in the air which was known to be free of the risk of inducing cancer."

The possibility presented by this new data—that industry influence might have had an effect on medical considerations concerning the problem of occupational exposure to asbestos in England—came as a surprise to me for two reasons. The first was that until Dr. Selikoff and Dr. Hammond had conducted their pioneering studies of the asbestos-insulation workers, in the early nineteen-sixties, by far the best and most

thorough investigations of asbestos disease had been conducted in England, where asbestosis had been recognized as a serious occupational-health hazard since the nineteen-twenties. The second was that I had talked at length with several leading English epidemiologists in London some months earlier, and when I told them that occupational-health data were being suppressed and ignored in the United States, they had solemnly assured me that, because of the independent character of English medicine and of the British government's occupational-health agencies, such a situation could not exist in their country.

When I told Sheldon Samuels the news from England, he was not at all surprised. "Business is always business," he said. "In fact, I have a new wrinkle for you here at home. When I came to the Industrial Union Department last year, I undertook an investigation of the company-doctor system, because it occurred to me that the system was operating to thwart the Occupational Safety and Health Act. A month or so after I began the investigation, I talked with Dr. Norbert Roberts, who is associate medical director of the Standard Oil Corporation of New Jersey, and was then president of the Industrial Medical Association. Dr. Roberts told me that he and his associates in the Industrial Medical Association hoped to reform and improve the industrial medical profession by setting standards for the professional performance of company doctors. They proposed to set up an organization called the Occupational Health Institute, which would derive its chief support from the Industrial Medical Association, the American Industrial Hygiene Association, and the American Association of Industrial Nurses, Inc.—all of which are organizations supported and controlled by industry. The institute would undertake to create a program to validate occupational-health programs and to set up standards that would enable industry, through voluntary compliance, to clean up the major health problems afflicting workers in the United States.

After listening to him, I told Dr. Roberts that in any opinion voluntary ethical standards would not accomplish the purpose of raising the professional performance of company doctors but should be part of enforceable O.S.H.A. regulations in order to guarantee the participatory role of workers envisioned in the Occupational Safety and Health Act, such as their guaranteed right to have access to medical records and to records pertaining to exposure to toxic substances. That was the last I heard of the matter for some time. Last November, however, I sent Dr. Roberts the results of the NIOSH survey of Pittsburgh Corning's Tyler plant and asked him to have the Industrial Medical Association conduct its own investigation of the situation. Then, in February, I sent him an account of the charges Mazzocchi had levelled against Pittsburgh Corning at his press conference, which included some information about how the affair had been handled by the company's medical consultant, Dr. Grant. In the meantime, Dr. Roberts and his associates had pursued their plan to set up the Occupational Health Institute. At their request, a meeting to discuss the aims of the institute was held here at the Industrial Union Department on March 24th. In addition to Dr. Roberts and myself, the meeting was attended by Dr. Duane Block, medical director of the Ford Motor Company; by Dr. Gilbert H. Collings, general medical director of the New York Telephone Company, who had been named to head the Occupational Health Institute; and by Dr. Marcus M. Key, who is the director of NIOSH, who was being asked to give NIOSH support to the new institute and its programs. According to Dr. Roberts and Dr. Collings, an accreditation commission initiated by the institute would pressure management to become enlightened in the field of occupational health by certifying valid industrial medical programs. Imagine my surprise, however, when I learned that Dr. Roberts and his colleagues were proposing Dr. Grant as one of the members of this accreditation commission. I pointed out that the very fact that Dr. Grant was being considered for such a position while serious allegations concerning his professional conduct remained to be resolved scarcely inspired confidence in the purpose and viability of the Occupational Health Institute. Subsequently, Dr. Roberts and his associates must have brought pressure to bear upon Dr. Grant to remove himself from consideration for the commission, for early this month I received a telephone call from William D. Kelley, the director of NIOSH's Division of Training, in Cincinnati, telling me that he had received a letter from Dr. Grant complaining that, because of his consultant relationship with Pittsburgh Corning, I considered him to be antilabor and, therefore, unacceptable as a commissioner. Now, what do you think of that?"

I told Samuels that I found it surprising, but I was really thinking that the medical-industrial complex went about its business in ways whose intricacies were a wonder to behold, and that the story I had been following for so many months seemed not only to repeat itself endlessly but to employ the same cast of characters.

"And now for the clincher," Samuels said. "Guess what outfit has just received a seventy - one - hundred - thousand - four - hundred - and - eighty - one - dollar contract from NIOSH, in order to—and I quote—'develop and validate criteria for program performance standards of occupational-health programs which will provide guidelines to NIOSH in promoting the development of such programs as well as provide guidance to facilities in establishing and/or upgrading their own operational program standards.'" "The Occupational Health Institute?" I said.

"Of Chicago, Illinois," Samuels replied. A few days later, I telephoned Dr. Mastromatteo in Toronto, and asked him if he had been able to find out anything about an asbestos plant on Manitoulin Island.

"I'm sorry to say I haven't," Dr. Mastromatteo replied. "We've checked all the available records and made inquiries by phone, but there doesn't appear to be any asbestos industry at all on Manitoulin Island."

I apologized to Dr. Mastromatteo for bothering him with what was obviously a false lead, and thanked him for taking the trouble to follow it up. Then I telephoned Herman Yandle in Hawkins, and told him what had happened.

"Well, that's what they told the boys at the plant when the stuff got sent out," Yandle said, with a chuckle. "But I got a new address for you just the other day, from a fellow who saw a shipping tag. The asbestos went to Canada, all right, but not to Manitoulin Island. It got sent to a company called Holmes Insulation, Ltd., at Point Edward, Ontario."

I called Dr. Mastromatteo back and told him what I had learned from Yandle.

"We'll try to run it down for you," he said. "I've never heard of Holmes Insulation, but I know where Point Edward is. It's about two hundred miles west of here, in the middle of a large petroleum-chemical complex."

In the second week of September, I received some rather interesting mail. From the August issue of the *Archives of Environmental Health* I learned that Dr. Grant had been elected treasurer of the American Academy of Occupational Medicine. In a clipping from the August 25th edition of the *Cincinnati Post*, I read that Dr. Wagoner and Dr. Johnson had been looking into the spraying of asbestos insulation on the steel girders of a new Procter & Gamble technical center in the Blue Ash, Ohio, a suburb of Cincinnati. The *Post* article stated that the spraying of asbestos insulation in construction had been banned in New York, Boston, Philadelphia, and Chicago, but that in Cincinnati and the rest of Ohio there were no ordinances either banning or controlling its use. The article went on to quote Dr. Mitchell R. Zvon, Assistant Health Commissioner for Cincinnati, who said that he had not seen fit to issue any regulations, since the evidence incriminating asbestos as a health hazard "is not sufficiently clear-cut." This surprised me, since I knew that Dr. Zvon was a member of the sixteen-man Threshold Limit Value Airborne Contaminants Committee of the American Conference of Governmental Industrial Hygienists, so I filed the newspaper clipping away with a mental note to make some inquiries about him.

A week or so later, Samuels sent me a copy of a statement delivered before the House Select Committee on Labor by Jacob Clayman, administrative director of the Industrial Union Department, concerning the activities of the government in enforcing the Occupational Safety and Health Act. It was obvious that Clayman did not think much of the government's performance. After reminding the committee members that the Department of Health, Education, and Welfare had estimated that there might be as many as a hundred thousand deaths each year from occupationally caused disease, he told them that seventeen months after the Act went into effect there were only four hundred inspectors to enforce its provisions in more than four million workshops, and that only one new health standard—that for asbestos—had been set during that time. "Even then, we have had to complain about its inadequacies," Clayman said. "Indeed, we have gone to court to emphasize its failure, in our judgment, to pursue the basic purpose of the law." Clayman said that his organization had never ceased to point out that not one of the nine carcinogens rated by the Conference of Hygienists and by forty-five states as being too dangerous for any exposure at all was included in the federal standards. "Benzidine is one of these," he declared. "More than seventeen hundred tons of this chemical and three of its most commonly used compounds are produced, distributed, and used in this country each year. We have no idea how many workers are exposed. We have no idea as to how many of the hundred thousand deaths that H.E.W. reports are due to exposure to this and other carcinogens."

Up to that time, my investigation of the workings of the medical-industrial complex had evolved out of the critical situation that had existed at Pittsburgh Corning's Tyler plant, and had focussed on the problem of exposure to asbestos. During the past six months, however, I had been told by Mazzocchi, Samuels, and others that the complex

was hard at work trying to put the lid on dozens of occupational-health problems involving, among others things, beryllium, benzidine, and beta-naphthylamine. (Indeed, Samuels and the Industrial Union Department had been pressing unsuccessfully for the Occupational Safety and Health Administration to take action on known chemical carcinogens for more than a year.) Now, reminded by Clayman's testimony of the multiplicity of the hazards, I decided to take a closer look at some of them.

On Monday, September 25th, I caught an early-morning flight to Cincinnati and went to the Division of Field Studies and Clinical Investigations to ask Dr. Johnson, whom I had not seen since March, what was being done about the problem of occupational exposure to beryllium, benzidine, and beta-naphthylamine. "Let's start with beryllium," Dr. Johnson said. "It is a metal that has been used in the United States since the nineteen-twenties, when it was alloyed with copper and other metals in order to give them greater tensile strength and fatigue resistance. During the late nineteen-thirties, it was used extensively in the manufacture of fluorescent-lamp tubes. Subsequently, however, thanks to the pioneering work of Dr. Harriet L. Hardy, who was then an occupational-health physician at the Massachusetts Institute of Technology, beryllium was found to be a cause of acute and chronic pulmonary disease among workers in the fluorescent-lamp industry, and in 1949 its use in the manufacture of those appliances was discontinued. Because of its light weight, its rigidity, and its stability, beryllium has achieved wide use in other areas. It is employed in nuclear reactors, in aerospace structural materials and inertial guidance systems, and in satellite antennae, rocket-motor parts, heat shields, rotor blades, and airplane brakes. It also appears to have considerable potential as a solid rocket fuel. Suffice it to say that beryllium and its components have an important use in modern technology, and that, as I have indicated, exposure to them can result in beryllium disease, which can cause death from pulmonary insufficiency or right-sided heart failure."

Dr. Johnson went on to say that during the summer of 1971, while he was unearthing from his predecessors' files the data on the Tyler plant and other asbestos factories, he had come across the report of an environmental survey that had been conducted in 1968 by engineers from Dr. Cralley's Division of Epidemiology and Special Services at a factory owned by Kawecki Beryllco Industries, Inc., in Hazelton, Pennsylvania. "As in the case of Tyler studies, no action had been instituted as a result of the Hazelton-plant survey," Dr. Johnson told me. "Yet the data showed incredibly high airborne levels of beryllium dust, especially in the factory's attrition-mill operations, where beryllium powder is made. Indeed, the engineers had recorded concentrations in the Hazelton plant as high as two hundred micrograms of beryllium per cubic metre of air, though the Conference of Hygienists had already adopted the Atomic Energy Commission's standard of a peak value of twenty-five micrograms per cubic metre of air and a time-weighted average of only two micrograms per cubic metre."

When I asked Dr. Johnson what he had done with the information he uncovered, he told me that, just as in the case of the data on conditions in the Tyler plant—data that were collected and ignored—he had relayed them to Anthony Mazzocchi and Steven Wodka, of the Oil, Chemical and Atomic Workers International Union, which, as it happened, also represented workers at the Hazelton plant. "As a result, just as in the case of Tyler, the union expressed concern to our division, and we conducted a comprehensive environmental survey of the plant last November," Dr. Johnson said. "The beryllium-dust levels we measured at that time showed that the company's powder-handling operations were still grossly out of control. In March of this year, beryllium levels at the Hazelton plant were measured again by the Pennsylvania State Department of Health, and once more the levels far exceeded the recommended threshold limit value of two micrograms per cubic metre of air. Consequently, on July 28th, Harry M. Donaldson, one of our industrial hygienists, wrote a letter to the Kawecki Beryllco people saying that we planned to conduct another survey of the Hazelton plant in the near future and asking what improvements they intended to make in their powder-handling operations, how they were going to make them, and when they would complete them. On August 3rd, I set a second memo of concern to the regional administrator of the Occupational Safety and Health Administration in Philadelphia—I had sent him one on the same subject last December 22nd. I told him again that a potential for serious medical consequences existed in the Hazelton plant, and I enclosed the results of a medical survey of two hundred and nineteen of the plant's employees which had been conducted last November by Dr. Homayoun Kazemi, the chief of the pulmonary unit of Massachusetts General Hospital, in Boston. Dr. Kazemi had found symptoms possibly related to beryllium disease in twenty-five cases and significant beryllium disease in half a dozen cases."

I asked Dr. Johnson if he or Donaldson had received any reply from the company, or if any action had been taken with regard to the situation at the plant. He smiled grimly and handed me a memorandum. It was sent to division directors, deputy directors, and assistant division directors; it was headed "Policy Memorandum," was dated September 12, 1972, and was signed by Dr. Edward J. Fairchild II, acting associate director for NIOSH's Cincinnati Operations, who was working under the direction of Dr. Key, the director of NIOSH. It read:

"There have been in the recent past certain communications, verbal as well as written, with distinct overtones of abatement-type language. It is not the intent, nor the policy, of NIOSH to convey to the outside world that our role under the Occupational Safety and Health Act of 1970 is one having authority for enforcement. Rather, we must present an image more in keeping with that of a research agency. The Act distinctly separates enforcement, the primary activity of the Department of Labor (O.S.H.A.), from research, the primary activity of HEW (NIOSH)."

"Accordingly, you are requested to monitor those actions which could evoke connotations of enforcement, especially those which may be so borderline that NIOSH involvement could be appropriate under certain circumstances, yet highly inappropriate under different circumstances. Those of your people who may have occasion for involvement should be informed of this policy."

"Through authority delegated to me by Dr. Key, and by copy of this memorandum, I assign Dr. [William S.] Lainhart as your contact in the extent that questionable issues arise. Thus, if you are in doubt as to whether actions constitute abatement-type language or policy or if activities infringe upon enforcement, you will bring such situations to the attention of Dr. Lainhart. If, then, the issue is not yet resolved, it will be brought to my attention by Dr. Lainhart."

"Your cooperation and diplomacy in this delicate, but important, matter of policy is expected and appreciated."

I remembered Dr. Lainhart very well. He had been chief assistant to Dr. Cralley in the old Division of Epidemiology and Special Services, and had been in charge of the medical-environmental teams that surveyed the Tyler plant and other asbestos factories during the middle and late nineteen-sixties. It was Dr. Lainhart who—in March of 1968, shortly before notification of the high asbestos-dust counts taken by his environmental team at the Tyler plant was sent to Dr. Grant and Pittsburgh Corning without any warning that they constituted a high risk of disease and death for the men who were working there—had said to me that the ideal method of tracing the natural history of asbestos disease would be to take a bunch of twenty-year-olds, put them into an asbestos plant where the exact dust level was known, and observe them for the next fifty years or until they died. I had often wondered about that statement, and now, remembering the poor condition of men I had met who had been employed at the Tyler plant for only ten or fifteen years, and the number of deaths from cancer and asbestosis that had occurred among the unfortunate workers at the Paterson factory, I found myself wondering about it again.

Then Dr. Johnson showed me a second memo. It was dated September 13, 1972, and it had been sent to the director of the division. It was headed "Short- and Long-Term 'Epidemiology,'" and was also signed by Dr. Fairchild, who was once again acting under the direction of Dr. Key. It started out:

"Pursuant to our discussion earlier with Dr. Key, as well as followup discussion you and I have had, this will verify for the record the resulting decisions."

"Short-term field studies which have been referred to as 'firefighting activities' will be assessed prior to obligating resources. We are mutually agreed that you and/or Dr. Johnson will keep Dr. Lainhart apprised of such categorical activities. When necessary I can be brought into the discussions. Dr. Lainhart is aware of this arrangement which is commensurate with his experience and the responsibility of his position."

"Also, in connection with our earlier discussions and in keeping with the indication given by Dr. Key to Mr. Edmund Velten, Vice-President, Kawecki Beryllco Industries, Inc., there will be developed for NIOSH policy the proposed regulations whereby industry-wide studies are to be conducted. Accordingly, I am requesting that this also be coordinated with Dr. Lainhart so that he is kept informed throughout the process of regulations development."

When I had finished reading the second memorandum, I asked Dr. Johnson to give me an example of a short-term field study, or "firefighting activity."

"Well, in some ways you might call our survey of Pittsburgh Corning's Tyler plant a short-term field study," Dr. Johnson replied.

"And what about the reference to the 'indication' given by Dr. Key to Edmund Velten, of Kawecki Beryllco?" I inquired.

"That simply means that the beryllium industry will be consulted by NIOSH with regard to any proposed industry-wide studies involving beryllium," Dr. Johnson said. "The

fact is, our criteria document for beryllium was completed and forwarded to the Occupational Safety and Health Administration several months ago. As of this date, however, the Administration has not seen fit to convene an advisory committee on beryllium, much less announce public hearings. Meanwhile, workers in beryllium plants are still being overexposed to beryllium dust and running the needless risk of developing beryllium disease. Incidentally, Mr. Velten must have complained to Dr. Key about the letter that Donaldson sent to his company about improvements in the Hazleton plant. In any case, Dr. Key wrote Velten a letter containing an apology for the tone of Donaldson's letter."

At this point, I asked Dr. Johnson what was being done about the problem of occupational exposure to beta-naphthylamine and benzidine.

"Beta-naphthylamine, which is commonly known as BNA, and benzidine are aromatic amines—chemicals derived from coal tar—and are used as intermediates in the synthesis of dyes," Dr. Johnson said. "Both are highly potent carcinogens, known to cause bladder cancer, and both are on the list of nine carcinogens that have been rated by the Conference of Hygienists as being too dangerous at any known level of exposure. Neither of them, however, has been so rated by the federal government. Before I go into our involvement with BNA and benzidine, I think you ought to take a look at a study of workers exposed to them in a plant operated by the specialty-chemicals division of the Allied Chemical Corporation, in Buffalo, New York. It was carried out back in 1962, by Dr. Morris Kleinfeld, director of the Division of Industrial Hygiene of the New York State Department of Labor; by Dr. Leonard J. Goldwater, a consulting industrial-hygiene physician; and by Dr. Albert J. Rosso, an associate industrial-hygiene physician in the Division. It was published in the *Archives of Environmental Health* in December, 1965. Dr. Kleinfeld, Dr. Goldwater, and Dr. Rosso studied three hundred and sixty-six workers at the plant in Buffalo, going back to 1912. Half of these men were between twenty and twenty-nine years old when they were first employed at the plant; about a quarter were between thirty and thirty-nine; and the remainder were between forty and fifty. Some of them were exposed to BNA alone; some to BNA and benzidine; some to BNA and alpha-naphthylamine, which is similar to BNA; some to benzidine alone; and some to various combinations of all three compounds."

Dr. Johnson handed me a copy of the study by Dr. Kleinfeld and his associates. From the introduction I learned that cancer of the bladder resulting from exposure to aromatic amines was discovered in Germany in 1895; that between 1905 and 1932 bladder tumors in dye workers were reported in Switzerland, Great Britain, Russia, and Austria; that the first cases of this condition in the United States were reported in 1934; and that the disease had subsequently been recognized in Italy, Japan, and France. Toward the end of the introduction, Dr. Kleinfeld and his associates described a large series of bladder tumors caused by aromatic amines which were reported by Dr. T. S. Scott in England in 1964. Dr. Scott found that of six hundred and sixty-seven persons exposed to the chemicals for more than six months a hundred and twenty-three had developed bladder tumors, and that bladder tumors occurred in fully seventy-one per cent of those who were exposed for thirty years or more.

As for the results of the study of three hundred and sixty-six men exposed to aromatic amines at the Allied Chemical plant in Buffalo, Dr. Kleinfeld and his associates reported in the main body of their article that ninety-six of the men had developed bladder tumors—an over-all incidence of slightly more than twenty-six per cent—and forty-six of these had died as a result. "By any reasonable standard it can be stated that the incidence or attack rate for bladder tumors in workers exposed to coal tar dye intermediates is frighteningly high," they concluded.

After I read the study, Dr. Johnson told me that the manufacture and use of BNA had been banned in Switzerland in 1938, and that the production and use of the chemical had virtually stopped in Pennsylvania after 1961, when the state adopted strict regulations for carcinogens. "The British abandoned the manufacture and use of BNA way back in 1952," Dr. Johnson said. "Why our government has not taken similar action is beyond my comprehension, especially in the light of conditions we uncovered recently in Georgia and South Carolina. During the early fifties, the Augusta Chemical Company, of Augusta, Georgia, which had been receiving shipments of BNA from the du Pont people, began manufacturing and using the chemical at its Augusta plant. In 1967, the company was purchased by the Blackman Uhler Chemical Division of the Synalloy Corporation, of Spartanburg, South Carolina, and thereafter BNA was manufactured at the Augusta plant and shipped in drums by truck to Synalloy's Spartanburg plant, where it was used as an intermediate in dye synthesis. Our regional director in Atlanta learned of this activity last fall, and got in touch with officials of the Georgia State Department of Health, who told him they knew of no problem associated with the manufacture of BNA in Georgia. In January of this year, however, we sent three of our people in the Division of Field Studies and Clinical Investigations to take a look at the Augusta plant. They found men shovelling BNA from a large slurry tank into drums, and discovered that none of them had ever been given a urinalysis

to determine whether their blood or atypical or malignant bladder cells were present in the urine. In April, I visited Spartanburg and Augusta, and told the Synalloy people the medical facts implicating BNA as a potent bladder carcinogen. They claimed that because the chemical was handled in wet slurry form it was not hazardous, whereupon I informed them that the primary route of entry of BNA into the body under these circumstances was not by inhalation but by absorption through intact or unabrased skin. As a result, the production and use of BNA have been discontinued at the Augusta and Spartanburg plants, and Tobias acid—a relatively safe substitute for BNA, which has been available for years, and which costs only a few cents more a pound—is now being used as an intermediate in dye synthesis.

We have begun a program of urine cytology on the workers currently employed at the Augusta plant, but since BNA wasn't used there until the late nineteen-forties, and since the latent period for the development of bladder cancer is about twenty years, we probably won't know their true health situation for some time. One big problem we're faced with is that, because of rapid turnover in the work force, past employees exposed to BNA are unavailable for medical followup, so we have only the present workers to evaluate. The thing to remember is that until 1972 no federal occupational-health agency had ever visited either of the plants—and this despite the fact that the hazard of BNA was brought up in congressional testimony in 1970 as justification for passing the Occupational Safety and Health Act, and had been cited repeatedly as being one of the health hazards the government was anxious to control. Moreover, none of the appropriate state occupational-health agencies had ever taken effective action to bring the hazard under control. We're now trying to track down other plants where BNA may be in use, because we've heard that the chemical is being imported into the United States from South America."

Dr. Johnson went on to tell me that the Allied Chemical plant in Buffalo had manufactured BNA until the middle fifties and had received shipments of the chemical from a plant in Pennsylvania from then until 1961, when the Pennsylvania plant was forced by the state to shut down. "Shortly thereafter, the Allied Chemical people discontinued the use of BNA in their Buffalo plant," he said. "However, they continued to handle benzidine, which they not only manufactured and used there but also shipped to the Toms River Chemical Corporation's plant, in Toms River, New Jersey, until sometime in 1971. Now I understand that they are using dichlorobenzidine, which they claim is less hazardous than benzidine. However, we are concerned about dichlorobenzidine because it is known to cause cancer in test animals, and because it is also on the list of carcinogens rated by the Conference of Hygienists as being too dangerous at any level of exposure. In fact, we'll be conducting a field survey of the Buffalo plant next month."

I asked Dr. Johnson what other industrial carcinogens the Division of Field Studies and Clinical Investigations was looking into. He replied that there were many, and that new ones came to his attention almost daily. "Recently, we've been worried about a chemical called bis-chloromethyl ether," he said. "It is formed as an intermediate in the production of anion-exchange resins, which are manufactured by a number of large outfits, including Rohm and Haas and Dow Chemical. Bis-chloromethyl ether has been demonstrated to be a potent lung carcinogen in test animals, and it, too, is on the list of dangerous cancer-producing agents. Last March, at the request of Jack Washkuhn, an industrial hygienist from the San Mateo County Health Department, in California, I went out with Harry Donaldson to visit the Diamond Shamrock Corporation's plant in Redwood City, where the chemical has been encountered as a by-product since 1957. The plant employs only about a hundred men, but we reviewed the cases of four employees who, Washkuhn had learned, had died of lung cancer within the past eight years, and we learned that two former workers at the plant had developed lung cancer but were still alive. The first death among these men occurred in 1964, the second in 1965, the third in 1967, and the fourth in November of 1971. Something that causes us great concern is that the age at death of these four men ranged from thirty-two to forty-eight—which is considered to be under the age at which most lung cancers develop in association with cigarette smoking. Moreover, we are particularly concerned about the worker who died in November of 1971, because he was only thirty-two years old, and he had worked in the plant for only two years—a circumstance indicating that bis-chloromethyl ether may be a far more potent carcinogen than had previously been suspected. Accordingly, we recommended to the company that chest X-rays and sputum cytology be conducted on its workers. A subsequent survey by a special field team from our Salt Lake City facility showed considerable amounts of abnormal cells in the sputum of men who had been working at the plant. As a result, the company has initiated a periodic sputum-cytology screening program of its current and former employees, which is being carried out with the cooperation of Dr. Geno Saccomanno, head of the pathology department at St. Mary's Hospital in Grand Junction, Colorado, who is well known for his sputum-cytology studies of uranium miners."

Dr. Johnson was then called away to attend a meeting. I told him that I hoped to talk with him again soon, and thanked him

"You're entirely welcome," he replied. "By the way, you asked me earlier for an example of the kind of short-term epidemiology, or firefighting activity, we are now required to clear through higher authority. Well, it just occurred to me that our visit to the Diamond Shamrock plant in Redwood City is a perfect one."

Back in New York, I telephoned Dr. Mastromatteo in Toronto, to find out if he had been able to discover anything for me about Holmes Insulation, Ltd., in Point Edward, Ontario. Dr. Mastromatteo told me that not only had he acquired some information about the company but that an industrial hygienist from the Ontario Ministry of Health had visited the company's plant in August to take airborne dust samples and to arrange for X-rays examinations for the workers there. "A few months ago, claims for asbestosis put in by workers employed there began to appear before our Workmen's Compensation Board," he said. "During our August inspection of the plant, we found that, generally speaking, asbestos-dust levels were well over two fibers per cubic centimetre, which is our unofficial standard. Since we always take action if dust levels exceed the five-fibre level, we recommended that the company install better ventilating equipment in order to avoid the use of respirators."

"What did your X-rays show?" I asked.

"They indicated," Dr. Mastromatteo replied, "that out of a work force of between fifty and seventy-five men, six or seven had signs consistent with the development of asbestosis."

During the second week in October, I called on Dr. Selkoff at Mount Sinai and asked him whether he had heard anything from his British colleagues concerning the marked discrepancy between the findings of Dr. Knox and Dr. Holmes and those of Dr. Lewinsohn in regard to asbestosis in the Turner Brothers workers. Dr. Selkoff had just returned from a World Health Organization Working Group to Review the Biological Effects of Asbestos, in Lyon, France, and by way of reply he handed me a copy of a paper that Dr. Holmes had delivered at the conference. The paper was entitled "Criteria for Environmental Data and Bases of Threshold Limit Values—Environmental Data in Industry," and the first sentence read, "The need for hygiene standards for airborne asbestos dust based on wider studies than were available to the British Occupational Hygiene Society in 1968 is emphasized."

Of the study that he and Dr. Knox had conducted of the workers at the Turner Brothers Rochdale plant, and the data they had furnished the society, Dr. Holmes said, "The information, although the best available at the time, was, to say the least, scanty for the purpose, and some of us who were associated with it have become increasingly concerned with the authority with which it has become invested in the international field." Dr. Holmes ended his paper by noting that in collaboration with Dr. Lewinsohn arrangements were being made to have the information from the factory brought up to date.

Essentially, what Dr. Holmes appeared to have admitted was that the data he and Dr. Knox had furnished the society concerning the incidence of asbestosis in the Turner Brothers workers were questionable. The ramifications of this were, of course, staggering, for if the data were inaccurate, the two-fibre standard for asbestos—which would not even go into effect in the United States until 1976—would be without medical or scientific validity. In the meantime, American asbestos workers had been assured by Secretary of Labor Hodgson that it was safe to breathe air containing five fibres per cubic centimetre, which was higher than the dust concentrations inhaled by a significant number of the Turner Brothers asbestos workers, many of whose chest X-rays had been interpreted by Dr. Lewinsohn as showing abnormal lung changes. All this, of course, could affect the health of tens, if not hundreds, of thousands of asbestos workers, and it had come about simply because two men—a medical doctor and an industrial hygienist—employed by the British asbestos industry had, one way or another, furnished questionable data, which may have misled occupational-health agencies on both sides of the Atlantic. One could only wonder exactly when Dr. Holmes had become "increasingly concerned" about the authority and validity of Dr. Knox's interpretation of the chest X-rays of the Turner Brothers workers. It can hardly have been prior to his appearance in behalf of the asbestos industry at the Department of Labor's public hearings six months earlier, when he declared that a standard of four or five fibres per cubic centimetre would provide adequate protection from disease for asbestos workers in the United States. Was it, then, only after the publication of Dr. Lewinsohn's findings, which suggested that Dr. Holmes and Dr. Knox could have understated by as much as tenfold the extent of asbestos disease among the Turner Brothers workers?



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