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NATIONAL PRODUCTIVITY AND QUALITY OF WORKING LIFE—1975

GOVERNMENT

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HEARINGS

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BEFORE THE

COMMITTEE ON GOVERNMENT OPERATIONS UNITED STATES SENATE

NINETY-FOURTH CONGRESS

FIRST SESSION

ON

S. 937

NATIONAL PRODUCTIVITY ACT OF 1975

S. 765

NATIONAL CENTER FOR PRODUCTIVITY AND QUALITY
OF WORKING LIFE ACT

MARCH 20 AND 21, 1975

Printed for the use of the Committee on Government Operations



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NATIONAL PRODUCTIVITY AND QUALITY OF WORKING LIFE—1975

THURSDAY, MARCH 20, 1975

U.S. SENATE,
COMMITTEE ON GOVERNMENT OPERATIONS,
Washington, D.C.

The committee met at 10:08 a.m., in room 3302, Dirksen Senate Office Building, Senator Sam Nunn presiding.

Members present: Senators Nunn, Chiles, Percy, and Javits.

Staff members present: W. P. Goodwin, Jr., chief counsel and staff director, Subcommittee on Oversight Procedures; J. Robert Vastine, chief counsel to the minority, Government Operations Committee; Roy Jenney, congressional fellow—Senator Nunn; Betsy Prichard, chief clerk, Subcommittee on Oversight Procedures; Lyle Ryter, minority counsel to Subcommittee on Reports, Accounts, and Management; Elizabeth Preast, assistant chief clerk, Government Operations Committee.

OPENING STATEMENT OF SENATOR NUNN

Senator NUNN. The chairman of the Committee on Government Operations, Senator Abe Ribicoff, has asked me to serve as acting chairman of the committee for the purpose of conducting these hearings on national productivity and quality of working life.

I am grateful for this opportunity for I believe that our declining rate of productivity is one of the most important and least understood economic problems that we face today.

These hearings will focus on two bills, S. 765 and S. 937,¹ which Senator Percy and I have introduced along with several other Senators. These bills are very similar in thrust, although there are differences between them, I believe both bills are aimed at the same direction.

I hope that the witnesses before us today and tomorrow will give us the benefit of their views on these differences and their recommendations as to how the committee can fashion the best possible legislation to deal with this problem.

Last December I had the honor of chairing an extensive set of hearings on productivity and quality of work. Senator Percy at that time was also vitally involved and was present during those hearings, too. Our focus then was on two bills, S. 4130 and S. 4212, which Senator Percy and I introduced in the 93d Congress. These were similar to the bills which are the subject of our consideration today.

¹ See p. 248 and p. 229, respectively, for text of S. 765 and S. 937.

Our new bills reflect many of the recommendations made by the 23 distinguished witnesses who appeared at our December hearings representing Government, business, labor, and the academic community. Those witnesses emphasized the critical need to increase productivity and to improve the quality of working life for all Americans.

Frankly, you do not have to be an economics professor to recognize this critical need and the threat posed by the twin dangers of inflation and recession to our economy and the well-being of all our citizens in this country and, really, throughout the world. Inflation and recession together have had a serious effect on our rate of productivity growth, which was once steadily improving but is now declining. In other words, output per man hour has failed to keep pace with costs of labor and materials.

As *Business Week* magazine pointed out in its issue of February 10, 1975, and I quote:

Productivity declined at an annual rate of 5.1 percent in the fourth quarter, adversely affected by a sharp drop in output.

At year end, output per man hour in the private economy was 3.7 percent below a year earlier—while compensation per man hour was 9.8 percent higher.

A *Wall Street Journal* article noted recently that the output per hour of work has declined for seven quarters in a row, that the level of overall manufacturing productivity has fallen at a 1.3-percent annual rate, and that this indicator has fallen in four of the past five quarters.

It is clear that declining productivity is one of our primary economic troubles, and one of our major tasks must be to find a cure.

We can continue to improve our living standards only if we develop new ways to improve our use of technological and human resources. We cannot expect improvements in productivity unless we have the proper tools, facilities and machinery. It also demands capital investments. Perhaps, more importantly, it also needs people—people who do a better job, not necessarily by working harder but by working smarter. Consequently, we must improve the working conditions and the quality of worklife for all our citizens.

One major area that adversely affects productivity in the United States is that of our free enterprise system has become increasingly bogged down with governmental regulations that stifle the incentive for efficiency. I am proud that we now are making some progress in that regard.

Senator Percy and I were present the other day at the markup session on the Consumer Protection Act, a bill which I did not favor last year but which now contains a vital provision requiring an economic and inflation impact statement to accompany all proposed rules, regulations and legislation imposed by the Government. That particular provision is aimed at the same problem that we address in this legislation. I think Senator Percy would agree that the productivity impact statement that we would require in this legislation is very similar to the economic and inflationary impact statement that is now required in the Consumer Protection Act. The amendment was sponsored by Senator Brock from Tennessee, and I was a coauthor.

I also think it is ironic that some of the most successful foreign industrialized nations have productivity centers that were established in response to U.S. prodding and often with U.S. aid. Yet in the United States, with the immensity of our economic problems, we have no

permanent organization or association that focuses on improving productivity. I find this incredible. You might say the students have out-produced the teacher.

The causes of the decline in productivity are varied and complex, and a solution will not be simple. My new bill, S. 937, is designed to implement a Federal policy and program, and to establish the machinery to bring about a reversal in this decline.

The purposes of S. 937 are to establish a national policy which will encourage productivity growth consistent with the needs of the economy, the environment, and the work force; to stimulate the adoption of new methods and technology by all sectors of the economy; to promote efforts to continuously review and improve efficiency and morale within all sectors of the economy; and to establish an independent National Center for Productivity and Quality of Work to carry out these purposes.

My bill is designed to provide information, stimulate research and development, and bring about the impetus to get productivity efforts started and to keep them moving—while at the same time not creating a large Federal bureaucracy. The National Center provided in S. 937 will work through State and local governments, local educational institutions, private organizations, and the existing Federal agencies to meet the requirements of the bill. The Center is the focal point, but it is not designed to perform these functions solely with its own staff. As I understand Senator Percy's bill, S. 765, most of the productivity effort would be performed by the Center.

This is one of the fundamental differences that we will struggle with in the next couple of days and the following weeks, because I believe it would require a very large Federal agency to perform this function. As we learned in December, this Nation has a wealth of grassroots organizations with talent waiting to be tapped. It should be the function of the Center in my opinion to tap these resources.

Productivity problems are often local in nature. My bill recognizes that fact and encourages and supports State and local productivity centers.

S. 937 requires that a separate and distinct productivity impact statement be included by each Federal agency on each proposed program or regulation. This provision is in both bills and is similar to a part of the consumer protection bill. Senator Percy's bill also requires such a study but makes it a part of the inflation impact statement now required by Executive order. I believe we both share the view that the time has come for this Nation to stop hiding or disguising the true costs of Federal laws, regulations, and programs in terms of their impact on the Nation's productivity.

Another area where we have a slight difference is in the approach in retaining the ongoing productivity efforts in Federal agencies. Several of them, GAO, GSA, and CSC, to name a few, have been working to improve Federal productivity for years. I believe it would be unwise not to retain and build upon their expertise, for who knows better the intricacies of each agency than its own members. My legislation requires each Federal agency to establish an internal staff to review and reinvigorate internal productivity efforts. Senator Percy's bill calls for only one productivity liaison person in each agency, with the Center itself undertaking the function of increasing productivity within the agencies.

My bill requires each agency to review its own laws, regulations, and procedures to insure they are in conformance with the stated productivity policy. While S. 765 also calls for a review in this area, it mandates the Center to perform this function as well as to review State and local regulations. Perhaps I have an overly enthusiastic approach for using State and local resources, but I believe that a huge Federal agency would be required to perform this function and it may represent an unwarranted intrusion upon the State and local governments. We must work with, and through, local organizations, and my bill is designed to do just that.

Senator Percy's bill provides for greater emphasis in the quality of working life. I believe this is a needed step which should be considered in the final bill. He has emphasized this more than I have. I hope the final bill will reflect his emphasis on this because I think it is a very positive aspect of Senator Percy's legislation.

One of the major drawbacks of the existing National Commission on Productivity and Quality of Work has been its lack of funds, lack of permanence, and lack of tenure. My bill provides that the new Center and Council will exist for 5 years. A total of \$65 million is authorized to be appropriated for the first 3 of those years as compared with the \$30 million in S. 765.

I believe that the time is right for Congress to legislate in order to bring direction to our national efforts to increase productivity. While we must find every avenue to reduce Federal spending, I believe that the funds provided for Federal, State, and local productivity efforts will repay themselves many times over by assisting in full-economic recovery.

Increasing productivity should not be a one-shot proposition, but should be a day-to-day, month-to-month and year-to-year continuing task. Only a steady increase in productivity over the years is the answer when dealing with inflation. Productivity increases may not be the only answer, but it will surely be a major step in the right direction.

I believe that these two bills contain the necessary elements we need to develop a comprehensive bill which will incorporate the best features of the two.

Together with the outstanding witnesses testifying before us, I am sure that we can together produce meaningful legislation.

Senator Percy, my apologies for this long statement. I did think the background on this was needed, and I will be delighted to yield to you for your opening remarks.

OPENING STATEMENT OF SENATOR PERCY

Senator PERCY. Thank you, Senator Nunn, very much indeed.

Because we have some of our very distinguished witnesses in the room, I think it is only fair that we share a little of our own philosophy before we hear from them.

I think we hold in common a great interest in this field. We do not think our timing could be any better.

Though the leadership of the Senate yesterday wondered whether we should really go ahead with these hearings today, and we might be interrupted because the tax bill is on the floor, we talked about it yesterday and felt that, in fairness to the witnesses we should make an

earnest attempt to move right ahead and stay on schedule because, really, what we are dealing with is the same problem.

But here we are looking at the long run, and the bill on the floor is dealing with the short run.

In order to stimulate the economy somehow, some members of the Senate propose, and I do not happen to agree with them, throwing some \$29 billion more of spending into the mainstream, just to stimulate the economy and pick up unemployment and somehow regain confidence.

The hearing we are engaged in this morning and tomorrow morning is a much more fundamental approach to the problem of how to lick inflation, how to beat the recession by increasing productivity and making our goods more attractive, relatively speaking, all over the world, as well as in U.S. markets.

We are considering how to bring our accounts back into balance again through the efficiency of American enterprise.

I can only assure our very distinguished witnesses today and tomorrow that you could not have two Senators more genuinely interested in your views. We did not introduce legislation just to have someone put it in and say, "Well, now, we have the answers."

So the hearings are not pro forma. We tried to think through the problems as best we could, recognizing the inadequacies of the information that we have. I think the process of trying to think through legislation with our staff and introducing it is paralleling some of the thoughts Senator Nunn and I have had and, I think, simply prepares us adequately to really receive the expert testimony from those who have come not to praise what we have done at all, but to add to, supplement, and then let us mark up a piece of legislation that would genuinely represent the best thinking that we can get on this subject.

Just 10 days ago at a luncheon, Senator Pearson said to me, "I hear a lot of comment about productivity. Just what is it? What is this thing called productivity?"

I could have answered him in a lot of ways. To me, as a former industrialist, and possibly also to Secretary Dent, it is the difference between survival and not surviving, because in our businesses, whether they are textiles or cameras, foreign competition is intense. Labor costs are relatively low abroad, and in addition to that, I was faced with a company in Rochester, N.Y., with a yellow box that would be able and willing to give away cameras. In fact, they gave millions of them away during the depression just to sell the film. We did not happen to make the film, but we had to compete with the cameras.

In addition to that, you had Japan on one side, Germany on the other, specializing in this field.

So either we had increased productivity in our enterprise, or we would go under. That was the constant battle.

The term "productivity," as I said to Jim Pearson, merely refers to a comparison between the quantity of goods and services produced, and the quantity of resources employed in producing them.

The standard measure one uses is output per man hour. That is our common yardstick. The common output of goods and services divided by the numbers of hours people work to produce them.

Productivity increases when more output results in the same or less input of labor.

I said to Jim Pearson, this is as simple as it is. But there is a myriad of approaches to the problem that not only involves capital investment, involves the turnover of working capital. It involves the skill of the workers, the attitude of the workers, and such things as absenteeism, tardy workers, excessive scrap and rework, poor quality of work, a poor attitude of people toward work. Things of that kind all add up to the cost of doing business which, when we compete and compare our costs against someone else's, we either come out well or we do not come out well, based on our productivity.

The trend of output per man-hours in the U.S. private economy is really quite something. If there is one thing we have prided ourselves on in this country, it is the ingenuity of the private sector. "Made in America" was stamped on products all over this country and sold with great pride all over the world. I can remember in Japan when there was a little city called Usa. Japan used to put "Made in USA", Usa, on their products. That has all changed. They are very glad to put "Made in Japan" on that product, because all over the world that means high quality. It means relatively low cost, and it means durability. That is a tremendous challenge to America.

We have helped Japan in its rebuilding process build its productivity, because we thought it was in the best interests of the free world to do that. We furnished hundreds of millions of dollars to help rebuild Europe, and gave them a sense of stability and independence so they could stand on their feet and fight for something and have something.

We have also helped build the tremendous competition that we are up against right now. When we consider that, on the average, U.S. private economy productivity has increased by 2.9 percent each year from 1960 through 1973, a period of 13 years, but that in 1974, after 2 relatively good years, U.S. productivity actually decreased by 2.7 percent; 1974 was the only year on record in which we have actually experienced a drop in productivity. It is the worst productivity in the U.S. economy since statistics have been compiled, and they began compiling these records in 1948.

So we have in these hearings a backdrop of very poor experience in recent periods, but a period of good experience in the past.

What we need to do now is rediret, refocus our attention on what needs to be done to bring back the historical productivity of the United States, which has always been the strength and underpinning of our entire economy.

Data for U.S. productivity performance indicates the need for greater attention by the Government. This is why this hearing will start out with Government witnesses. This is why even in the Republican conference last December all the Republican Senators strongly endorsed increasing the role of the National Commission on Productivity and Work Quality.

That is why Senator Nunn, and why I have introduced the two bills before us. Certainly we have enthusiastic sponsors in Senator Ribicoff, and Senator Javits, who has long been a pioneer in this field, and other distinguished Senators, and certainly Senator Proxmire, who have been very interested in the field.

Increasing productivity is a very illusive problem at best, because productivity growth is really the result of separate decisions by hun-

dreds of thousands of business managers, labor officials and individual white- and blue-collar employees.

The best Government can do to increase productivity is to create the most positive fiscal and monetary environment for stable economic growth. This also means removing Government obstacles to adequate capital formation or to efficient business operations.

There is an important role for Government in pointing the way for innovations and manufacturing processes and organization of working life.

For example, the General Accounting Office study team has tentatively concluded that, even though the U.S. leads the world in computer applications to manufacturing, this advanced technology is primarily clustered in a relatively few high-technology capital-intensive firms, that most firms are accomplishing their metal-cutting functions much as they did 25 or 30 years ago.

In contrast with this, other countries have advanced very rapidly in these areas. Similarly, some U.S. firms are employing revolutionary new ideas about quality of working life, workplace organization, and job enrichment that seem to be paying big dividends.

Yet, application of such techniques still have a very, very narrow base in this country. If possible, a productivity center could do much to disseminate advanced development throughout U.S. industry.

I have always felt the greatest secret to American industrial success has been the willingness of industry and labor to share our technology and our knowhow and our experience, recognizing it is very difficult to keep a secret of the type very long. But the more we share, the American Management Association, National Conference Board, U.S. Chamber of Commerce, NAM and others, these are the ways that we have added tremendously to our total knowledge and ability.

Our question today is, what further role can Government play as a catalyst in this to stimulate thinking and to stimulate all of us to move in the direction we really must if American industry and the American economy and the American nation, as a strong nation, is to survive. That question of survival which has been put to many companies is the very same question now put to the United States. Survival in the same way in the future as we have during a brilliant past.

We look forward very much indeed, Mr. Chairman, to having these hearings under your leadership, and to our distinguished guests who are here with us today.

Senator NUNN. Thank you very much, Senator Percy.

Senator CHILES.

OPENING STATEMENT BY SENATOR LAWTON CHILES

Senator CHILES. Mr. Chairman, over the years we as a nation have, often unwittingly, initiated governmental regulations and business and labor practices without appropriate awareness or consideration of their possible impact on our national productivity. At a time when our economy is facing serious energy and raw material shortages, as well as the dual threats of inflation and recession, our rate of productivity growth is of key importance to this Nation's economic health. Efforts to reduce or eliminate some of the Government induced inefficiencies in the production of goods and services can play a significant role in relieving long-term inflationary pressures.

Long before we got caught up in the inflationary spiral, double-digit inflation was already occurring in Europe and other parts of the world. A major reason we were able to avoid getting caught up in it earlier was our high level of productivity growth. Unfortunately, however, private sector productivity declined in 1973, and that slide continued in 1974. Labor Department statistics show a productivity decline at a 3-percent annual rate for the third quarter of 1974—the second largest drop in 14 years. And, as our productivity curve has dropped, our inflation curve has risen.

This decline in productivity has occurred despite the outstanding efficiency record of the American worker. We are a work-oriented society, and this is what has given our economy its resiliency and made it the most imitated in the world. My experience has been that our citizens are interested in seeing what can be done to help increase productivity but are uncertain what they, either individually or collectively, can do.

The reason their hands are tied is that a great many of the factors which have an impact on our rate of productivity growth are institutional in nature. These include such elements as the level of investment in modern capital equipment and technological processes, availability of energy and materials, and regulatory requirements in such areas as the environment and occupational health and safety. These are fields which are beyond the control of any single individual, and in which Government can serve as a catalyst, stimulating and assisting the private sector's efforts to achieve productivity growth.

With this in mind, I am pleased to join in sponsoring S. 937, which would establish a clear Federal policy on productivity and would undertake a number of programs to promote productivity growth. One of the important features of this bill is that it would pioneer in developing an "industrial extension service" similar in many respects to its counterpart in the agricultural sector. The legislation would provide grants to our engineering and business schools for the establishment of productivity centers, which in turn would offer technical assistance to small- and medium-size manufacturing and service industries.

The agricultural extension service has, without a doubt, been very helpful to the food economy of Florida. Furthermore, the U.S. leads the world in agricultural productivity and efficiency. S. 937 seeks to extend to the business community the kinds of experiences and institutions that have made us preeminent in the agricultural field. Another important aspect of this legislation is that it would channel a substantial segment of its funds to State and local institutions, to take advantage of their special, on-the-spot expertise on local problems.

I congratulate our distinguished chairman for holding these timely hearings on S. 937. We are now ready to move quickly forward, and I will certainly do what I can to see that Congress assigns priority attention to this important area.

Senator NUNN. Our first witness is the very distinguished Secretary of Commerce, Frederick Dent.

Mr. Secretary, do you want to come forward with your staff?

Secretary Dent is one of the leaders in promoting productivity stimulation through the Federal Government. He was deeply involved in the economic summit conference last year which was the source for

many of the ideas included in this legislation. I know many of my own ideas, Mr. Secretary, were developed in Pittsburgh when we talked at length about some of these problems. On Wednesday, March 19, the Senate approved Secretary Dent to be the Special Representative for trade negotiations, with the rank of Ambassador. Of course, this will be one of our most crucial positions, for the next few years, in all of Government. We are delighted to have you here, Mr. Secretary. You testified at our earlier hearings in December. We have incorporated some of those suggestions in our new legislation. We are glad to hear from you, and we will get into some questions after you complete your statement.

TESTIMONY OF FREDERICK B. DENT, SECRETARY OF COMMERCE

Secretary DENT. Thank you very much, Mr. Chairman. I have with me Mr. Robert Milligan, who is Director of our Office of Policy Development.

Mr. Chairman and members of the committee, I appreciate the opportunity to appear again before this committee and to comment on Senate bills S. 765, the National Center for Productivity and Quality of Working Life Act, and S. 937, the National Productivity Act of 1975.

As previously stated before the committee during its hearings on S. 4130 and S. 4212 last December, I strongly share your concerns with regard to productivity trends in this country and the implications of such trends.

Again, I commend the members of this committee for their initiatives and continuing efforts in developing legislation designed to promote productivity improvement in the public and private sectors.

I understand the committees' purpose is to achieve the best possible legislation in this area. To this end, my remarks will focus on a review of basic considerations which I believe should influence the scope of the final legislation, the role of the proposed National Center, and specific suggestions on selected provisions of the proposed legislation.

In defining responsibilities for the proposed Center, it is particularly important to remember that productivity improvement is an inherent responsibility of every manager, in both the public and private sectors. It is also suggested that improved productivity should be a basic commitment of everyone who aspires to a better way of life. Clearly, improved productivity in governmental operations and in the private sector should be a particular concern of legislators at every level. It is important that centralization or specialization of productivity enhancement responsibilities in the Federal Government not detract from such inherent responsibilities and obligations.

In a similar vein, I believe it is essential to recognize that future national productivity trends will be largely a function of initiatives and achievements of the private sector of our economy with its millions of productive enterprises. Productivity growth in this sector will not be automatic, nor can it be mandated or legislated, per se; rather it will continue to be primarily a function of incentives for such growth, both economic and noneconomic. In a free society the basic and most powerful incentive for businesses to improve their effectiveness through

new technologies, processes, or procedures will continue to be the profit motive under competitive conditions.

With respect to human resources, it is becoming increasingly apparent that the quality of working life in any organization can have a decided influence on productivity growth, and in turn, be influenced by such growth.

The wisest and most effective government role in productivity improvement would be to insure that the competitive enterprise strengths of our system are not eroded or suffocated by Government and that concerns for the quality of working life in America be given appropriate attention.

In spite of the pervasive implications of productivity changes, there is still a need for better public understanding in this area. Governments and educational institutions have clear and primary responsibilities for meeting this need.

Another consideration that warrants mentioning is that cyclic variations in the economy critically affect national productivity trends in the short term. The best machines, the best technology, and the best workers can contribute little to avoid declining productivity ratios when the Nation's output declines sharply. Clearly, the quickest and most effective way to reverse the 2.7 percent productivity decline in 1974 for the private nonfarm economy, will be through economic policy and program actions. I fully expect to see major improvements in national productivity indices as the economy begins to recover strength during the second half of this year.

Based upon these considerations, I believe it necessary to be quite realistic in formulating a proper role for the National Center envisioned by the two bills under consideration. We must recognize existing and inherent responsibilities of a huge array of Federal agencies, avoid duplication where possible, and realize that the Center can probably be most effective in a policy, research, coordination, and information role as opposed to a more operational role.

In consonance with these basic considerations, it is suggested that the role of the proposed National Center and its Board of Directors, or Council, should be to:

Develop and provide recommendations on national policy guidelines relating to productivity for use by the executive and legislative branches.

Improve the coordination of Federal productivity initiatives and programs.

Serve as an information clearinghouse on productivity improvement techniques, to include case histories, and improve methodologies for productivity measurement.

Support research in the areas of productivity enhancement and measurement techniques.

Support demonstration projects and experiments at the State and local level and in selected industries, with particular emphasis on the encouragement of labor-management cooperation in the pursuit of improved productivity and improvements in the quality of working life.

Promote better public understanding of productivity implications with respect to both their individual interests and to the interests of the public at large.

Provide review services on proposed Federal programs and legislation which impact on productivity.

Provide recommendations with respect to manpower adjustment policies.

Provide reports and recommendations to the President and Congress as appropriate.

I note that together, the two bills being considered contain provisions for each of these functions.

There are several provisions that would expand the functions or programs of the Center beyond what would appear to be desirable.

With respect to the funding of the National Center, I suggest that contracting for services should be favored over the use of grants. I do not believe that any extensive grant program would be cost effective in this area at this time.

State and local activities to stimulate productivity growth should be encouraged; however, the costs of such programs should be shared essentially by sponsors and participants on the basis of realistic appraisals of expected utility. Limited Federal support would only be appropriate for selected demonstration projects which appear to have high potential for wide application.

As previously discussed during the December hearings, I recommend against a new requirement for productivity impact statements in view of the current requirements for inflationary impact statements established by Executive order 11821 of November 27, 1974. Section 303 of S. 765 appears to be close to a practical solution for meeting the objectives of a productivity impact statement requirement through existing administrative procedures for inflationary impact statements.

Proposed National Center responsibilities relating to structural imbalances, as reflected in section 103(2) and section 207(14) of S. 765, constitute an exceptionally broad mandate in a particularly complex and often controversial area. The scope of these responsibilities should be reconsidered in terms of what might be feasible, considering other responsibilities envisioned for the Center and its anticipated staff capabilities.

It is recommended that section 208, which provides for "Offices of Productivity and Quality of Working Life" in the Departments of Commerce and Labor not be included in final legislation (particularly since no additional funds are being authorized for such offices). Since the Secretary of Commerce and the Secretary of Labor would be members of the proposed Board or Council, it is suggested that existing authority and responsibility would exist for each of them to affect working relationships between their Departments and the proposed Center in a manner responsive to the needs of the situation.

Mr. Chairman, this concludes my prepared statement. Improving productivity in our great Nation is a continuing and basic challenge for us all. It will be influenced for better or for worse, in one way or another, by virtually every law passed by this and succeeding Congresses. I congratulate the committee on its concern and pledge the continued support of the Department of Commerce in meeting this challenge.

Thank you.

Senator NUNN. Thank you, Mr. Secretary. I have the couple of questions here. One of the main issues is the question of impact state-

ments. All of us, I think, are aiming at the same problem. That is, Government regulations and legislation that comes out of Congress and the executive branch without any thorough analysis of what it is going to do to our economy. This does not mean we may not want to go ahead with the particular program or regulation or rule, even if we know what it is going to do on our economy.

However, to proceed blindly without recognizing the consequences, I think, has led to an awful lot of our economic problems. My question is, how do we in a most meaningful way deal with this question of impact statements? Would you agree that a productivity impact statement, inflation impact statement, and economic impact statement, are all aimed in the same general direction and that we should not duplicate these requirements?

Secretary DENT. I agree that these are very important. We have been negligent in not providing them in the past. We are presently preparing these to go forward with legislation from our Department under the direction of executive order.

Senator NUNN. What is happening under that? What is the status of the executive order? Isn't each department in the Federal Government supposed to prepare an inflation impact statement on every rule and every regulation set forth?

Secretary DENT. That is correct. This has been issued. As I mentioned just last week, I wrote a directive instructing preparation of the economic impact statement of the new patent legislation which we are submitting on both Government operations and the private sector, as we can determine at this time.

Senator NUNN. Are all agencies complying? I have not seen any of the impact statements. I have not seen references to them in the press. What is happening in the Federal Government on these?

Secretary DENT. The instructions have been issued by the President that they be prepared. I think they have not been visible as yet because they apply to new legislation coming forward.

As you know, in the beginning of a new Congress, the legislation is coming forward rather slowly.

Senator NUNN. Do you think the executive branch of Government would object to having this executive order codified, made part of legislation and broadened so it also includes impact statements of legislation?

Secretary DENT. We concur with the philosophy. As I mentioned, the Executive order covers this. This is the responsibility of the executive branch, to see that its house is in order. We feel that the President has moved in this area responsively.

Senator NUNN. Are you saying you do or do not think we need to legislate in this area?

Secretary DENT. My feeling is that the executive order provides the same objective and is perhaps less restrictive than a codified law. It can change as times and requirements change more readily than having to change a law which passes Congress, as we all know, after hearings and considerably passage of time.

Senator NUNN. Does the Executive order cover legislation and legislative efforts? Is an impact statement required by the executive branch on something Congress is going to do?

Secretary DENT. The law provides this to go forward with legislation initiated by the executive branch. We would hope that executive

representation, when testifying on legislation, for instance, if initiated by yourself, would put that evidence before the Congress although it does not compel a member of Congress initiating legislation to provide that to their colleagues.

Senator NUNN. Do you have any examples of completed impact statements on a particular proposal and do you have that impact statement available? Is there any study that has been completed under this so we can see how the process is now working?

Secretary DENT. We have one in preparation for the patent legislation which we are sending to the Congress. We hope to have this done at an early date. I will be glad to provide it to you at that time.

Senator NUNN. Would you provide it so that we can put it in the record for these hearings?

Secretary DENT. We certainly will. Yes, sir.

Senator NUNN. The President issued this order, as I recall, right after the economic summit conference, which has been almost 6 months ago.

There have been innumerable Federal rules and regulations since then. I have not seen the first impact statement. This is puzzling to me.

Secretary DENT. The date of the issuance was November 27, Mr. Chairman.

Senator NUNN. That would have been 4 months ago. Of course, the Federal Register is just full of new rules and regulations.

I am trying to figure out how broad that order is and whether it is really being followed.

Secretary DENT. We have a copy of the order, if you would like to make it a part of the record.

Senator NUNN. I think I would, but I would be more interested in your interpretation as to whether it is really being followed. I know it is in the one example you have given, but, that is only one example.

There are thousands of administrative rules and regulations that are being put out. I just wonder what your interpretation is as to how broad the order is and whether anyone is really following it. If we do not have a single example in 4 months, it seems to me it is not being taken very seriously.

Secretary DENT. Mr. Chairman, I think that, as with everything in Government, it is rather slow in taking hold. But it is an Executive order by the President. It is moving into acceptance, and I am confident will be fully implemented.

[The information referred to and subsequently supplied follows:]

[From Presidential Documents : Gerald R. Ford, 1974, Vol. 10—No. 48, p. 1504]

INFLATION IMPACT STATEMENTS—EXECUTIVE ORDER 11821. NOVEMBER 27, 1974

In my address to the Congress on October 8, 1974, I announced that I would require that all major legislative proposals, regulations, and rules emanating from the executive branch of the Government include a statement certifying that the inflationary impact of such actions on the Nation has been carefully considered. I have determined that this objective can best be achieved in coordination with the budget preparation, legislative clearance, and management evaluation functions of the Director of the Office of Management and Budget.

Now, THEREFORE, by virtue of the authority vested in me as President of the United States of America by the Constitution and laws of the United States, it is hereby ordered as follows:

SECTION 1. Major proposals for legislation, and for the promulgation of regulations or rules by any executive branch agency must be accompanied by a state-

ment which certifies that the inflationary impact of the proposal has been evaluated. Such evaluation must be in accordance with criteria and procedures established pursuant to this order.

SEC. 2(a) The Director of the Office of Management and Budget is designated and empowered, to the extent permitted by law, to develop criteria for the identification of major legislative proposals, regulations, and rules emanating from the executive branch which may have a significant impact upon inflation, and to prescribe procedures for their evaluation.

(b) The Director, in carrying out the provisions of this order, may delegate functions to the head of any department or agency, including the Chairman of the Council on Wage and Price Stability, when appropriate in the exercise of his responsibilities pursuant to this order.

SEC. 3. In developing criteria for identifying legislative proposals, regulations, and rules subject to this order, the Director must consider among other things, the following general categories of significant impact:

- a. cost impact on consumers, business, markets, or Federal, State or local government;
- b. effect on productivity of wage earners, businesses or government at any level;
- c. effect on competition;
- d. effect on supplies of important products or services.

SEC. 4. Each Federal department and agency must, to the extent permitted by law, cooperate with the Director of the Office of Management and Budget in the performance of his functions under this order, furnish him with such information as he may request, and comply with the procedures prescribed pursuant to this order.

SEC. 5. This order expires December 31, 1976, unless extended prior to that time.

GERALD R. FORD.

THE WHITE HOUSE,
November 27, 1974.

[Filed with the Office of the Federal Register, 12:09 p.m., November 27, 1974.]



EXECUTIVE OFFICE OF THE PRESIDENT
OFFICE OF MANAGEMENT AND BUDGET
WASHINGTON, D.C. 20503

January 28, 1975

CIRCULAR NO. A-107

TO THE HEADS OF EXECUTIVE DEPARTMENTS AND ESTABLISHMENTS

SUBJECT: Evaluation of the Inflationary Impact of Major Proposals for Legislation and for the Promulgation of Regulations or Rules

1. Purpose. This Circular prescribes guidelines for the identification and evaluation of major proposals for legislation and for the promulgation of regulations or rules.

2. Authority. Executive Order No. 11821 provided that major proposals for legislation and for the promulgation of regulations or rules by any Executive branch agency shall be accompanied by a statement which certifies that the inflationary impact of the proposal has been evaluated. The Director of the Office of Management and Budget (OMB) was designated to develop criteria and prescribe procedures for carrying out the Order.

3. Coverage. For purposes of this Circular major proposals for legislation and for the promulgation of regulations or rules for which evaluations will be required will be determined by criteria developed by each Executive branch agency and approved by the Director of OMB in accordance with this Circular. Agencies which do not propose legislation or promulgate rules or regulations may be exempted from the requirements of this Circular (pursuant to Section 4(e)).

4. Requirements.

a. Agency heads are responsible for the development of criteria to determine which proposed legislation, regulations, or rules originated by the agency are "major" and therefore require evaluation and certification. In developing criteria, each agency head shall consider, among other things,

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(1) cost impact on consumers, businesses, markets, or Federal, State, or local government;

(2) effect on productivity of wage-earners, businesses, or government;

(3) effect on competition;

(4) effect on supplies of important materials, products or services;

(5) effect on employment;

(6) effect on energy supply or demand.

b. Each agency shall develop procedures for the evaluation of proposals identified by application of approved criteria. The evaluation should include, where applicable,

(1) an analysis of the principal cost or other inflationary effects of the action on markets, consumers, businesses, etc., and, where practical, an analysis of secondary cost and price effects. These analyses should have as much quantitative precision as necessary and should focus on a time period sufficient to determine economic and inflationary impacts.

(2) a comparison of the benefits to be derived from the proposed action with the estimated costs and inflationary impacts. These benefits should be quantified to the extent practical, and

(3) a review of alternatives to the proposed action that were considered, their probable costs, benefits, risks, and inflationary impacts compared with those of the proposed action.

c. Agencies should comply with the requirements of this Circular with existing resources and personnel.

d. Identification criteria established by each agency shall be submitted to the Office of Management and Budget within 30 days of the issuance of this Circular for review and approval by OMB in consultation with the Council on Wage and Price Stability. Each agency shall designate an official to be responsible for compliance with this Circular

and shall also notify OMB and the Council within the 30 days of that officer's name and title.

e. Agencies that do not propose major legislation, rules, or regulations, may be exempted from the requirements of this Circular by the Director of the Office of Management and Budget, acting in consultation with the Council on Wage and Price Stability. Requests for exemption should be submitted to OMB within 30 days of issuance of this Circular.

5. Disclosure.

a. As provided in Executive Order No. 11821, major proposals for legislation and for the promulgation of regulations or rules by any Executive branch agency shall be accompanied by a statement which certifies that the inflationary impact of the proposal has been evaluated. The statement of certification should be repeated whenever the proposal is published or issued. Upon request, agencies shall provide the Office of Management and Budget with the information necessary to ascertain that the approved criteria and procedures are adequately implemented.

b. When legislative proposals determined to warrant evaluation are forwarded to OMB for review and clearance pursuant to OMB Circular No. A-19 (Revised), agencies should furnish upon request appropriate data and analyses.

c. After a legislative proposal is forwarded to the Congress, economic data and analyses developed in evaluating the inflationary impact of the proposal along with other data and analyses concerning the overall impact of the proposal will, of course, be furnished to the Congress, as part of the overall justification of the proposal.

d. With respect to major proposals for rules or regulations, the proposing agency shall also, at the time it first certifies it has evaluated the inflationary impact of the proposal, submit to the Council on Wage and Price Stability a copy of the proposed rule or regulation, the accompanying certification, and a brief summary of the agency's evaluation pursuant to Section 4(b) above.

6. Responsibilities.

a. Council on Wage and Price Stability. Each Executive branch agency should be prepared to respond to requests for information from the Council on Wage and Price Stability, or from other authorized agencies, concerning the identification or evaluation of a major proposal for legislation, rule, or regulation or of a particular class of proposals.

b. The Office of Management and Budget. The Office of Management and Budget will cooperate with the agencies in developing criteria and evaluation procedures in compliance with this Circular.

c. Interim Provisions. In the interim prior to final approval of criteria, agency heads are responsible for identifying which proposed legislation, regulations, or rules originating from their agency require evaluation and certification. In making such determinations, agency heads shall consider the categories of impact in Section 4(a) of this Circular. For assistance, agencies may consult the following: for legislative proposals, the Assistant Director for Legislative Reference (OMB), telephone 395-4864; or for proposed regulations or rules, the Assistant Director for Government Operations and Research (Council on Wage and Price Stability), telephone 456-6493.

7. Inquiries. Inquiries and requests for other assistance should be directed to the Associate Director for Economics and Government (OMB), telephone 395-4844 (code 103).

ROY L. ASH
DIRECTOR

Senator NUNN. Is there a requirement anywhere in this Executive order that it be retroactive in order to see what rules, regulations, laws already on the books are having a damaging economic effect and, thereby, should be the subject of intensive review? Is there any retroactivity in its application?

Secretary DENT. No. But the President has recommended the development of a commission to review actions and commissions which would be a joint operation of the Congress and the executive branch to review the implications of independent regulatory agencies.

We do hope that this will be adopted to review the development of regulatory practices in this country which may be contrary to the concept of increasing productivity.

Senator NUNN. One other question, Mr. Secretary, then I will defer to my colleagues.

You said that the Federal support for selective demonstration projects should be limited. Have you got any advice as to how much support should be provided and what sort of programs should be funded? In other words, should we use universities, State and local governments, private organizations. Based on your experience, what would you expect to be the most productive in this area in terms of use of Federal money?

Secretary DENT. I would suggest that the Center review those groups in the private sector, government, or education, which are closest to the point of impact. Namely, be it industry, agriculture, labor relations, where they are most thoroughly informed concerning the problem at hand. And these people be encouraged through grants or contracts to expand their knowledge and spread the information which they gain.

Senator NUNN. Thank you, sir.

At this point, Senator Percy, I will defer to you.

Senator PERCY. Thank you, Senator Nunn.

Senator Javits, in my opening statement, I was not aware that you were going to be here today. I am just delighted that you have joined us. I did mention that you have been a pioneer in this field and have contributed immensely to legislative thrusts. I told our witnesses I did not think they could be before a committee that had a deeper interest in what they were undertaking and doing.

We have spent a great many hours together talking about what the function and proper role of government is. I think Secretary Dent, has quite properly indicated that the major thrust for this whole effort must come from the private sector. We have a role that we can play.

I would like to say to the Secretary before I ask him any questions that this will probably be the last time I will have the pleasure of hearing him testify in his present role. We will look forward very much, indeed, in the Foreign Relations Committee to hearing from you in your role as Chief Trade Negotiator from the United States, moving from the frying pan to the fire, as it is probably the toughest negotiating role anyone could have.

But I know the very, very great sense of confidence the American business community has in you and the administration has in you.

You could not go with greater backing and support. I think the Congress shares that sense of confidence, also, in your capacity and capability. To have as one of your final activities this field of productiv-

ity, I think, is a very fitting activity for you to have engaged in in your final days with the Commerce Department, as it has such long-range importance.

It is quite apparent to the Congress, and I think certainly to the administration and President, as well, that we need to identify and review the laws and regulations that impede economic efficiency in this country.

How important do you believe it is that this process of study be carried on some sort of a centralized manner and that the Productivity Center have a role in this effort.

Secretary DENT. I think that it is important that the Center have a role in it. However, I do not think that the President's recommendation for a Commission involving Members of the Congress with the Executive is vitally important because these independent commissions are independent.

The Center would better be served by having a supportive group that represents the Congress which, in a way, represents the parents of these commissions to see that they are carrying out the intent for which the Congress established them and is not in conflict with current congressional thinking.

But I do think when you go beyond independent agencies that this Center can have a significant impact in publicizing and identifying problems which may exist with respect to productivity.

Senator PERCY. You used the term commission. Is the Administration thinking in terms of the creation of a commission, or a Center?

Secretary DENT. The President recommended the establishment of a joint commission to review independent agencies, the members of which would involve the Congress as those who establish and maintain these commissions.

Senator PERCY. But your reference there is to a commission that would study the regulatory agencies, is that correct?

Secretary DENT. That is correct. Independent agencies, sir.

Senator PERCY. But your thinking so far as the creating of a central focus point for the development of productivity is more along the lines of a Center, is it not?

Secretary DENT. Correct.

Senator PERCY. Yes. S. 765 proposes a Center that provides a strong leadership and coordinating role in relationship to the agencies. Do you think this emphasis on a rather strong central agency is correct?

Secretary DENT. The important thing in my judgment is that the concept of improved productivity be disseminated widely across both the Government and the private sector. It will take strong leadership to do this.

But it is also important that we have involvement and cooperative attitudes toward this concept and the group which heads it. You cannot, in my judgment, merely issue directives from the top. It has to be a participatory process of education and joint venturism, so to speak.

Senator PERCY. Just recently in Decatur, Ill., the National Commission on Productivity, through the Chicago field office, held a meeting with labor, management and academicians.

Secretary DENT. Senator, I happened to be the keynote speaker at that. And I think that it was very constructive. I understand that the

feedback from both local labor and management circles was quite enthusiastic.

Senator PERCY. I think your being the keynote speaker, I might say insured the success of it. We were very grateful, indeed, for your willingness to do that.

Do you feel that it is important to have field work done, field activities right out in the country where the industrialists can have access to a conference, where labor can come in, an atmosphere that is other than just Washington, where we can draw upon our great universities? And would you, as a result of having participated in this, and my feedback has been extraordinarily enthusiastic about it, everyone felt their time had been well spent, they had sparked their imaginations, they had taken up new lines of thought.

I think it was an action oriented conference to cause people to say, "There is more that we can do back in our own shops and factories and offices than we are now doing."

That, of course, is the test of it, whether or not they go back and do something.

Do you feel the continuation of such activities out in the field would be a very important thing?

Secretary DENT. Senator, the answer to the whole problem of productivity lies well beyond the narrow confines of the Potomac River here in the Nation's Capital.

If we cannot get the concept, the message and the commitment out across the United States, we cannot succeed at all. It is absolutely essential that we get this concept out to the factories and the farms of America, as well as the schools and colleges.

Senator PERCY. I would like to ask just two other questions, the first relating to the Department of Commerce.

S. 765 proposes the creation of an Office of Productivity and Quality of Working Life in the Department of Commerce. It was proposed simply because it was felt that there should be some centralizing of productivity efforts in your Department and some coordinating support of the activities of the National Center.

Do you not prefer this proposal? If you do not prefer that proposal, do you agree that some existing unit in your Department should be assigned this centralizing role? In what other ways could the Commerce Department coordinate and centralize its productivity efforts and support and supplement the activities of the National Center?

Secretary DENT. We have pulled together through the Office of Policy Development representatives of all aspects of our Department that can influence American business and industry with respect to productivity.

This involves the Maritime Administration, our Domestic and International Business Administration bureaus. We feel that productivity must become a part of every activity in the Department.

Consequently, we feel that, if you centralize it, some of these areas may say, "We will leave it to Joe," and it will fall between the cracks.

But if we have productivity as a basic portion of every bureau in the Department then we see a widening of the base of participation, concern, and, hopefully, achievement.

Senator PERCY. Lastly, I wonder if you could just take a look back and take the gloves off and just as candidly as possible tell us and evaluate the National Commission on Productivity.

If you are critical, I am sure everyone would understand, because the Commission, itself, has been critical. The staff has been critical of what it has been able to accomplish and do; the membership has been critical; and the architects, in a sense, have been critical.

I know Senator Javits was a spearhead of this. I worked with him on it. We had high expectations, and they were not achieved. They were not realized, for a variety of reasons.

Maybe it was some of the things in the way it was legislatively established. We fought hard for the funding of it, but maybe the funding was inadequate. I do not know.

Is there anything you feel that, in your final comments here, you could reflect on and tell us what went wrong that it did not become a much more important activity and has not had the impact that we felt it should have had?

And here, during the creation of it, it had been in existence the whole year, we had the year of the greatest decline in the history of recording productivity in this country.

The Commission could not, obviously, reverse that. But what can we learn from this experience; what did we do wrong?

Secretary DENT. I will give you my personal views, which are limited, of course, to one individual.

But I see three things, really, that are at fault, one of which was that there was not continuity of leadership. The chairmanship changed relatively frequently. A man would get in with commitment and, lo and behold, he would be changed to a new job, or what have you. There was not continuity.

Senator PERCY. How many different chairmen did they have in the life of the Commission?

Secretary DENT. I can remember three, and I do not know whether that is all of them. Secretary Schultz.

Senator PERCY. Pete Peterson, John Dunlop.

Secretary DENT. Yes, those are the three I recall.

Senator PERCY. And now Vice President Rockefeller.

Secretary DENT. There are rumors that he will be, but I do not think it has been officially designated.

Senator PERCY. That is right. But there is a change of leadership, and it probably was never the top priority on any of their lists. It was important to all of them, but they had a lot of other things that they were doing.

Secretary DENT. I think all of them were vitally interested, probably would have built a program that would have been consistent and followed through. But because of the lack of tenure, they were unable to get the momentum underway.

I think perhaps one of the most glaring problems, however, was the hiatus in funding, where it really went adrift and was kept alive, as I recall, by a grant from another agency while there was a question of whether the Congress was willing to continue its life.

I think, here again, it is indicative of the lack of understanding of the need for productivity in our Nation. Those are the two main problems.

The third, of course, is this which is reflected in all of that, that we simply do not, as a Nation, understand the essential need for increasing productivity. This need will become ever greater as the bur-

dens upon our national economy of Federal, State and local governments become greater, so that there is less margin for error in the private sector.

We know that Government direct expenditures today are already about 34 percent of the GNP. When we add the expenditures of off-budget Federal agencies and Government-sponsored enterprises, this percentage would even be higher. We know this will be growing in the years ahead.

This year alone our GNP gross on a current basis will not keep up with the growth of Federal expenditures, so we are penetrating our GNP further. The only way we will have a vibrant private sector is through growth of productivity in that area.

Senator PERCY. Thank you very much, indeed, Mr. Secretary.

Senator NUNN. Thank you. We have got a live quorum vote and I think we are going to run into severe time problems this morning because we are in the middle of a tax bill and have a closure vote coming up.

Senator CHILES. We will go to your questions and, hopefully, we can complete you and Senator Javits. When we come back after the vote, we can take our next witnesses.

Senator PERCY. Mr. Chairman, I would suggest, really, it would not be necessary for us to go down. We will be carried on this rollcall.

Senator NUNN. I agree, I will wait until the vote comes up.

Senator PERCY. I think there will be plenty of Senators to show up for a quorum.

Senator NUNN. We have three more witnesses, though. The first of the three was to start at 10:30, so we are running 35 minutes behind and it is going to get worse as we go along. We do want to complete all of our witnesses this morning.

Senator CHILES. Mr. Secretary, I just got into the last of your questioning by Senator Nunn. I was amazed by what I thought was the tenor of your answer on the compliance with the President's Executive order on the inflation impact statement.

It seems to me, that from the time the President of the United States issues that order, they would begin complying. I cannot understand why everyone would not comply to it immediately.

Secretary DENT. Senator, the problem arises from section 2, which states that the Director of OMB is designated and empowered to the extent permitted by law to develop criteria for identification of major legislative proposals and so forth.

After it's issued, they had to develop the regulations which have been issued subsequently to that. That provided part of the reason for the delay.

Senator CHILES. It is just inconceivable to me, again, that we are so tied up with the bureaucracy that the President of the United States cannot issue an order to departments of the Government, that when they come out with a rule or regulation, that these agencies should come to us with an impact study before they present that rule or regulation.

We will be out of this thing and into something else. The recession or inflation will be in the next round before it comes up.

When the President made that speech on television and told the American people what he required, I think they reacted as I did.

They believed and applauded and thought, hallelujah, this is going to happen.

But I don't think they thought that it was going to go through in 4 months, and then rules and regulations have been adopted that have not gone through.

We ought to have an impact statement on why it takes OMB so long to get rules and regulations out and what the cost of this delay is to the American public.

I just can't believe it. The Government does not work. I hope the people don't find out, but I'm afraid they have.

Mr. Chairman, that is all I have to say.

Senator NUNN. Senator Javits.

Senator JAVITS. Mr. Secretary, as you have been told, and I am grateful to Senator Percy, I have been at this for a long time. I am very pleased to report to you that in my State there has actually been a trial of an effort like this. It has been extraordinarily successful.

As a matter of fact, I hope that the Chair, in the course of these hearings, will let me call the primary factors in this effort.

It is being done in the city of Jamestown, in a sense, under my own sponsorship. For about 3 years now, the so-called Labor-Management Committee of the Jamestown Area has been working at the problem of poor productivity, worker morale, skill, upgrading programs, and the problem of maintaining employment levels. This effort has been extraordinarily successful. Jamestown, which was a city rocked by labor problems, has now an unemployment rate which is down from 10 percent of the work force in 1972, to 5.2 percent in September of 1974.

Productivity has gone up very materially. There are specific examples of specific firms which have had dramatic productivity improvement, and they have attracted a new industry which surveyed the city as a possible site and found it very much warranted, though, heretofore, they might have run away from it. That is Cummins Engine, which is putting a plant in, itself.

The question I would like to ask you is this. This is an example. We had 5,000 labor-management councils in World War II under the auspices of the War Production Board. Have you or the Department studied these experiences in order to come to us with specific recommendations on the extension of the productivity effort on the local level—which would mean either the community or the region or the plant—so that you might help us with some experience on that score?

Secretary DENT. Senator, let me observe that the Jamestown project is a project funded by the Economic Development Administration of the Department of Commerce. We look upon this grant as one of the very successful grants that EDA has made. We are utilizing the information gleaned there to advise other communities of what they might do in order to correct the situation similar to what was found in Jamestown.

I happen to have had an indirect connection with Jamestown because one of the firms some years ago that went into disarray because of local conditions settled in my community in South Carolina.

I do think that emphasis on productivity, the types of labor-management cooperation that were demonstrated in the steel industry

through their agreement, no-strike agreement, to avoid problems there, is something that can be picked up by the private sector, both labor and management, and instituted at the local level on a basis of information which is provided from such demonstration projects as Jamestown.

Senator JAVITS. Mr. Secretary, naturally I am a party to Senator Percy's bill, and would be honored to be a party to Senator Nunn's bill, but I have not actually done it. I will do it promptly.

Did you study both bills and determine whether the provisions are such that we can, under either bill, deal with the labor-management productivity council idea on the local plant or industry level effectively? Or is amendment required, whichever bill the committee decides is the proper vehicle, to most effectively deal with the problem?

Let me tell you why I ask. One of the Price and Wage Administrators, as I recall it, was willing to put as much as \$50 million into the Productivity Commission in order to give it some resources with which to develop the labor-management productivity council idea. The theory being that startup, technical assistance and other costs might very usefully promote this effort very vigorously. I would greatly appreciate it, therefore, if you could study the two bills from the point of view of authority to engage in this kind of effort.

I have just read the bills again, and I think there is implied authority without any question. The question is one, whether we should spell it out specifically, and two, whether there is enough money.

Senator Nunn's bill is more ample than Senator Percy's. But the question is if the activity were really vigorously extended as I suggest, would there be enough money? Depending upon your report, I would be prepared to sponsor special amendments, hopefully with the cooperation of the authors of the bills, to bring that about.

Under our present circumstances that is the straight line between two points. I favor the Productivity Center. I think it is a very good idea. You may recall that I am the author of the National Institute of Building Sciences, which is now a research agency in housing. So I favor this strongly. But I think there has to be a massive productivity effort because of the pinch we are in. The figures as you know, are horrendous. These are the worst figures in our economy: the diminution in productivity, and the diminution in output.

It seems to me that we really are in a kind of war against depression which justifies the kind of organization that we had in World War II, which I understand was very successful.

Indeed, Mr. Secretary, it might be very useful to us, and I imagine the records of the Department would have it, to see if any history was done of the Labor-Management Council experience in World War II.

I would ask, Mr. Chairman, that if we can work up a summary on that, I would not expect some great thick report to be included, that that be made part of the record of our hearing.

Senator NUNN. We will. Without objection, Secretary Dent's reply to your question, which I think is very important, and any information he has about the past history in this regard will be made part of the record.

[The material referred to follows:]

LABOR-MANAGEMENT PRODUCTIVITY COMMITTEE
IN AMERICAN INDUSTRY

NATIONAL COMMISSION ON PRODUCTIVITY
AND WORK QUALITY

September 1974

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PREFACE

As one of its functions, the National Commission on Productivity and Work Quality is directed by Public Law 93-311 "To encourage and assist in the organization and work of labor-management committees, which may also include public members, on a plant, community, regional, and industry basis. Such committees may be specifically designed to facilitate labor-management cooperation to increase productivity or to help improve the morale and quality of work of the American worker."

This report attempts briefly to review the limited experience in the United States with joint labor-management committees established to deal with production and related problems. This experience relates almost entirely to committees set up under collective bargaining arrangements. Although joint productivity committees in nonunion firms are not unknown, they appear, at least thus far, to have been relatively few in number and little is known of their activity.

For the most part, the report is based upon secondary sources. However, it does incorporate data prepared for the Commission on Productivity by the Bureau of Labor Statistics on the current incidence of labor-management productivity committee clauses in major collective bargaining

agreements, and on a field investigation of the operation of joint committees in six situations. With reference to one type of joint committee arrangement, the Scanlon Plan, material is drawn from a special report prepared for the Commission by two outside experts.

The report was prepared by Dr. Harry M. Douty, formerly Assistant Commissioner for Wages and Industrial Relations and Associate Commissioner for Program Planning of the U.S. Bureau of Labor Statistics. Dr. Douty is the author of many studies and articles on industrial relations and wages in the United States and abroad. He taught courses in labor economics at the University of Pennsylvania, the New York School of Labor and Industrial Relations at Cornell, and the Institute of Labor and Industrial Relations at the University of Illinois. Dr. Douty served on several U.S. delegations to the International Labor Organization, as a delegate and advisor.

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INTRODUCTION

The Case for Joint Production Committees

There has now been about fifty year of experimentation in the United States with joint labor-management productivity committees at the plant, company, or industry level. Such committees have never been numerous, and their experience has been diverse. Nevertheless, interest in this type of formal labor-management cooperation in production has persisted among some union and management officials and among some students of industrial relations. The most conspicuous recent expression of this interest was provision for the establishment of joint advisory committees on productivity at the plant level in the 1971 and 1974 collective bargaining agreements in the basic steel industry.

The case for formal labor-management cooperation to improve productivity has been stated in part in terms of the need for common concern for the survival and growth of the enterprise. "It is undeniable," wrote one observer in 1947, "that in a real sense there is a very substantial identity of interest between a worker and the company employing him. A sense of relative economic security or attachment to a definite point in the social and economic

structure is highly important to most workers. In our competitive system, an unprofitable enterprise, which is to say an inefficient enterprise, is one in which every worker's employment and earnings are insecure. Furthermore, in this respect, there is little difference in interest between the unskilled worker and the company executive. There may be a gradation of interest, but little difference in kind. It would seem, therefore, that a broad foundation of economic self-interest exists for a cooperative effort to insure high efficiency within an enterprise."¹

It has been pointed out also that the extraordinary development during the postwar period of a variety of employee benefits related to length of service, such as pension plans and paid vacations, serve to tie employees more securely to particular firms and reenforce common interests between employees and managements. The spread of collective bargaining, with its elaboration of rules governing promotion, layoff and recall, discipline, and many other matters, has the same effect. It is argued, in fact, that "... unions unintentionally create stronger common interests between employees and employers. More than ever in a unionized enterprise the interests of the employees depend on the success of the firm."²

A second line of reasoning for the development of a

formal approach to labor-management cooperation in production is that it provides a mechanism through which rank and file employees can make a positive contribution to the improvement of production processes, the elimination of waste, the better care of tools and equipment, and the maintenance or improvement in the quality of output. It is believed that such cooperation, if successful, taps a deep reservoir of knowledge and experience among the underlying work force that is not ordinarily available to management. It is thought also that successful labor-management cooperation arrangements serve to stimulate worker efficiency in the performance of day-to-day job duties.³

These results flow, it is argued, from the beneficial results of the cooperative program on worker motivation and morale, and from the deeper insights that management obtains into the capacities of the nonsupervisory work force. A successful cooperative program is calculated to provide workers with a greater sense of responsibility than they might otherwise feel for the success of the enterprise, and for a sense of participation in the production process beyond the routine performance of their particular tasks. Through the cooperative mechanism, they have a procedure for advancing ideas relating to production or working

conditions with reasonable assurance that they will receive careful consideration. They are also likely, through the use of joint committees as channels of information, to have a better appreciation of the overall competitive position of the firm and of its problems.

A third and more contemporary argument for the development of joint labor-management productivity committees is that they should contribute in some measure to reenforce national policies to restrain inflation. The collective bargaining system, of course, should not be expected to solve overall problems of price stability and full employment. But in the words of one observer, management and labor representatives should ". . . be encouraged to develop private policies and procedures whose implementation at the individual firm level will contribute to the achievement of national economic policy goals. It seems to me transparently evident," he continues, "that we need to make a greater effort than we have up to now to develop coordinated public and private policies."⁴ Effective labor-management cooperation can be one source of productivity growth, and to this extent can support broader measures calculated to expand employment and real incomes within the framework of reasonable price stability.

Some Characteristics of Joint Production Committees

This report deals only with joint production or productivity committees. These are defined as formal, negotiated arrangements by which labor and management, through joint committee procedures, cooperate in improving the quantity and quality of production. Related objectives may include better working conditions, heightened employee morale, and an improved industrial relations climate.

The above definition excludes certain notable types of union-management cooperation. In the needle trades, to cite a conspicuous example, the two principal clothing unions have provided many firms with direct help by union experts and technicians in overcoming a variety of production problems. This effort, however, has not involved the use of joint committees.⁵ The report does not cover the work of joint committees set up for specific purposes, such as safety, which may indirectly have productivity implications. It does not relate to provisions found in an appreciable number of collective bargaining agreements by which unions make general pledges of cooperation in achieving efficiency in production.⁶ Nor does it take account of informal labor-management efforts to deal with specific production problems that arise in the day-to-day administration of an enterprise.

There are a number of characteristics of labor-management productivity committees, and conditions affecting their operation, that should be noted.

1. Joint committees are not substitutes for or alternatives to the normal machinery of collective bargaining. Rates of pay, hours of work, supplementary benefits, and work rules are still determined through the bargaining process, and employee grievances are processed through procedures established for that purpose. Successful joint production committees may serve to reduce the incidence of grievances and may contribute to more informed bargaining over the substantive terms of agreements. But they will not eliminate conflict in industrial relations.

2. Joint committees, with rare exceptions, are advisory rather than decision-making bodies. They are instruments through which suggestions for improvements in production processes or in working conditions (e.g., lighting) that affect productivity may be proposed and discussed. Whether a specific suggestion should be accepted or rejected is a management decision which must typically be made by the appropriate managerial authority. If responsible plant or company officials are on the management side of a committee, decisions on some suggestions may be made on the spot by these officials acting in their managerial capacity. But suggestions that require any substantial cost or

feasibility study will require more extended consideration.

Occasionally a committee may be set up to engage essentially in joint decision-making. This was the situation at the Naumkeag Cotton Mill, described in the next section of this report, where the committee attempted, initially with substantial success, to administer a major upward readjustment in employee work loads.

3. Joint labor-management productivity committees are more likely to succeed in mature industrial relations situations. The term "mature" is difficult to define, but generally may be understood to mean full acceptance by management of the union's collective bargaining function, a feeling of mutual respect developed over time between management and union officials, and the absence of a heavy load of grievance cases, which would indicate reasonable satisfaction with working conditions and the administration of working rules among rank and file workers.

4. It appears highly important that the introduction of a joint committee program have more than routine support from top management and union officials, and, equally important, that its purpose, structure, and method of operation be widely understood among the lower echelons of management and the underlying work force. The basic purpose of a joint committee arrangement, after all, is to

encourage workers and the lower ranks of management personnel to take a more positive approach to the success of the enterprise by contributing ideas for greater efficiency in production, waste reduction, and quality improvement. Widespread understanding and support from both sides within the enterprise is therefore of critical importance before a joint committee program is launched.

5. The joint committee structure will depend largely upon the size and nature of the enterprise. In a relatively small firm, for example, a single committee may suffice. In large enterprises, departmental committees may be required, together with a top committee to coordinate the program, to consider suggestions that cannot be disposed of at lower committee levels, and to discuss, where appropriate, such matters as company-wide policy affecting technological change, shifts in product-mix, or redeployment of the work force, and, from the union side, general issues causing concern among the workers. In some cases, subcommittees may be required to deal with particular matters. The question of committee membership will have to be given careful consideration.

6. To the extent possible, assurance should be given that the job security of present employees will not be adversely affected by the joint committee program. This should be no particular problem in enterprises of at least

average efficiency in stable or expanding industries. In fact, an effective program in such enterprises should enhance job security. The problem is rather different where joint committee programs are installed in relatively high-cost plants or firms that are experiencing competitive difficulties. Aside from the World War II period, many joint committee programs have been installed under precisely such circumstances. In these cases, cost reductions that are labor-saving may well result in some shrinkage in employment, at least in the short-run. This may be a condition for the survival of the enterprise as the source of any employment at all. If this is clearly understood, and if the workers are convinced that employment adjustments will follow equitable rules that their representatives had a voice in formulating, the usefulness of the joint committee approach to greater efficiency in production may not be impaired.

7. There is the question of the division of the "gains" of labor-management cooperation. These may be difficult to quantify, and some, in any case, may be intangible. An intangible gain for the workers may be a sense of greater participation in the production process and hence of personal worth; management may acquire an awareness of untapped capacities in the work force. Both sides will benefit if worker grievances are reduced. The workers

will benefit (and possibly management indirectly) if plant amenities and working conditions are improved. Experience with joint committees suggests that a portion of the proposals with which they deal will relate to "housekeeping" measures.

Beyond this, the division of the gains of labor-management cooperation, insofar as they affect the income position of the enterprise, will be resolved through the normal processes of collective bargaining. An exception is found in the case of so-called "participating" plans of the Scanlon type. These are essentially plant-wide incentive plans, with joint committees as an integral part of the philosophy of labor-management cooperation that underlies their operation. Savings in labor costs in these plans are shared between the employees and the company under a formula described at a later point.

EARLY EXPERIENCE WITH JOINT COMMITTEES

The general idea that workers could make a positive contribution to efficiency in production, and that under stable union-management conditions it was in their interest to do so, gained wide currency during the 1920's. For example, the idea found expression in the so-called "new wage policy" adopted at the 1925 convention of the American Federation of Labor. This policy related improvements in wages and hours of work to gains in productivity; in return for employer implementation of such a policy, organized labor pledged cooperation to eliminate waste and increase efficiency in industry. President Gompers of the AFL wrote in 1930 that "The union is just as necessary for the newer function—cooperation—as it is for defensive and bargaining purposes . . . Cooperation comes with development and maturity." In 1938 the United Steelworkers (then the Steel Workers Organizing Committee) issued a handbook on production problems for its local officials. The general position taken was that once the union had established itself in the industry emphasis should be given to reducing waste, improving production techniques, and increasing efficiency.⁷

If the general idea of positive cooperation by workers

in the furtherance of efficiency in production was in the air by the 1920's, at least on the side of organized labor, it did not result in widespread adoption of joint labor-management committees. Such committees, of course, represent a highly structured response to the idea of cooperation, and other forms of formal and informal cooperation between unions and management undoubtedly occurred. Joint labor-management production committees were organized notably in railroading and textiles during the 1920's, and also were established in a scattering of other industries. Conceivably these modest efforts would have taken firmer root had it not been for the great depression beginning in the fall of 1929. The large scale unemployment that persisted throughout the 1930's clearly was not conducive to experimentation in cooperative efforts to improve productivity.

Experience with two outstanding prewar instances of the operation of joint labor-management committees is summarized in this section. These committees differed in origin, method of operation, and in the underlying problems with which they sought to deal. One of the committees, after a promising start, failed to survive the strains imposed by the depression.

The Baltimore & Ohio Railroad Plan

Perhaps the most widely known example during the prewar

period of union management cooperation through joint committees occurred in the shops of the Baltimore & Ohio Railroad. The plan was introduced in 1923, but the idea had been developed some years earlier by Otto S. Beyer, an engineer with a lively interest in production problems. He secured support from leaders of the shopcraft unions, particularly from W. H. Johnston, president of the Machinists. Other unions involved included the electricians, boilermakers, sheet metal workers, carmen, firemen, and oilers. Top management at the B. & O., including President Daniel Willard, approved the experiment. The initial effort, at the insistence of B. & O. management, was made in the Glenwood shop in Pittsburg, where labor relations were unsatisfactory, production low, and costs high. A year later, in light of favorable experience at Glenwood, the plan was extended throughout the company's roundhouses and maintenance shops. The plan at the B. & O. survived the deep depression of the 1930's, which saw the demise of formal union-management cooperation arrangements on several other railroads in the United States.⁸

At the B. & O., joint committees were established in each facility devoted to mechanical operations. Their membership typically consisted of a representative from each of the unions concerned and, on the management side, of the principal line and staff officials. Meetings were

held regularly, minutes were kept, and explanations were given in cases where suggestions for improvements in production or in working conditions were not adopted. The shop committees were supplemented by a system-wide committee consisting of key management personnel in the road's mechanical maintenance operation and the general chairmen of the shopcraft unions. The system-wide committee considered matters referred to it by the shop committees and also matters of company-wide interest brought to its attention by its union or management members.

The plan evoked widespread response from workers in the shops. During the first 15 years of the B. & O. plan, almost 31,000 suggestions were made. Some of these related to conditions of work, but a great many were designed to improve efficiency in production or enhance the quality of work. An analysis of a sample of 1,076 suggestions made during the early years of the B. & O. plan showed that 7.7. percent related to labor saving methods or devices; 2.5 percent to improvements in layout and routing of work; 12 percent to new machinery and equipment; and 29.3 percent to shortages of either materials or small parts. It was concluded, in a study published in 1941, that ". . . this survey of specific suggestions leaves little doubt that the direct contribution of the cooperative plan to higher production has been important. Undoubtedly the contribution

has been considerably less since 1929 than before, not only because the most obvious suggestions have been made but because the severe shrinkage of employment during the depression has made the men reluctant to offer labor-saving suggestions. In 1940 the contribution of the cooperative plan to higher production is in the main indirect through its effect upon morale and union-management relations."⁹

There is also evidence that the cooperative plan encouraged economy in the use of materials, and resulted in improvements in the quality of work. In return, the rank and file workers benefited in a variety of ways, including improvements in working conditions, somewhat higher wages, reduction in the number of grievances, improvement in apprenticeship training, more complete information on company operations, and, prior to the great depression, stabilization and increase of employment. With the depression of the 1930's, the effect of the cooperative program upon worker morale and management-employee relations became "... the result most stressed by both union leaders and managers. In 1940 this was clearly the most important gain from union-management cooperation to the Baltimore and Ohio ..."¹⁰

Naumkeag Steam Cotton Company

The experiment in union-management cooperation at the Naumkeag Steam Cotton Company in Salem, Massachusetts, has

been studied in fascinating detail.¹¹ The company was founded in 1839, and in the 1920's was a leading producer of quality sheets and pillow cases under the trade name "Pequot." In 1919 the company recognized the United Textile Workers as the bargaining agent for its workers and granted the closed shop. Unlike most of its competitors, the company did not reduce wages during the depression of 1921, and its wages in the following years were said to be the highest in the industry.

The operations of the company were profitable until the latter part of the 1920's. In the meantime, competition in the industry had become increasingly severe. Employers sought ways of cutting costs, one of which took the form of substantially increasing job assignments in the spinning and weaving rooms on the basis, in the better situations, of changes in work methods, the better maintenance of equipment, and improved raw material standards. Labor costs at the Pequot mill began to get seriously out of line. This was recognized by the local union leadership which proposed a plan of union-management cooperation similar to that on the Baltimore & Ohio Railroad. A formal cooperative agreement was signed in April 1927 in which the union pledged "its support in a constructive and responsible way to the end that quantity and quality of production may be maintained" and "its cooperation in effecting such

economies in manufacturing as may be brought about by the introduction of improved machinery." At this time the extension of job assignments—the "stretch out"—was not at issue at the mill.

By the end of 1928, the position of the company had ^c deteriorated to the point that management proposed new work assignment schedules involving the demotion of some employees and the dismissal of others. A proper foundation for this proposal had not been laid with either the joint committee or the rank and file workers. The reaction of the workers was understandably hostile. The union official recognized the need of the mill to reduce costs, but they were concerned that the union have a voice in the methods used and that the displacement of workers be kept to a minimum. They wished to avoid strike action over the reorganization of work assignments, which had had disastrous consequences for the workers in a number of other "stretch out" situations.

In an effort to find a way out of a difficult situation involving its own rank and file and the mill management, the union leadership, with the consent of management, employed an engineer to study the problem and make recommendations. The engineer confirmed management's contention that the more efficient use of labor was required. He also suggested several alternative ways in which the union

could safeguard its membership. The upshot was a proposal by the union in January 1929 for the joint determination of new job assignments, involving the employment of a technician who would report to a Waste Elimination Committee composed of several representatives of each side. With some hesitation, management accepted this proposal and it was adopted also by the union membership. The plan meant, in effect, that "Where management alone had been responsible for devising means of saving labor, the Union now proposed to assume a share of that responsibility in exchange for an opportunity to participate in the control of the labor aspects of the 'stretch out' and through 'joint research' to work with the management toward achieving more economical mill operations."¹²

The joint research plan, which became operative in March 1929, worked reasonably well for about two years. Work assignments in both the spinning and weaving rooms were considerably extended. Net employment in both departments was substantially reduced, but most of the employment displacement fell on relatively new hires. A considerable number of longer-term employees were demoted to lesser-skilled jobs. The wages of both spinners and weavers handling additional equipment were raised. The competitive position of the company was materially strengthened. The

joint research program was in process of being extended to other departments in the mill. It has been stated that "If business had improved during the summer of 1931, it is probable that the Naumkeag experiment would have gone down in history as a notable success in union-management cooperation."¹³

In the event, the deepening depression was to destroy the cooperative effort. By the fall of 1931, the Naumkeag mill was operating only four days a week, and this in itself created dissatisfaction among the workers. It meant a reduction in weekly earnings for all workers and, in addition, lessened the prospect that those employees transferred to less-skilled and lower-paying work would quickly regain their former jobs. These latter workers, who understandably had resented the outcome of the joint research program, became more and more hostile to the program. At the same time, the deteriorating business situation, and wage cuts at competing mills, led the Naumkeag management to seek additional reduction in costs.

In November 1931 a 10 percent wage cut was proposed. This proposal served to crystallize opposition to the joint research program, for the workers feared that its continuation would result in additional loss of employment. The leadership of the union, although still favorable to the joint program, offered to ask their members to accept a 10 percent reduction in pay on condition that joint research be

discontinued. Management agreed to abandon joint research if the pay cut was accepted. In January 1932 the wage reduction was put into effect and the policy of organized union-management cooperation in increasing operating efficiency ceased to exist. Despite the wage cut, the company continued to operate at a loss.

Subsequent events included a second wage reduction (July 1932), and in the spring of 1933 a proposal by management for new extensions in job assignments. The union officials, convinced that further reduction in cost was necessary and hoping to forestall additional wage cuts, offered to restore the joint research program. Management agreed, but the workers repudiated their leadership, went on strike, and formed an independent union. With a temporary upswing in the market for textiles, the strike was settled on the basis of no change in job assignments. But two years later, after a second strike, the workers, still on the basis of existing job assignments, accepted a pay cut of about 11 percent. Their level of pay might have been better preserved if the cooperative effort to adjust work assignments to a pattern approaching that prevailing in competitive firms had been carried through.

The leading historian of the Naumkeag experiment concludes his account with the observation that "... rarely have more difficult problems of cooperation presented

themselves than those that the Pequot management and labor union were forced to face due to the 'stretch out' and the dépression. It is clear, also, that rarely, if ever, have cooperative efforts of management and labor to serve to common good surpassed those of union-management cooperation at the Pequot Mills."¹⁴

JOINT COMMITTEES DURING WORLD WAR II

Although the United States was not irrevocably committed to participation in World War II until the attack on Pearl Harbor on December 7, 1941, a substantial defense program was begun 18 months earlier. By the spring of 1941, at the end of the first year of the defense program, about one-eight of our productive resources were being devoted to the output of war materials. When the defense effort began, substantial unemployment and unused plant capacity existed. For a time, therefore, it was possible simultaneously to expand defense production without curtailing the output of consumer goods. This period ended by late 1941 or early 1942. Thereafter, the strain on our productive capacity, which had been eroded by a decade of depression, was enormous. The output of war goods had to be accelerated at a time when large numbers of men and women were being withdrawn from the labor market to serve in the armed forces.

Clearly the war placed a high premium upon maximizing productivity in the use of resources. Experience with joint labor-management productivity committees during the two decades before the war evidently suggested that such committees could make a contribution to greater efficiency

in production. At any rate, on March 2, 1942, Donald Nelson, then chairman of the War Production Board, urged in a radio address that managers and workers in American industry set up " . . . joint management-labor committees to push production up to and beyond the President's goals."¹⁵

By and large, the War Production Board left the development of the plant committee program to the employers and unions concerned. The WPB did provide some general guidelines. The most important of these were that the committees were to deal with interferences to production and that undue strain should not be placed on individual workers; that committee activities should be separate from regular grievance procedures and collective bargaining functions; and that the choice of committee members on the labor side should be made by the recognized collective bargaining agents.

The two national trade union centers (the American Federation of Labor and the Congress of Industrial Organizations) and many of their affiliated unions generally endorsed the idea of joint labor-management production committees at the plant level. From the management side, endorsement came from the National Association of Manufacturers and the United States Chamber of Commerce. The NAM issued a manual for the use of its member companies; some national or international unions issued guides for the

use of their local organizations. But aside from general encouragement and some guidance materials from national organizations and from the government, individual employers and local unions were largely on their own in the formation and operation of joint committees. Committees were requested to register with the War Production Board, and this source provides some basic statistics on their number.

Altogether, about 5,000 committees in plants employing more than 7 million workers registered with the War Production Board.* The classification of these committees in terms of function was not highly precise. It is estimated that not more than one-fifth of the committees operated directly to increase production efficiency. A considerably larger number were concerned with a variety of problems that at least indirectly affected output, such as worker transportation (frequently a difficult problem in wartime), absenteeism, and safety. A substantial number confined their work to the conduct of wartime rallies, bond drives, blood donor campaigns, and similar activities. Perhaps as many as four or five hundred committees registered with the

* The figure of 5,000 indicates the total number of committees registered with the WPB during the war period; it does not show the number functioning at any one time. In July 1945, a check of the registration list indicated that about 3,200 committees were active at that time.

War Production Board but either never functioned at all or conducted only one patriotic rally.

The wartime joint committees were organized in a wide variety of industry groups, but there was marked concentration in shipbuilding, basic steel, ordnance, and other types of metal-working. As of September 15, 1944, about 76 percent of the committees and 89 percent of the workers were in unionized establishments.

Those committees, upwards of 1,000, that dealt directly with plant production problems were concerned with a wide range of activities that contribute to the more effective use of resources. These included the more efficient use of raw materials, and the reworking, recovery, or salvage of raw materials or of materials in process; product design; tool design; the use of idle or the fuller use of partly idle equipment; worker training; improvement in the maintenance and repair of equipment; product quality improvement; adjustment to changes in product-mix, technological innovations, and work assignments. Attention was often given, frequently through subcommittees, to such problems as absenteeism and safety that bear upon the efficiency with which production operations are conducted.

The leading historian of the wartime labor-management committees concludes that "While there were no precise measures of the effect of labor-management committees on

production, there was a substantial number of company officials and union officers who considered that the work had added to the quantity and quality of production and that it had increased the understanding of employers' problems and labor's concerns."¹⁶

Perhaps some emphasis should be given to the latter part of the above statement. As suggested earlier, experience does seem to indicate that successful joint committees do serve to improve the climate of industrial relations in addition to such direct productivity benefits as may result. The reason is the greater insight that union officials and workers gain into the problems of the enterprise, and the greater understanding that management achieves of the mood and concerns of the underlying work force. The joint committee, in other words, is not only a device for receiving and evaluating suggestions for improvements in production and in productivity-related conditions of work; it is also a means of developing mutual understanding between management and workers on wider problems of the enterprise as a viable concern. To the extent that this happens cannot be predetermined; it depends on the growth of trust and understanding between the parties and the use of the joint committee as a vehicle for communication between them.

This is not to say that successful joint committees

will eliminate conflict over terms and conditions of employment. But they may facilitate the collective bargaining process and, under the terms of collective agreements, minimize the number and seriousness of grievances that inevitably will arise. This in itself will contribute to a high level of performance in the enterprise and this, in turn, should be reflected favorably in its income and in the level of wages and employee benefits that it can sustain.

STATISTICS ON POSTWAR JOINT COMMITTEES

The available statistical data on the incidence of joint labor-management production committees during the years following World War II are not complete. These data are summarized below. Although they suggest a continuing interest in this form of cooperation, there clearly has been no large scale adoption thus far of the joint committee approach to greater efficiency in industry.

Most of the joint committees that were established during World War II were discontinued when wartime pressures ended. In January 1948, the Bureau of Labor Statistics sent mailed questionnaires to 3,023 plants to determine the status of joint committees which had been recorded by the War Production Board as functioning in July 1945.¹⁷ Of the 1,272 replies received, 944 provided usable information. Committees were reporting as still functioning in 287 plants, of which 223 were union and 64 nonunion. In the 657 plants that reported that joint committees had been discontinued, the reasons most commonly given were end of war, ineffectiveness, and lack of interest. It seems reasonable to assume that joint committees had been discontinued in most of the plants that failed to respond to the questionnaire or which provided unusable data.

Of the total of 287 active committees uncovered by the 1948 Bureau of Labor Statistics survey, 71 percent were in plants with fewer than 1,000 workers, including 67 percent of the 223 committees in union establishments.* It was reported that 77 percent of the active committees were concerned generally with production problems; a variety of other, and in many cases closely related, activities were also reported. Thus, 69 percent of the committees were reported to deal with improving work quality; 57 percent with the care of tools and equipment; 64 percent with absenteeism; and 84 percent with safety.

In appraising the results of the 1948 survey, it should be recalled that, at the outside, not more than 1,000 of the wartime joint committees registered with the War Production Board dealt primarily with problems of increased efficiency in production. The remainder were concerned with such matters as war bond drives, blood donor campaigns, worker transportation, absenteeism, and safety. Thus the survival into the early postwar years of almost 300 joint committees, most of which were reported to be concerned with production problems, is not unimpressive.

The next study that throws some light on the prevalence

*The size classification of 31 of the 287 plants, including 28 of the 223 union establishments, was unknown.

of joint union-management production committees was not made until the early 1960's, when the Bureau of Labor Statistics issued a study of union-management cooperation provisions in 1,773 major collective bargaining agreements in effect during 1963-64.¹⁸ A major agreement was defined as one covering 1,000 workers or more, and the Bureau's study related to virtually all agreements of this size in the United States, exclusive of those in the railroad and airline industries and in government.

Of the 1,773 major agreements, 450, about one-quarter, contained union-management cooperation provisions. Of the 450 agreements with such provisions, only 92 established labor-management committees, of which 44 dealt with production problems. Clearly the incidence of joint union-management production committees in major bargaining situations was rare in 1963-64, a finding which does not differ greatly from that of the 1948 study, where most of the joint committees were in plants with fewer than 1,000 workers.

At the request of the National Commission on Productivity and Work Quality, the Bureau of Labor Statistics conducted a new study of major collective bargaining agreements in effect on July 1, 1973, to determine the prevalence of joint productivity committees.¹⁹ The 1973 study, which also excluded railroads, airlines, and government, covered 1,311 major agreements. As the accompanying table shows,

64 of these agreements contained provisions for joint productivity committees. More than half of these provisions were found in primary metals agreements as a result of the 1971 negotiations between major steel producers and the United Steelworkers of America. The remainder were widely dispersed among manufacturing and nonmanufacturing industries. Again the conclusion is inescapable that joint union-management production committees are rare in major bargaining situations. The recent development in the basic steel industry is discussed at a later point.

It is no criticism of the Bureau's 1973 study of major collective bargaining agreements to point out that analysis confined to such agreements may fail fully to indicate the prevalence, at least in absolute terms, of joint labor-management productivity committees. For this there are several reasons, as outlined below.

1. A factor undoubtedly of very minor importance is that the 1973 study related only to major agreements in effect as of July 1, 1973. Several hundred major agreements, for technical or other reasons, were omitted from the analysis. Of somewhat greater importance, the study omitted major agreements in the railroad and airline industries and in government. Particularly in the Federal service, as shown at a later point, there has been a considerable development of joint committees in recent years.

Joint Productivity Committees in Major Collective
Bargaining Agreements,^{1/} by Industry, July 1, 1973

Industry	All agreements		Joint productivity committees	
	Agreements	Workers	Agreements	Workers
All industries-----	1,311	6,227,480	64	508,900
Manufacturing-----	716	3,308,750	55	480,950
Ordnance-----	14	37,550	-	-
Food-----	89	285,500	5	68,450
Tobacco-----	8	23,250	-	-
Textiles-----	11	32,350	-	-
Apparel-----	31	256,200	2	2,000
Lumber-----	7	11,050	-	-
Furniture-----	11	22,150	1	1,200
Paper-----	43	65,650	1	1,200
Printing and publishing-----	15	28,500	1	1,100
Chemicals-----	35	68,750	-	-
Petroleum refining-----	7	14,350	-	-
Rubber and plastics-----	15	78,800	1	1,150
Leather products-----	15	36,200	2	7,050
Stone, clay, and glass-----	31	79,900	-	-
Primary metals-----	90	504,900	37	368,800
Fabricated metals-----	34	90,850	-	-
Machinery-----	73	209,900	2	22,650
Electrical machinery-----	74	375,650	-	-
Transportation equipment-----	95	1,038,100	3	7,350
Instruments-----	12	24,150	-	-
Miscellaneous manufacturing-----	6	24,000	-	-
Nonmanufacturing-----	595	2,918,730	9	27,950
Mining, crude petroleum, and natural gas-----	13	101,500	3	6,550
Transportation ^{2/} -----	60	568,050	1	1,100
Communications-----	66	575,500	-	-
Utilities: electric and gas-----	48	125,100	1	1,600
Wholesale trade-----	16	26,150	-	-
Retail trade-----	82	312,730	-	-
Hotels and restaurants-----	34	137,350	-	-
Services ^{3/} -----	59	280,650	3	17,700
Construction-----	215	788,250	1	1,000
Miscellaneous nonmanufacturing-----	2	2,450	-	-

^{1/}Agreements covering 1,000 workers or more.

^{2/}Excludes railroads and airlines.

^{3/}Excludes government.

Source: U. S. Department of Labor
Bureau of Labor Statistics

2. Small agreements (those covering fewer than 1,000 workers) were not covered by the 1973 study. As indicated earlier, most of the wartime joint committees that survived into the early postwar years were in establishments with fewer than 1,000 employees. The Bureau states in its 1973 study that "Indications from union sources revealed that they [joint productivity committees] were also almost nonexistent in smaller bargaining units, that is, those applying to less than 1,000 workers."²⁰ The union sources are not identified; in any case, even a comprehensive check of central union opinion is not the same as a survey with reference to a particular type of collective bargaining provision.

3. For purposes of agreement provision studies, plans of the Scanlon type, which are described at a later point, apparently are not classified by the Bureau as a form of labor-management cooperation involving joint production committees. Such plans are viewed as plant-wide incentive schemes, which does identify one of their characteristics. This is a matter of classification. Scanlon-type plans are included within the scope of this report, for joint production committees form an integral part of the Scanlon approach to labor-management cooperation. Estimates as of 1968 show an appreciable number of Scanlon-type plans in operation.

4. Finally, an analysis of collective bargaining agreement

provisions obviously excludes nonunion situations. During World War II joint labor-management committees were established in a number of nonunion plants.²¹ It will be recalled that the 287 active joint committees reported by the Bureau of Labor Statistics in its 1948 study included 64 in nonunion plants. There appears to be no information on the extent to which, if at all, joint production committees are found in nonunion establishments at the present time.

The above considerations suggest that the number of joint production committees in American industry, including those of the Scanlon type, is somewhat greater than that disclosed by an analysis of major collective bargaining agreements. No basis exists for an assured estimate of the total number. There is no reason to believe, however, that the number is large. As of now, joint production committees are not widely used to promote efficiency in industry or the public service.

SOME POSTWAR EXPERIENCE WITH JOINT COMMITTEES

The postwar literature on joint production committees is not voluminous, and detailed studies, such as those relating to the Baltimore & Ohio Railroad and the Naumkeag Steam Cotton Company, appear to be lacking. A substantial amount of information is available on experience at the Tennessee Valley Authority, and Scanlon-type plans have received considerable attention. The results of recent field investigations of six plans by the Bureau of Labor Statistics are also available.

An effort is made in this section to draw together information from a variety of sources on at least some of the postwar joint committee developments in both the public and private sectors of the economy.

Joint Committees in Government Agencies

Tennessee Valley Authority. For more than 30 years, union-management productivity committees have functioned at the Tennessee Valley Authority, and this experience represents an outstanding example of cooperation in achieving higher production and better industrial relations. That the experience relates to a public enterprise with comparatively stable employment should not detract from its significance.

The primary functions of TVA, which was established in 1933, are flood control, navigation, the generation of electric power, and the agricultural and industrial development of the valley area. The agency at an early date decided to build its dams and other projects with its own forces. From the beginning, conflict over union recognition and collective bargaining was avoided. In 1937, 16 unions (AFL affiliated) with members on TVA jobs formed the Tennessee Valley Trades and Labor Council; the Council, which represented a majority of the blue-collar employees, was recognized by TVA as the bargaining agent for such workers. In 1943, the Salary Policy Employee Panel, made up of seven white-collar unions, including two independents, was recognized to represent most of the professional, clerical, and custodial employees at TVA. Today the Panel consists of three unions affiliated with the AFL-CIO and two independent associations.²²

In a 1935 management statement of an Employee Relationship Policy, the hope was expressed that eventually joint conferences could be established for "systematic employee-management cooperation." Local union leaders also were actively interested in the cooperative idea. Cooperation in employee training programs began at an early date. In 1942, TVA and the Trades and Labor Council set up a joint production committee, on an experimental basis, at a construction project. This venture was a success, and others followed on construction

projects, steam generating plants, chemical plants, engineering offices, and in various other facilities.

Article X of the general agreement between TVA and the Trades and Labor Council* reads as follows:

- "1. TVA and the Council, having recognized that cooperation between management and employees is indispensable to the accomplishment of the purposes for which TVA has been established, maintain and support a Central Joint Cooperative Committee and local joint cooperative committees as an effective means by which to foster such cooperation.
- "2. These cooperative committees give consideration to such matters as the elimination of waste; the conservation of materials, supplies, and energy; the improvement of quality of workmanship and services; the promotion of education and training; the correction of conditions making for misunderstandings; the encouragement of courtesy in the relations of employees with the public; the safeguarding of health; the prevention of hazards to life and property; and the strengthening of the morale of the service. The committees shall, however, not consider and act upon subjects or disputes the adjustment of which is provided for by Articles VI, VII, and VIII of this agreement (jurisdiction, grievances, wages).^{23/}

The essential feature of the TWA plan involves the use of union-management committees** at the plant, office, project, or departmental level to encourage, collect, and

* A similar clause exists in the agreement between TWA and the Salary Policy Employee Panel, which relates to white-collar workers.

** Within TVA, trades and labor cooperative groups are called "committees" and white-collar groups "conferences." The term "committees" is used in this report broadly to cover both.

consider suggestions for improving operations. Most committees meet once a month. Each committee has cochairmen, a secretary, and a number of union and management representatives. The secretary's job is described as ". . . a leadership position that is complex, demanding, and challenging,"²⁴ and his duties include, in effect, keeping in touch with, and stimulating, all phases of committee activity. The work of the local committees is coordinated by central policy committees of union and management representatives for the blue-collar and white-collar groups, respectively. For many years an annual valley-wide meeting has been held for representatives of the local union-management cooperative committees.

Suggestions for increased efficiency are sought from both workers and supervisory personnel. Ideas for the solution of stated problems are often solicited, and this "problem-solving" approach is said to yield excellent results. The volume of suggestions is impressive. In 1973, the blue-collar committees alone contributed 1,451 suggestions, or 13 suggestions for each 100 employees represented. Decisions regarding some suggestions may be made directly by representatives of the committees concerned. In other cases, the decision-maker may be outside the committee membership. In these instances, ". . . the management cochairman should refer the recommendations or expectations

of the group to those who can make the decisions. He should do this promptly, explaining to the decision makers the source of the idea or recommended action, reasons for the consensus, and nature of the discussion regarding it. If necessary he should keep after the decision makers until they reach a decision."²⁵

In addition to appraising suggestions dealing with efficiency on the job, or with such related matters as occupational health and safety, the committees also serve as avenues for information to employees about the overall TVA program and about the progress of local job projects, and to management about employee attitudes and morale. This two-way communication is considered one of the most important functions of the committee system.

The TVA director of personnel in 1965 observed of the work of the joint committees:

"Important as suggestions and solutions to specific problems are, the intangible values of cooperative committees are even more significant. As one employee put it, 'The cooperative program gives us a feeling of partnership.'

"Individuals, regardless of whether they are labor or management, come to know each other better. From sharing ideas and working together in the cooperative program, they come to understand each other's points of view. This understanding carries over into other areas of their work experience. It may well prevent grievances, and improve production and quality of work in general. It can even pave the way for smoother negotiations."^{26/}

Federal Agencies Other Than TVA. During the past ten or twelve years, union organization and collective bargaining have increased dramatically in the Federal service. In November 1971 there were 1,643 collective bargaining agreements in effect in Federal agencies. These agreements covered about 707,000 nonpostal employees.* The Bureau of Labor Statistics selected a sample from this universe for a study of collective bargaining provisions.²⁷ The sample consisted of all agreements covering 500 employees or more, plus one in every four agreements, arranged by size within agency, having fewer than 500 employees. The total sample included 671 agreements covering approximately 533,000 employees. The Departments of Army, Navy, and Air Force and the Veterans Administration accounted for seven-tenths of the agreements studied and for more than three-fourths of the workers covered.

Almost one-half—314—of the agreements studied provided for joint committees to improve labor-management cooperation generally or to deal with specific problems.²⁸ This was double the proportion of agreements with this type of provision found in a similar Bureau study in 1964. Excluded from the duties of these committees were the

* The Post Office is now a quasi-independent agency.

negotiation of agreements and the processing of grievances.

The joint committee provisions of some of the Federal agreements are quite specific with respect to the productivity function. One provision cited in the Bureau's study is from the agreement between the National Federation of Federal Employees, Local 1214, and the U. S. Army Training Center at Fort Jackson, S. C. The union in this instance agrees that it will cooperate to

" . . . assure a full day's work on the part of all employees in the unit, and that it will actively seek to combat absenteeism, carelessness, inefficiency and other practices which may restrict production and hamper efficiency. NFFE 1214 further agrees to actively support the employer in efforts to eliminate waste, conserve materials and supplies, improve the quality of workmanship, encourage the submission of improvement and cost-reduction suggestions, improve the unit safety program, and improve relations within the community."29/

An agreement between the American Federation of Government Employees and the Assay Office of the Treasury Department in New York City includes among the functions of the joint labor-management committee a number calculated to contribute directly or indirectly to improved productivity. These include the elimination of waste and the conservation of materials and supplies; the promotion of education and training; the correction of conditions making for grievances and misunderstanding; the improvement of working conditions; and the safeguarding of health and the

prevention of hazards to life and property.³⁰ The functions of some of the joint committees are stated in quite general terms. For example, the agreement between the International Brotherhood of Electrical Workers and the Rio Grande Project of the Department of the Interior, Bureau of Reclamation, El Paso, Texas, simply states that the committee ". . . shall have the prerogative of recommending improvements in efficiency and employment conditions . . ." ³¹

Little appears to be known as yet about the performance of these joint labor-management committees in the Federal service. This performance, in all probability, is diverse. Many of the committees, after all, have been in existence for a comparatively short time, and there must be wide variation in the maturity, understanding, imagination, and drive that determines the effectiveness of their work. But the spread of the joint committee idea in a wide range of Federal agencies has considerable potential, judging by TVA experience, for improvement in efficiency and morale in the Federal service.

Municipal Agencies. In 1970 the Bureau of Labor Statistics studied 286 collective bargaining agreements and related documents covering 613,490 municipal workers in 39 cities having populations of 250,000 or more.³² The

bulk of these agreements (184 covering 490,448 employees) had been negotiated by unions affiliated with the AFL-CIO, and the remainder by unaffiliated unions and associations.* As in the case of the Federal service, union organization and collective bargaining have increased markedly in State and local governmental units in recent years.

A substantial number of the agreements studied by the Bureau of Labor Statistics provided for the creation of joint committees. General labor-management committees were provided for by 19 percent of the agreements. These general committees were set up to provide a forum for the discussion of any problems of common interest outside the grievance procedure. They were not specifically oriented toward the question of increased efficiency in the operation of municipal services, although conceivably problems in that area could be placed on committee agendas.

Provisions for joint committees to deal with a variety of specific issues were also found in some municipal agreements. Twelve percent of the agreements, for example, provided for joint safety committees, and a few joint committees were established to deal with such matters as apprenticeship training, job evaluation, and health insurance.

* In two cases, the agreements represented the combined negotiations of AFL-CIO and independent unions.

As cost pressures on municipalities grow, and as the need to achieve greater efficiency in the delivery of municipal services increases, the potentialities of labor-management cooperation to enhance productivity may receive explicit attention. The fact that an appreciable number of joint labor-management committees have been established in collective bargaining contracts with municipal agencies, either for general or specific purposes, may provide experience that can be carried over to consideration of cost-saving ideas from rank and file workers and management personnel. This will not happen automatically. The rationale for this type of cooperation, and procedures for its implementation, must be worked out carefully by the responsible administrators and the unions concerned.

Joint Committees Under the Scanlon Plan

A most interesting postwar development in the use of joint production committees is associated with the name of Joseph N. Scanlon, who in the late 1930's conceived a plan for reducing costs in a small steel mill where he was a union representative. He was subsequently moved to the national office of the United Steelworkers of America, where he became Director of Research and Engineering. There, in his own words, he had ". . . the job of going out and organizing plans for Union-Management Cooperation

for the purpose of saving the various firms in the steel industry whose survival was threatened, and likewise the jobs of the union people working for those firms . . . It was necessary for these firms and these local unions to meet a common threat, and that common threat was their competitor, whether he be in Europe, in England or in the United States, who was able to make a better product cheaper. Under these circumstances everybody wanted to help. Resistance to change was minimized."³³ Mr. Scanlon later left the Steelworkers, joined the staff of the Massachusetts Institute of Technology, and devoted the remainder of his life to the promotion of the type of labor-management cooperation with which his name is identified.

The basic approach of the Scanlon plan to union-management cooperation is that an articulated sense of partnership between workers and management is required to achieve and sustain the production goals of an enterprise. The emphasis is upon teamwork and information-sharing. This means high effectiveness in work performance and supervision, suggestions for greater efficiency from both workers and management, and the provision generally by management of information on such matters as production problems, conditions in the product market, and proposed changes in technology. The essential idea is that the success of an enterprise depends upon genuine participation on the part of all of those involved

in its operation.³⁴

Motivation for participation is sought in two ways. The first is through a plant-wide incentive scheme. It is important to note that there is no place in the Scanlon plan for individual or small group incentive arrangements, since the plan is based on the belief that efficiency depends on effective cooperation throughout an organization. The incentive formula involves the computation of the ratio of payroll to the sales value of production in a base period. Where, as is often the case, the incentive plan covers management personnel as well as rank and file workers, supervisory payroll is included in computing the ratio of payroll to sales. In those months in which the payroll to sales ratio falls below the ratio in the base period, the labor cost savings are available for distribution in the form of bonuses, after provision for a reserve to protect the company against possible deficit months. The major share (usually three-fourths) of the saving in labor costs goes to employees. The bonus formula may require adjustment from time to time to reflect changes in such factors as prices, wages, inventories, technology, and product mix.³⁵

Participation is also sought through a system of joint committees to receive and evaluate suggestions for greater efficiency in production. In Scanlon-type plans, committees usually are established on a departmental basis, with a

higher level committee (usually called a screening committee) to consider suggestions that affect more than one department or that involve expenditures beyond a given amount. Ideas are sought from both rank and file employees and supervisory personnel. A major difference between the Scanlon plan and other forms of labor-management cooperation involving joint committees is that the former provides a direct financial incentive for employees to perform efficiently and to make cost-saving suggestions. Management retains the right to accept or reject suggestions. The screening committee may be a vehicle for discussion of overall company goals, its competitive position in the product market, technological developments, and other factors affecting the enterprise as a going concern.

The number of firms utilizing plans of the Scanlon type is not known with any precision. In 1968 two leading proponents of the plan estimated that plans were in operation in from 120 to 130 situations and that, ". . . in addition to these situations that are definitely known to us, evidence suggests that there probably are anywhere from 300 to 500 situations in the United States and Canada employing some version of a Scanlon-type plan."³⁶ For the most part, Scanlon installations have been in relatively small plants, defined roughly as those employing not more than 1,000 workers.

The proponents of the Scanlon plan have been insistent upon the need for careful preparation in its introduction; in particular, they insist upon a reasoned acceptance by both management and employees of a belief in cooperation as a means to lower costs, and the existence of a large measure of mutual confidence between the two parties. On the workers' side, this means that local union officials must be convinced of the soundness of the plan and willing to take responsibility for promoting the cooperative idea among the union rank and file. On the management side, top officials must take positive steps to foster acceptance of the cooperative idea at all levels of supervision, and to be willing to share information on company prospects and problems that often is not available to the underlying work force.

Successful Scanlon plan installations evidently have had beneficial effects on productivity through improved work performance, better supervision, useful labor-saving suggestions, greater willingness among workers to accept technological change, greater interest in quality of workmanship, and more flexible administration of collective bargaining agreements. Some installations have failed to achieve anticipated results. In all cases, as with any social invention, interest must be sustained, and from time to time problems and difficulties will present themselves. A slow-down in business activity is likely to present a

particular challenge, for in such a period incentive bonuses may not be earned, layoffs may occur, and labor-saving suggestions may dry up. The construction of a satisfactory bonus formula, and its adjustment to basic changes in the firm's situation, may also prove a source of difficulty.³⁷

BLS Field Investigations of Joint Committees in Six Situations

It will be recalled that in its 1963-64 study of major collective bargaining agreements, the Bureau of Labor Statistics found 44 agreements with provisions for joint production committees. The Bureau reexamined the agreements in these 44 situations in October 1972. Provision for joint committees had been dropped in 22 cases. In an additional 14 situations, the contract language was weak; that is, the language was sufficiently broad to allow for discussion of production problems, but there was no specific authority for the committees to seek solutions. Of the remaining 8 contracts, 3 had been negotiated at TVA. From the remaining 5 contracts in the private sector, plus the 22 which had dropped provisions for joint committees, six were chosen for Bureau field visits. These visits were conducted during the spring and summer of 1973, and were designed to determine reasons for the success or failure of these joint committees.

The situations selected for field visits were (1) an association of firms manufacturing ladies' fashion accessories;

(2) an association of wholesale bakeries in a three-county metropolitan area; (3) a multiemployer agreement covering bindery workers in printing establishments in a major city; (4) an association agreement covering restaurant workers in a metropolitan area; (5) a rubber products manufacturing plant; and (6) an independent basic steel producer.* It will be noticed that four of the six situations for which field visits were made involved multiemployer agreements. This is not a bar to successful joint committee action, especially if attention is focused on one or several problems that cut across employer lines. But the history of joint labor-management production committees seems to indicate that their chances of success are greatest if they grow out of the needs and convictions of individual firms and the unions with which they deal.

In the six situations subject to field visit, the Bureau comments that "It became clear very early in the interviews that committees were not really needed in all instances where they had been negotiated. Either no real productivity issue existed, or its place in the order of priorities was so low that it made the committee stillborn."³⁹ The Bureau's findings in each of the six situations are summarized below.

* The steel committee studied antedated those established by the 1971 basic steel agreement.

(1) Ladies Fashion Accessories. In the case of the ladies fashion accessories association, a joint production committee provision had been incorporated in the agreement since 1951. No effort apparently had ever been made to implement the provision, and no one on the current union or employer association staffs was present when the clause was negotiated. It had simply been carried over from one agreement to the next. The industry operates today much as it did three or four decades ago, essentially on a handicraft basis. The union representatives stated that their advice on productivity had never been sought.⁴⁰

(2) Independent Wholesale Bakeries. In the independent wholesale bakeries case, an "Industry-Union Committee" was established in 1962 on an industry basis in a three-county metropolitan area. Joint committees at the individual company level were not provided for. Impetus for the formation of the industry-wide committee came from the deteriorating competitive position of the independent as against the captive (those owned by supermarkets) bakeries. Problems of product distribution appear to have been more pressing than those of production. The broad mandate of the committee was to "... study problems affecting the industry, find solutions to these problems, if possible, and consider methods and procedures of implementing the findings ..."

Initially, bimonthly luncheon meetings, attended by

large numbers of union and management representatives, were held. Both parties eventually concluded that this arrangement was unwieldy and "... was unsatisfactory in facing common problems because neither party was yet ready to reach an understanding of what the common problems were. Management was concerned about distribution costs and the impact upon the economic health of the industry; the union was concerned with time stops, book work, and internal industry policies which affected their membership."⁴¹ Some issues that arose should have been resolved at the plant level by local union and management officials. In any event, the bimonthly meetings lapsed. In 1964, the contract language was revised to provide for a smaller committee and for meetings to be held on call. The revised committee was never activated.

In 1967, with the distribution problem becoming more acute, the research director for the bakery workers' joint council (nine local unions were involved) concluded that a study was needed of its nature and dimensions. The companies had forced the issue by proposing that the commission system of payment for driver-salesmen be abandoned. The new agreement modified the 1964 provision by providing for a joint union-management committee restricted to a single issue: "... studying and investigating the economics and efficiencies of the current distribution methods in the baking industry ..."

After some delay, the parties created a study trust fund, and in 1968 a grant was awarded to a faculty member at a local university to analyze product distribution in the wholesale bakery industry in the three-county market. The study was completed in the spring of 1970. It was well received by management, but with deep reservations by the union officials, at least partly in response to rank and file pressure.⁴¹ The study was not used effectively in the 1970 negotiations, which in effect maintained the status quo on commission payments and other conditions for driver-salesmen. The committee was inactive at the time of the Bureau's interviews. The Bureau reported that "The companies, anxious to resolve the issue of driver-salesmen, are willing to use negotiations, the intercession of a third party, or the committee. The union now recognizes that the seriousness of the situation is growing, and that something must be done. However, it does not consider the joint committee to be the proper vehicle for working out solutions."⁴²

(3) Bindery Workers. The provision for joint committees in the print shops and binderies in a major city grew out of the problem of the proper manning on automatic bindery machines. This was in part a highly technical problem, depending upon the nature of the equipment and size of the inserts into the machines, and partly reflected employer concern for greater flexibility in manning to remain

competitive in bidding for various jobs.

As a means of dissipating pressures at the bargaining table, management in the 1961 negotiations proposed joint committees to deal with the manning problem. The union agreed. Committees were established on a company basis (approximately 100 firms were under the agreement), with the size of the committee varying from shop to shop. At the largest company, the committee consisted of about 10 union and 9 management representatives. Small shops had two-man committees.

As a practical matter, the committees have been most significant in the larger firms. The Bureau of Labor Statistics reports that, in addition to manning, "Productivity-related matters and items concerned with the labor-management relationship also came up."⁴³ According to the chief management spokesman, industrial relations improvements have far outweighed any improvements in productivity, although some ". . . improvements in efficiency, quality and costs" have grown out of the committee work.⁴⁴ It can be argued, of course, that improved industrial relations in itself contributes to favorable productivity experience. The chief union spokesman felt ". . . that the committees had worked well until recent years . . ." ⁴⁵ He believed that they presently functioned largely as conciliation committees, since much responsibility for resolving manning

disputes had been delegated to shop foremen and union chapel chairmen. It seems clear that, on the whole, joint committees have played a constructive role in this somewhat specialized production and industrial relations situation.

(4) Metropolitan Restaurant Owners. In 1959, the Hotel and Restaurant Employees and Bartenders International Union, through its local joint executive board (comprising six local unions), signed a 5-year agreement with the Metropolitan Restaurant Association in a major metropolitan area. One provision was for the establishment of a labor-management committee for discussion of any general problems that might arise without the union invoking the grievance procedure or taking any other action. A second agreement in the area, covering nonmembers of the employers' association, did not contain this provision.

Apparently few meetings of the joint committee were held during the term of the 1959 agreement, and these do not appear to have been related directly to productivity. In the meantime, several developments, at least experimental in nature, were taking place among some of the employers in the industry. These included use of the microwave oven, the cooking and freezing of full meals at central locations, and the centralized cutting of meat. Employers and the union differed on the impact of these developments, the union fearing that kitchen employment might be seriously affected.

When the contract with the Metropolitan Restaurant Association was renegotiated in 1964, the union proposed a study of automation and employee displacement. The employers' association accepted this proposal, and the labor-management committee clause was modified to provide for such a study as one of its functions. A similar provision was inserted in the agreement covering nonmembers of the employers' association. These clauses were renewed without change in the two agreements running from 1969 to 1972 and again in contracts negotiated in 1972.

At no time, however, has a study been inaugurated and none had been planned at the time of the interviews by Bureau of Labor Statistics staff. The employers feel that an employment displacement problem does not exist and that a study is unnecessary. The union view is different; it believes that there have been job losses, especially for butchers, pastry cooks, and vegetable cooks. The union is determined that a study eventually will be made, but its immediate priority is organizing a nonunion segment of the restaurant industry that has emerged in the area. Funds are not presently available for a study. The Bureau reports that "The union doubts that employers would finance the study because they do not feel it is important. Nor does the union have funds to finance a study for two reasons. First, it has been losing membership as a result of the job shrinkage, in part

from the use of pre-prepared foods in restaurant kitchens. Second, it has been allocating available funds to organizing projects."⁴⁶

Clearly the joint committee in this situation has had little if any significance. It has been largely inactive. It is possible that the contemplated study of technological change and its impact on employment in the industry eventually will be made, and conditions conceivably could arise that would make the committee a useful instrument for considering productivity and related problems.

(5) Rubber Products Plant. The plant involved is one of four of a subsidiary of a large corporation engaged in rubber manufacturing. Collective bargaining rights were won by the United Rubber Workers in the early 1930's, and currently about 2,600 workers are in the bargaining unit. The bargaining relationship has been good during the postwar years, but strains began to appear in 1969-70.

In 1943, at the suggestion of the War Production Board, the parties agreed to establish a joint labor-management production committee. After the war, with suitable modifications in language, the clause was continued. It contained a general provision to the effect that the committee shall concern itself with "Improving employee relations and increasing operating efficiency by prompting cooperation in effectuating economy moves . . ." This

language remains in the 1973 agreement. Other functions presently include participation in community affairs and involvement in plant safety and sanitation matters. Until 1970, the contract called for monthly meetings of the committee; bimonthly meetings are now provided for. The committee originally consisted of only three members each from the union and management, but the number has now increased.

For many years meetings were regularly held. Until recent years, management typically would present a "state of the plant" report, consisting of comments on sales, costs, capital expenditures, and future prospects. After carryover items had been discussed, each committee member would be given an opportunity to bring up new items. As a rule, these involved relatively minor suggestions, although they may have had considerable cumulative importance. Some related directly to factors affecting productivity, while others were of the plant housekeeping variety. Minutes were kept by management. The results of the committee sessions were disseminated to all employees.

Beginning about 1969, the climate within which the joint committee functioned appeared to deteriorate from tensions that had developed on both the management and union sides. According to management, worthwhile suggestions ceased to be made. The union charged, on the contrary, that management failed to recognize and accept useful ideas,

and refused to make small expenditures suggested by committee members that could have led to major savings for the company. Management contended that factionalism within the union inhibited the union leadership from supporting changes, such as tightening loose incentive rates, that would favorably affect the plant's cost situation, and that the rank and file workers, having never experienced a major layoff, were not deeply concerned about the plant's competitive position. In this atmosphere, joint committee meetings became less frequent. No meetings were held for several months before the 1973 contract negotiations, and meetings had not been resumed by the time of the Bureau of Labor Statistics interviews.

The Bureau reports that "The committee, therefore, finds itself at a standstill. It has worked in the past handling minor productivity matters and employee relations items (i.e., items having an impact on employee morale and attitudes towards management and work). But strains on the relationship involving fundamental changes in the contract, union resistance, and alleged actions of a new personnel manager, have caused the committee to cease to function, at least temporarily, as of August 1973."⁴⁷ This situation may indeed be temporary. The joint committee apparently functioned with reasonable success for many years, and the Bureau's report indicates that neither the union nor

management is ready to abandon it.⁴⁸ A change in the plant's industrial relations climate, or a worsening of its competitive position, may lead to the committee's revival.

(6) Basic Steel Plant. In 1959 the company concerned was an independent producer of a variety of steel products. Its facilities included open hearth furnaces, blast furnaces, a sintering plant, coke ovens, a number of mills, and a railroad operating within the plant gates. More than 3,000 workers were covered by an agreement with several local unions affiliated in a joint council with the United Steelworkers of America. Relations between the union and the company in 1959 were described as good, and one of the basic issues in the prolonged steel strike of that year—local working conditions and the rules for their modification under Section 2-B of the contract—apparently was not a problem. The company indicated that it would have no objection to the continuation of the clause in its new agreement, and the workers at the plant did not participate in the strike.

The plant management was somewhat apprehensive, in relation to its competitive position, of the post-strike reaction of the major producers to its continued production during the general stoppage. It felt that it might be advisable to strengthen its relationship with the international union, and that a closer relationship with the joint council

and its locals in the plant might help it to improve productivity and to ease those strains in the relationship caused by an unusually high number of grievances."⁴⁹ The company therefore proposed the creation of a joint union-management committee on plant productivity problems and to strengthen relationships between the parties. With union agreement, a joint committee was formed consisting of 9 members from each party. Its first meeting was held in December 1959.

The contract called for monthly committee meetings. In practice, the committee met on call by either party over the years, and met much less frequently as time passed. The tendency toward fewer meetings was explained by union representatives as due to the novelty of the committee being replaced by an understanding of the kind of situations in which it could best function. Management representatives, none of whom had been with the company when the committee was functioning, stated that the company tended to avoid meetings in later years because they had developed into gripe sessions. In 1968, in fact, the company proposed that the joint committee provision be removed from the contract. The union refused to agree. The clause was finally deleted in 1971, with the adoption of the provision for joint productivity committees agreed to by the United Steelworkers and the major steel companies. By this time,

the company, due to financial difficulties, had merged with one of the major companies in the industry.

At least during the early years, the joint committee appears to have played a constructive role on a variety of issues relating to productivity. These include the use of lead men, training for craftsmen in the maintenance of new equipment, product quality problems involving inspection and shipping, and the conversion of various plant operations from time to incentive rates of pay. It also dealt with plant housekeeping problems of various kinds.

The parties differed markedly in their evaluation of the joint committee experience in 1973 interviews with the Bureau of Labor Statistics. The management view was decidedly negative. This may reflect the fact that none of the management personnel interviewed actually had participated to any great extent in committee activities, and to a shift to an arms-length industrial relations policy. On the other hand, union representatives took the view that the committee was worthwhile, although conceding that it did not continue to operate at a high level of activity or resolve all of the issues before it.

General Observations. The Bureau of Labor Statistics, in its general report on the six studies summarized above, makes a number of points that are worth emphasis.

1. Joint committees really were not needed in several of the situations studied.

2. Where a measure of success was found, the joint committees did not deal exclusively with productivity matters. The Bureau reports that "without exception, the successful committees were used as". . . a means of discussing matters not covered by the contract that were bothering employees and a means of by-passing time-consuming lower managerial echelons to get speedy decisions from management levels that were empowered to make them. To the company, the advantage was in resolving minor problems before they mushroomed into major labor relations issues. In some committees, in fact, the industrial relations benefits were greater than the productivity benefits, a result not necessarily detrimental to productivity goals . . . "50

3. Key management and union official play a crucial role in determining whether joint committee operations will prove useful. In the three situations studied by the Bureau where committees enjoyed a measure of success, ". . . leadership from both sides was determined to make the committees work. Their enthusiasms were transmitted to their subordinates, and the committees functioned well."51

4. Good communication with rank and file workers on joint committee activities is essential to allay ". . . underlying fears among employees that the committees might be working them right right out of jobs."52 It is reported that both management and union representatives

"... recognized that requests for rank and file cooperation had to be timed, dependent upon the mood of employees and how they felt matters were going in the plant."⁵³ Management officials invariably expressed the opinion that their union counterparts had an awareness of company problems, but that internal union politics played an inhibiting role in reaching agreement on solutions.

5. The existence of good labor-management relations at the initiation of a joint committee program is important in helping "... a committee to survive that early period of adjustment where parties determine what the committee can and cannot do."⁵⁴ On the other hand, union or management leadership changes, if they result in strains to the collective bargaining relationship, can adversely affect, or even destroy, the work of a joint committee.

6. At least in some instances, increasing inactivity can be taken as a measure of joint committee success. The Bureau points out that " During the first rush of enthusiasm, committee meetings could be held frequently as problems were shared and worked out. As time passed, this frequency dropped not because the committee was failing, but because the problems which had accumulated preceding the formation of the committee had been brought before it and resolved. Subsequently, new problems would be taken care of as they came up, necessitating fewer meetings."⁵⁵

7. Except for one of the six committees studied by the BIS, all functioned in areas not subject to collective bargaining. Thus, "Committees could discuss maintenance and repair of equipment and the workplace, improvements in physical working conditions, and the development of ways of making work easier or more efficient. But if any of these areas affected compensation or workload, then they were to be considered negotiable items outside committee jurisdiction. The one committee which permitted discussion of negotiable items required changes to be ratified by the rank and file."⁵⁶

Joint Committees in Basic Steel

An important development in labor-management cooperation occurred in 1971 when the United Steelworkers of America and the major basic steel companies agreed to establish a joint advisory committee at each plant of the signatory companies to devise ways of improving productivity and promoting the use of domestic steel. With minor changes, the provision for joint committees was carried over into the three-year collective bargaining contract reached in May 1974.

The 1974 agreement states that "The parties recognize that for their joint benefit increases in wages and benefits

should be consistent with the long term prosperity and efficiency of the steel industry," and that ". . . the future for the industry in terms of employment security and return on substantial capital expenditures will rest heavily upon the ability of the parties to work cooperatively to achieve significantly higher productivity trends than have occurred in the recent past." The agreement also points to ". . . the impact upon the industry and its employees of the sizable penetration of the domestic steel market by foreign producers," and notes the joint efforts of the parties ". . . in seeking relief from the problems of massive importation of foreign steel manufactured in low-wage countries."

The agreement provides for an eight-member joint advisory Committee on Employment Security and Plant Productivity at each plant in the industry, with meetings to be held at least once a month. The functions of the committees ". . . shall be to advise with plant management concerning ways and means of improving productivity and developing recommendations for stimulating its growth so as to promote the purpose of the parties as set forth above and also promote orderly and peaceful relations with the employees, to achieve uninterrupted operations in the plants, to promote the use of domestic steel and to

achieve the desired prosperity and progress of the Company and its employees." It is specified that the functioning of the plant committees shall not affect the existing rights of either party under any other provision of the collective bargaining agreement;

The contract provision for joint committees at the plant level was accompanied by a Memorandum of Understanding which provides for the establishment of an overall Industry-Union Employment Security and Plant Productivity Committee. In effect, this is a joint industry-wide coordinating committee to review matters relating to improving productivity and advise with the plant committees. The Industry-Union Committee is authorized to convene meetings on an industry, company, or regional basis for the purpose of (1) assuring continuity in accomplishing objectives; (2) reviewing matters of administration; (3) disseminating information relative to improving productivity; and (4) reporting outstanding plant achievements on productivity.

The Memorandum of Understanding also outlines the subjects appropriate for consideration by the individual plant committees. These matters may include "... maximizing use of production time and facilities; reducing equipment breakdowns and delays; improving quality; reducing need for reprocessing products; eliminating waste of materials,

supplies and equipment; reducing excessive overtime; boosting employee morale; improving safety experience; and focusing employee awareness on the problems of productivity and those posed by the threat of foreign competition."

In 1974, about 230 individual plant joint productivity committees were in operation, according to the Officers' Report to the 17th Constitutional Convention of the United Steelworkers. Little is known in detail of the work of these committees. Since the program is comparatively new, dating only from 1971, progress undoubtedly varies considerably from plant to plant. This is suggested in an address in 1973 by Mr. Bruce Thrasher, Assistant to the President of the United Steelworkers, and a key figure on the union side in the operation of the joint committee program.⁵⁷ Mr. Thrasher reported that "The progress has been good. But as might be expected in any program, the progress ranges from good to bad. Some locations have shown excellent progress as a result of full cooperation. In other locations we have little or no progress due to indifference of the parties at the plant level, lack of cooperation, and in some cases an outright refusal to meet to discuss the problems."

As an outstanding example of the success of the program, Mr. Thrasher pointed to experience at the tube mill of the

Fontana, California, works of the Kaiser Steel Corporation, where productivity over a six-month period was increased by 32 percent. This dramatic improvement, according to Mr. Thrasher, restored the competitive position of the plant which had deteriorated to the point at which its continued operation was threatened.

Joint Committees in Retail Food and Trucking Industries

Union-management committees recently have been established at the national level in the retail food and interstate trucking industries. These are not joint productivity committees in the narrow sense of the term. They are oriented more toward the achievement of a greater measure of accommodation in the collective bargaining process. No provision is made for joint committees at lower levels within the structures of the two industries. The terms of reference for the two national committees is broad enough to include productivity questions, and it is possible that significant attention will be given to such issues.

The formation of the Joint Labor-Management Committee of the Retail Food Industry was announced on April 12, 1974, by executives of a number of the largest retail food chains and the principal officers of three major unions in the industry.⁶⁰ The establishment of the Committee was the

outgrowth of a series of discussions between industry and union officials and representatives of the Cost of Living Council and the Federal Mediation Service. The Committee has a neutral chairman. It presently represents in the neighborhood of 40 percent of the country's retail food industry.

Among the agreed-upon items that the Committee will consider are two that bear directly on productivity--(1) technological change and (2) management and union work practices. In a broader sense, other items calculated to improve the collective bargaining function may well have productivity implications. The Committee plans to hold meetings once a month in different parts of the country. These will be two-day sessions, the first devoted to the business of the Committee and the second to discussions with regional labor and management representatives.

With respect to trucking, the current contract between the International Brotherhood of Teamsters and interstate trucking firms (the National Master Freight agreement) makes provision for a Committee on Industry Operations. The Committee is composed of equal numbers of members from the industry and each union conference area. Its purpose, as set forth in Article 20 of the agreement, is to ". . . investigate and make recommendations to the

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National Grievance Committee on a quarterly basis designed to eliminate operational inefficiencies" and to "... advise the Joint National Negotiating Committee of specific recommendations to achieve operational efficiencies as well as steady growth in the Motor Carrier Industry in writing six (6) months prior to the expiration of the current agreement."

JOINT COMMITTEES AND THE INDUSTRIAL RELATIONS
SYSTEM

There is nothing in the American system of industrial relations that precludes the use of joint labor-management committees to increase productivity. This form of cooperation in industry, where it exists, is negotiated by the union and management officials concerned. The collective bargaining agreement can express, in whatever detail may be desired, the structure and functions of the joint committee arrangement.

The responsibility of management for the efficient conduct of work is not impaired by the existence of joint productivity committees. Such committees typically are advisory rather than decision-making bodies. The exceptions occur where the parties agree that decisions on a particular issue, or even a range of issues, can best be made jointly.

The case for positive efforts toward labor-management cooperation in production, as stated by its proponents, was outlined in the first section of this report. It is, on its face, a powerful case. Labor and management do have strong mutual interests, in terms of job security, wage and salary incomes and related benefits, and

satisfactory profit levels, in the survival and growth of the enterprises with which they are associated. There are a number of keys to survival and growth, and one surely is efficiency in the use of technology and labor in the production process. Efficiency requires good supervision, but supervision itself may not be enough unless high productivity is an acceptable goal to the underlying work force. It is here that a positive program of labor-management cooperation may play a significant role. Joint productivity committees, where the foundation for their work has been carefully prepared, are calculated to stimulate performance on the job and to tap ideas for improving output that often are possessed by rank and file workers.

An institutionalized program of labor-management cooperation may contribute to efficiency if it provides workers with a genuine sense of participation in the work of the enterprise. There is considerable evidence, in part from the experience of successful joint production committees, that many workers find deep satisfaction in good job performance and need only encouragement to help devise more efficient procedures. Recent evidence is provided by a general survey of worker attitudes conducted by the University of Michigan's Survey Research Center. In response to an open ended question regarding their single biggest on-the-job problem, ". . . most workers answered in

terms of obstacles to getting their work done. Further, the survey showed high correlations between the content of jobs (for example, workers' concern with resource adequacy, autonomy, challenge, and so on) and workers' job satisfaction. These findings, along with the results of other research and experimentation, suggest that workers often have considerable motivation oriented toward productivity or achievement. The community of interest between labor and management implied by this kind of worker motivation has gone largely untapped."⁵⁸

In view of these considerations, an obvious question is why, over half a century, formal procedures for labor-management cooperation, such as joint productivity committees, have made comparatively little progress? There is no simple answer. It may, in part, reflect the effect of the great depression of the 1930's, which stifled some promising beginnings that had been made during the preceding decade. On the other hand, the wartime joint committee development did not carry over strongly into the postwar period, perhaps because it seemed largely unnecessary in view of the reasonably continuous expansion in the economy and the lack, in many branches of industry, of powerful cost and competitive pressures.

But there is more to it than this. If there is nothing in our system of labor-management relations that

precludes the use of joint production committees, there clearly are inhibiting factors. Curs is essentially an adversary system. It works reasonably well, and in most situations the parties, through mutual accommodation, are able to achieve satisfactory relations. It is necessary to recognize, however, differences of interest between management and union officials, and sometimes between the latter and their rank and file. The differences between these three sides of the industrial relations triangle are ". . . rooted deeply in the objectives, responsibilities, functions, and traditions of each . . . and from a difference in economic and social status to preserve or improve which the parties have developed different ways of life, supported by different philosophies, folklore, symbols, slogans, and codes."⁵⁹

In overly simple terms, management may be reluctant to embark upon a formal program of union-management cooperation for fear that such a program will in some way affect its managerial authority. Union officials may look upon the achievement of higher levels of output as purely a management function. The union rank and file may be concerned about the effect of higher productivity on employment, and may feel that a cooperative program might dampen the effectiveness of its leadership in collective

bargaining and the processing of grievances.

These factors are real, and they show why a labor-management cooperation program requires careful preparation in its introduction and certain conditions for its success. Among the latter are strength and maturity in the collective bargaining relationship and stability in union and management leadership. The responsible union and management officials obviously must be convinced of the usefulness of a cooperative program. Certainly of critical importance is support from the union rank and file. Unless the firm is facing survival problems, this support may require assurance that the job of incumbents will not be adversely affected by the program. But positive advantages clearly should be stressed. One is the opportunity that should be offered by the program for wider worker participation and recognition in the production process; another is the long-term relationship between gains in productivity, job security, better conditions of work, and higher real incomes.

The wider use of carefully devised joint productivity committee programs depends largely upon the parties directly concerned. In the private sector, government or other outside agencies can provide encouragement and perhaps some expert advice and guidance. But the parties must be convinced that it is to their advantage to act, and that the potential gains in productivity, and also, very often,

in the climate of industrial relations will make the effort worthwhile.

There are some factors in our present situation that may serve to heighten interest in labor-management cooperation in production. These include the maturity that now characterizes collective bargaining relationships in many segments of the economy; growing recognition of the fact that workers, with proper motivation, can often significantly increase their contribution to production; cost pressures in both the private and public sectors of the economy; and broader recognition of the role that productivity can play in dampening the current inflation and in providing the basis for continuing gains in living standards for the population as a whole.

FOOTNOTES

- ¹W. Duane Evans, "Productivity and Human Relations," American Economic Review, May 1947, pp. 418-419.
- ²Sumner H. Slichter, James J. Healy, and E. Robert Livernash, The Impact of Collective Bargaining on Management (Washington, D. C.: The Brookings Institution, 1960), p. 841.
- ³Clinton S. Golden and Harold J. Rutenberg, The Dynamics of Industrial Democracy (New York: Harper & Brothers, 1942), chap. 8.
- ⁴Harold W. Davey, "Union-Management Cooperation Revisited," Business Perspectives, Winter 1968, p. 5.
- ⁵With reference particularly to prewar union-management cooperation in the needle trades, see Sumner H. Slichter, Union Policies and Industrial Management (Washington, D. C.: The Brookings Institution, 1941), chaps. 14 and 17; and Kurt Braun, Union-Management Cooperation: Experience in the Clothing Industry (Washington, D. C.: The Brookings Institution, 1947), chap. 9. For a general discussion of expert help to management by unions, see Slichter, Healy, and Livernash, op. cit., pp. 846-851.
- ⁶See U. S. Bureau of Labor Statistics, Bulletin 1425-5, Management Rights and Union-Management Cooperation (Washington: Government Printing Office, 1965), pp. 25ff.
- ⁷For an account of the general attitude of organized labor toward labor-management cooperation during the two decades prior to World War II, see Harry A. Millis and Royal E. Montgomery, Organized Labor (New York: McGraw Hill, 1945), pp. 464-470. For some experiences of the United Steelworkers of America with labor-management cooperation during its early years, see Golden and Rutenberg, op. cit., chap. 9.
- ⁸For the railroad experience with labor-management cooperation, see Louis A. Wood, Union-Management Cooperation on the Railroads (New Haven, Conn.: Yale University Press, 1931); Slichter, op. cit., chaps. 15-16; and Slichter, Healy, and Livernash, op. cit., pp. 852-856.
- ⁹Slichter, op. cit., p. 469.

- ¹⁰ Ibid., p. 479.
- ¹¹ Richmond C. Nyman and Elliott Lunlap Smith, Union-Management Cooperation in the "Stretch Out" (New Haven, Conn.: Yale University Press, 1934). See also Slichter, op. cit., chap. 18.
- ¹² Nyman and Smith, op. cit., pp. 29-30.
- ¹³ Slichter, op. cit., p. 544.
- ¹⁴ Nyman and Smith, op. cit., p. 180.
- ¹⁵ The wartime experience with joint labor-management committees has been described by Dorothea de Schweinitz, Labor and Management in a Common Enterprise (Cambridge, Mass.: Harvard University Press, 1949). See also Carol Riegelman, Labour-Management Cooperation in United States War Production (Geneva, Switzerland: International Labor Office, 1948), chaps. 9-14.
- ¹⁶ de Schweinitz, op. cit., p. 155.
- ¹⁷ Frank S. McElroy and Alexander Moros, "Joint Production Committees, January 1948," Monthly Labor Review, August 1948, pp. 123-126.
- ¹⁸ U. S. Bureau of Labor Statistics, Bulletin 1425-5, op. cit., pp. 25-47.
- ¹⁹ U. S. Bureau of Labor Statistics, Report on Joint Productivity Committees to the National Commission on Productivity and Work Quality (unpublished, February 20, 1974).
- ²⁰ Ibid., p. 6.
- ²¹ As of September 15, 1944, about 24 percent of the joint committees registered with the War Production Board, with 11 percent of the workers, were in nonunion establishments. See de Schweinitz, op. cit., p. 23.
- ²² For a review of collective bargaining at TVA, see Aubrey J. Wagner, "TVA Looks at Three Decades of Collective Bargaining," Industrial and Labor Relations Review, October 1968, pp. 20-30.
- ²³ Tennessee Valley Authority, Guidelines for Union-Management Cooperative Program (Knoxville, Tenn.: TVA, revised April 1, 1971), p. 13.

- ²⁴ Ibid., p. 3.
- ²⁵ Ibid., p. 2.
- ²⁶ John E. Massey, "Labor-Management Cooperation in TVA," Public Personnel Review, July 1965, p. 132.
- ²⁷ U. S. Bureau of Labor Statistics, Bulletin 1789, Collective Bargaining Agreements in the Federal Service, Late 1971 (Washington: Government Printing Office, 1973).
- ²⁸ Ibid., p. 62.
- ²⁹ Ibid., pp. 62-63.
- ³⁰ Ibid., p. 63.
- ³¹ Ibid., p. 62.
- ³² U. S. Bureau of Labor Statistics, Bulletin 1759, Municipal Collective Bargaining Agreements in Large Cities (Washington: Government Printing Office, 1972).
- ³³ Conference on "Labor-Management Cooperation and Collective Bargaining as Means of Overcoming Resistance to Technological Change" (Washington: Mutual Security Agency, mimeographed, no date), pp. 11-12.
- ³⁴ The literature on the Scanlon Plan is reviewed by Brian E. Moore and Paul S. Goodman, Factors Affecting the Impact of a Company-Wide Incentive Program on Productivity (Report prepared for National Commission on Productivity and Work Quality, processed, 1973), pp. 1-16. The second part of this report describes the installation of a Scanlon plan in a manufacturing plant. See also the basic compilation of materials by Frederick G. Lesieur (editor), The Scanlon Plan: A Frontier in Labor-Management Cooperation (published jointly by Technology Press, Massachusetts Institute of Technology, and John Wiley & Sons, New York, 1958).
- ³⁵ For a good discussion of the bonus formula, see Elbridge S. Puckett, "Measuring Performance Under the Scanlon Plan," in Lesieur (editor), op. cit., chap. 6.
- ³⁶ Frederick G. Lesieur and Elbridge S. Puckett, "The Scanlon Plan—Past, Present and Future," Proceedings, 21st Annual Winter Meeting, Industrial Relations Research Association, 1968, p. 77.

³⁷ An excellent summary of the results and problems of Scanlon-type plans will be found in Slichter, Healy, and Livernash, op. cit., pp. 864-877.

³⁸ U. S. Bureau of Labor Statistics, Report on Joint Productivity Committees to the National Commission on Productivity and Work Quality (unpublished, February 20, 1974). Separate reports were attached to the General Report on each of the six case studies. These are footnoted separately below in relation to the situations with which they deal.

³⁹ Ibid., General Report, p. 7.

⁴⁰ Ibid., Report on The Ladies' Accessory Association: Shop Committees.

⁴¹ Ibid., Report on Three Counties Bakeries Study, p. 4.

⁴² Ibid., p. 9.

⁴³ Ibid., Report on Area Bindery Operations: Manning Committees, p. 7.

⁴⁴ Ibid., p. 11.

⁴⁵ Ibid., p. 10.

⁴⁶ Ibid., Report on Metropolitan Restaurant Owners: Committee and Study, p. 5.

⁴⁷ Ibid., Rubber Products, Inc.: The Labor-Management Committee, p. 10.

⁴⁸ Ibid., pp. 10-11.

⁴⁹ Ibid., Report on Catalyst Steel Company: The Catalyst Productivity Committee, p. 2.

⁵⁰ Ibid., General Report, p. 8.

⁵¹ Ibid., p. 8.

⁵² Ibid., p. 9.

⁵³ Ibid., p. 9.

⁵⁴ Ibid., p. 10.

⁵⁵Ibid., p. 11.

⁵⁶Ibid., p. 12.

⁵⁷United Steelworkers of America, The Joint Advisory Committee on Productivity (Pittsburg, November 1971), p. 29.

⁵⁸Neal Q. Herrick and Robert P. Quinn, "The Working Conditions Survey as a Source of Social Indicators," Monthly Labor Review, April 1971, p. 23.

⁵⁹E. Wight Bakke, Mutual Survival: The Goal of Unions and Management (Hamden, Conn.: Archon Books, 1966), p. 80.

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Secretary DENT. I do think, Senator, that we need to recognize that World War II experience, as with so many other things, had a unity of purpose and commitment and a doing away with selfish interests. I believe that as we address this labor-management cooperative problem, we need to recognize that those two parties are going to have to recognize a selfish vested interest in working together.

Federal funding will not bring this about. It has got to be done through an understanding of what more can be accomplished from both industry and labor by working together.

We have seen examples of this. As I mentioned, the steel industry agreement, which example the Productivity Commission is trying to spread across their country, was developed between labor and management because they had a commonality of interests. Not because of Federal funding.

In the Maritime industry, there was a decline of both jobs and activity. They developed shipping councils where ocean operators, labor and shippers go around the country trying to induce exporters to utilize American bottoms. They had a mutuality of interests and brought their efforts together. And it has brought peace in that industry which previously did not enjoy it.

I think we can find other examples of communities where they have problems, like Jamestown, where they have gotten together. I do think that the emphasis placed on productivity, educating the American people about the importance of our economic system and how best to deal with it, and identifying our selfish interests in this, are going to move us ahead far more than the Federal grant, although we will be delighted to develop the analysis which you have requested.

Senator JAVITS. Mr. Secretary, I did not recommend Federal grants, or that you start with \$5 billion instead of \$50 million. All I recommended was technical assistance. You know, what the unions call organizers.

In short, this situation is so grave that it is the judgment of one Senator that it cannot wait on the normal processes of development and education, which may take years. We are in a terrible bind on this one right now. The counterpart to a 12-percent investment credit must be an activity of this kind.

All the machinery in the world is not going to help you if there is not the will and the methodology to work in a traditional American way.

That is all I have.

Secretary DENT. I agree with you.

Senator NUNN. Thank you, Senator Javits.

At this point, I would like to thank the Secretary and his assistant for appearing. We look forward to working with you as we pursue this legislation. It is my hope we will be able to have some meaningful markup session on this legislation shortly after the recess, although, of course, that will be entirely within the discretion of the chairman of the committee.

Our next witness is Mr. Abraham Weiss, Assistant Secretary of Labor for Policy Evaluation and Research.

Mr. Weiss, we are delighted to have you. You can bring your staff up with you, if you like.

Mr. Weiss, proceed with your statement if you wish. We do have a vote. I am going to ask Senator Chiles and Senator Percy to act as chairmen and we will rotate back and forth. We will try to complete all the witnesses. We will go ahead with your statement.

**TESTIMONY OF ABRAHAM WEISS, ASSISTANT SECRETARY OF
LABOR FOR POLICY, EVALUATION, AND RESEARCH**

Mr. WEISS. I have on my left Dr. Richard P. Shore; on my right Mr. Bruce Millen of my staff.

Mr. Chairman, and members of the committee, I appreciate this opportunity to appear before your committee to discuss the problems inherent in attempting to stimulate productivity in the American economy and those changes in the existing Federal institutional organization structure; namely, the National Commission on Productivity and Work Quality, which could best facilitate this goal. Specifically, you have asked for comments on S. 765 and S. 937 which are directed to improving productivity and the quality of work.

There are several elements of both bills with which we agree. A few sections give us concern. Specifically, the scope of both bills is too broad and nonspecific. For these reasons, we prefer the administration bill which—if it has not already arrived—will be forwarded to Congress very soon, I am given to understand.

Last December Secretary Dunlop testified before the committee in his capacity at that time as Chairman of the National Commission on Productivity and Work Quality and discussed what he considered to be some of the fundamentals regarding productivity. Those ideas should be considered carefully since they have a bearing on the type of legislation now being considered by this committee.

Before we look at the legislation you are considering, I should like to review briefly what I consider the important elements in productivity.

There is no question that increased productivity is the essential ingredient to real and I stress the word "real" economic growth. Through the effects of increased productivity, real income of all groups can rise. Thus, getting the most out of our resources, manpower, capital and material through better methods, increased skills and technological improvements is vital in promoting a higher standard for all American workers.

The second point I would make is that productivity improvement is, unfortunately, a slow process. The task is particularly difficult during periods of economic downturn. I would emphasize that the long-term nature and trend of productivity growth should not be overlooked when reviewing the current short-term decline in output per man-hour.

Thirdly, beside the traditional sources of productivity growth, consisting of a more highly skilled labor force with greater mobility, improved technology, capital and economics of scale, productivity is also affected by almost everything that involves the worker, from his health and safety to his ability to commute quickly to work. I only draw your attention to his obvious point to emphasize that a program to stimulate productivity increase must select a few well chosen areas that can be effectively influenced. We should recognize that many areas will be beyond the scope of such a program.

I would also make the point that shifts in our economy, for instance from manufacturing to service industry, as well as the growth of Federal, State and local governments, have created areas that have not been as exposed to productivity pressures as have the traditional goods producing sector.

None of these factors that I have mentioned should be looked upon as barriers to efforts to increase productivity. Indeed, I share your concern over the alarming slowdowns in U.S. productivity growth and believe there are changes in the existing Productivity Commission which should be made in order to revitalize and coordinate Federal efforts to stimulate productivity in both the private and public sector.

However, to achieve improved productivity requires actual changes in practices, attitudes and procedures in the habits of people and institutions. The give-and-take of labor-management relations—although time consuming—had led to constructive change and progress while at the same time providing protection to those who might be adversely affected. I am pleased to see that S. 765 gives explicit recognition to the problems of job security in the change process as we seek to improve productivity. I want to emphasize that the basic responsibility for productivity improvement rests with management in both the public and private sector—with labor support, of course. Government as an entity can play the role of a catalytic agent in fostering productivity improvements.

Senator PERCY. I would like to say we all seem united on that particular point.

Mr. WEISS. We are because the proposed bills as we see them are eminently sensible.

There are traditional areas of Government activity which work to stimulate productivity. For instance, the Department of Labor by virtue of its basic charter, and more importantly, through the discharge of its year to year functions, has been actively concerned with productivity for decades. The Bureau of Labor Statistics has made substantial contributions to the field through the development and refinement of techniques to measure productivity which are vital to micro- and macro-economic analysis and to collective bargaining. Our labor relations experts within the Labor-Management Services Administration frequently contribute to improving productivity in the assistance they render to the resolution of emergency disputes. Furthermore, one of the main objectives of our manpower programs is to encourage productivity improvement through upgrading the skills of the labor force and developing more efficient ties between jobs and available workers. In brief, job matching, job assistance.

Those laws administered by the Department of Labor which are designed mainly to solve problems of worker security and eliminate discrimination also, in their turn, serve to improve productivity. The long-range goals of such programs are to promote better utilization of the total labor force and end the waste or underutilization of skills in our economy. Programs such as I have described are not normally identified as being related to productivity and I call them to your attention for this reason, because I view productivity as an overall issue and as an overall problem.

Although the existing National Commission on Productivity and Quality Work has had some notable successes, its history has been burdened by a struggle to maintain its identity.

S. 765 would establish an independent agency in the executive branch, a National Center for Productivity and Quality of Working Life with broader statutory authority than the existing Commission.

Senator PERCY. I think we will have to suspend for maybe 2 minutes until the Chair gets back. I will miss this vote if I do not leave now.

[Recess taken at 11:29 a.m.]

Senator NUNN. We apologize for the interruption. I do not know where you left off, but we ask you to proceed.

Mr. WEISS. Surely. If you have a copy of my statement, Mr. Chairman, I was at the top of page 6, the first paragraph. I am about to read the last line of that first paragraph.

This concept is also incorporated in the administration's bill.

The function of the Center would be twofold: to develop a national policy and to coordinate all efforts for the Federal Government that aim to increase productivity growth and improve the quality of working life in America. The National Center for Productivity and Working Life is charged under these proposals to study, examine, and identify all existing statutory and regulatory impairments to increased productivity growth and to recommend to Congress legislation which would remove such obstacles.

To carry out its functions, the Center would have the authorization to let contracts and make grants to private and public academic institutions, private industry, and labor unions to implement technological research programs, and to encourage programs for increased human resource utilization. This is an illustration of the "open end" quality of the subject bills which gives us some concern.

S. 937 has a similar purpose and thrust, but with less explicit emphasis in the body of the bill on the issue of the "quality of work." It also prescribes, among other things, that 65 percent of grant funds may be made available to State productivity centers. The proposals differ in that S. 765 favors the establishment of labor-management committees, whereas S. 937 is silent on the matter.

May I insert, Mr. Chairman, that there was an inquiry, I believe, by Senator Javits to try to ascertain what was the experience during World War II of labor-management productivity committees.

I might suggest for your staff two works which I think would be extremely helpful which distill the experience of that period.

One is a book by Dorothea DeSchweinitz, who wrote what was at that time the authoritative work on labor-management committees.

The Bureau of Labor Statistics of my Department has also prepared a report on labor-management committees which I think you might find helpful.

I support the general purposes of S. 765 and S. 937, particularly the establishment of an independent National Center. I am pleased that the proposed Center under both bills would be based on the existing Commission by transfer of its activities and personnel. In this manner, continuity can be maintained and existing programs continued.

We have concern over some parts of S. 765 regarding treatment of the "Quality of Work" issue. The Center's proposed responsibilities are to "establish and promulgate a national policy for short-term and long-range productivity growth and improved quality of working life which is consistent with the needs, rights, and best interests of labor, industry, and government." I raise this issue because the Department

of Labor is required by its organic act "to promote and develop the welfare of the wage earners of the United States, to improve their working conditions and to advance their opportunity for profitable employment." We have historically followed a policy of demonstrating concern for the worker both as an individual and with respect to his work environment.

Our viewpoint concerning "quality of work" has evolved from our experience over a period of 60 years in coping with the problems of working people. "Quality of work" as we see it represents a point of view, or a view of work much broader in scope, for example flexi time, job enrichment, worker participation in management, than traditional concerns with wages, hours, and conditions of employment.

The Labor Department is adapting its efforts to the new ideas and issues being raised in some quarters which suggest a need for change. We already have in progress a significant research and development effort which is continuously generating data both for internal use in policy development and for dissemination to labor and management to assist them in designing more effective ways of furthering both organizational and worker interests.

During the past few years, this program has become focused with increasing precision on those dimensions of employment experience which have come to be characterized, or to be denominated, as the quality of work. These R. & D. activities have two general aims: (1) defining in reasonably concrete and measurable terms the key issues of work quality which are of concern to labor, management, and Government; and (2) producing and making available to decisionmakers a body of reliable and usable data regarding the potential costs and benefits of alternative forms of work structure and working conditions.

There is one other facet of the treatment of improved productivity and quality of work which I wish to point out. I refer here to the somewhat facile fashion in which the two subject matters are often linked as if they are two sides of the same coin. This is not necessarily true.

While the possibility for joint consideration of productivity and improved quality of work exists, the relationship should not be treated as a constant. For example, our concern with workplace health and safety goes beyond its instrumental importance in achieving improved work performance and productivity growth.

Indeed, job-related illness and accidents, as I have mentioned earlier, do impede productivity improvement. A reduction in such occupational disabilities has its own payoff. But I want to make clear that this Department considers such policies as enhancing worker safety and health as vital goals in their own right.

In summary, I want to make clear that I do recognize that an interface between the two areas of inquiry does exist. It may be direct in some instances and only tangential in others. The point is, however, these relationships are not fully understood, are not necessarily positive, and are not often one of cause and effect. Therefore, in your consideration of legislation in the area of productivity and quality of work, care should be taken not to treat one as simply the counterpart of the other. Stated another way: Satisfied workers are not necessarily more productive ones. To the extent there may be worker discontent, we do not know its economic and social consequences. Both sub-

jects represent important areas of activity in their own right, and should often be treated as discrete entities.

We note also that responsibilities are given this Department under S. 765 by the establishment of an Office of Productivity and Quality of Working Life. Its function, in addition to integrating Departmental research on productivity, would develop and apply indicators of quality of working life in order that the Secretary of Labor analyze data on the health, safety and wellbeing of American workers.

In our view, the establishment of such an office within the Department of Labor may be premature. Under our existing mandate, and under the laws which we administer, we are already evaluating and studying the quality of the working environment. We have been studying the feasibility of integrating the Department's activities in both productivity and quality of work areas.

The bill would also establish a similar office in the Department of Commerce. The function assigned to this latter office, that is, to develop indicators of economic organizational effectiveness and productivity, in our view, duplicates work carried on by the Office of Productivity and Technology of the Bureau of Labor Statistics. The data used by the present Productivity Commission is dependent on the work of BLS and the proposed Center should continue to draw on this resource. (Please refer to the December 17, 1974 testimony of Jerome A. Mark, Assistant Commissioner of BLS for the appropriate reference to the work done by the BLS in the productivity field.) It would be unwise to create another office with this function.

Another question presented by both bills is the requirement for a statement regarding productivity impact. Executive Order 11821 and the implementing OMB Circular A-107, already provide for the consideration of productivity impact, along with other criteria for development of an inflationary impact statement. The provision in these bills is therefore probably unnecessary and certainly duplicative of what has already been mandated.

In conclusion, I want to reemphasize the importance of productivity growth to an expanding economy and job creation. Although realistically I do not believe there is any easy or quick way to stimulate productivity gains, I believe that a National Center for Productivity which is the thrust of all bills under consideration, with secure funding can serve as a catalyst for more effective action.

Senator NUNN. Thank you very much, Mr. Weiss, for this statement which I think is going to be of considerable help to us. I wish I had time to ask you a lot of questions. However, we have two more witnesses and we have votes that at any time could just break out all over. I do not want to keep the hearing people here as they are very busy, without every step being taken to expedite the hearing.

One question. I agree with you that there is some duplication between the productivity impact statement and the Executive order. But I suppose you heard the dialog a little while ago with the Secretary of Commerce.

In your Department have you made any inflation impact statements in compliance with the Executive order as issued by the President?

Mr. WEISS. Not insofar as I know, Mr. Chairman, but I would hasten to add this statement. I would like to enlarge on that statement. Under the direction of a staff member of my own office, we have had a series

of meetings involving other staff members within the Labor Department to set forth guidelines for the constituent agencies within the Department—guidelines, criteria, standards, for the issuance and preparation of inflationary impact statements upon the occasion of the issuance of major regulations or proposed bills to submit to the Congress dealing within the jurisdiction of the Department of Labor.

We have not been sitting still. We have developed such criteria and standards. We have sent them forth to the OMB for their clearance. Upon receipt of such clearance, they will then become an operative rule of the Department with respect to major rules and regulations to be issued by constituent Department agencies.

Senator NUNN. When do you think your first impact statement, as a statement, will be issued?

Mr. WEISS. Inasmuch as I do not know what is in the mill with respect to proposed rules and regulations, I am afraid I am in no position to answer that question.

Senator NUNN. You would say that, if the American public were to be informed that the President of the United States issued an Executive order and, 4 months later, after thousands of rules and regulations and pieces of legislation have been submitted to Congress, not one single department has issued one single impact statement, they would have every right to ask what is the American Government all about? The President of the United States obviously cannot move the bureaucracy.

It seems to be beyond the capacity of the President to do it, unless he gives it his personal day-to-day, hour-to-hour, minute-to-minute attention.

This is really very discouraging.

Mr. WEISS. Mr. Chairman, by way of explanation, but not necessarily extenuation, may I say this? This was a new concept which was to be added to existing responsibilities of Federal agencies and departments. The issue, the concept of inflationary impact statements, had to be digested. You just do not shoot from the hip. You have to say, "OK, to what activities of an agency or department are such statements appropriate?"

Having surmounted the answer to that question, you have to say, "OK, what should such statements consist of?"

You do not come forth with this on an overnight basis.

As I indicated to you earlier, my office was given the responsibility for pulling together the best thoughts of the various professional and technical staff within the Department so as to determine what should go in such a statement. We have done our work. We have done it well. We have passed it on to the next level. We are waiting for response. You can rest assured, sir, that once we get that response this will be automatic, an automatic procedure for the component agencies within the Department.

Senator NUNN. Is your recommendation over at OMB now?

Mr. WEISS. It is, sir.

Senator NUNN. How long has it been there?

Mr. WEISS. About a week or so, I believe.

Senator NUNN. Could you make available to this committee your recommendations so that we could have them in this record?

Mr. WEISS. I should be glad to, sir.

[The information referred to and subsequently supplied follows:]

U.S. DEPARTMENT OF LABOR
OFFICE OF THE ASSISTANT SECRETARY
WASHINGTON

March 27, 1975

Honorable Sam Nunn
U.S. Senate
Washington, D.C. 20510

Dear Senator Nunn:

During the course of my testimony before the Senate Government Operations Committee on March 20, 1975, we discussed the matter of inflationary impact statements. I indicated at that time that we would provide you with further information on the Department's activities in this area.

Under my direction an interagency departmental task force has drafted rather extensive guidelines for the preparation and issuance of inflationary impact statements. These proposed guidelines, which will be issued as a secretarial order, are enclosed for your information.

These proposed guidelines have been forwarded to OMB for clearance. These proposed guidelines represent a staff position. We have not had an opportunity to discuss them with the Secretary. In view of this fact, I should greatly appreciate it if you were to consider them as a staff proposal and hence, treat them as administratively confidential. In the near future, I hope the guidelines will be cleared by the Administration and that we will have a more definitive statement to send you.

While we await the formal OMB approval of our guidelines, the Department is not standing still. We are not ignoring the Executive Order. We have been following the general guidance furnished us in the OMB Circular and we are

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attempting to produce statements conforming to the intent and spirit of the Executive Order. A case in point is our unemployment insurance program revisions which we have already submitted to OMB, but for which we are preparing a rather extensive analysis of its costs and benefits.

We at the Department are very much concerned with the impact of our proposals. We take pride in the fact that any proposal put forth by the Department has been carefully analyzed with all reasonable alternatives considered.

I hope this information has been helpful.

Sincerely,

Abraham Weiss

Abraham Weiss
Assistant Secretary for Policy,
Evaluation and Research

Enclosure

SECRETARY'S ORDER NO.

Subject: Inflation Impact Statement

1. Purpose. This order, in compliance with Executive Order No. 11821, establishes the policy and criteria for the evaluation of the inflationary impact of major proposals for legislation and for the promulgation of regulations or rules, and provides for a statement of certification of such evaluations.
2. Background. On November 27, 1974, President Ford issued Executive Order No. 11821 emphasizing his commitment to diminish the inflationary impact of the Executive Branch of government. The Executive Order provided that major proposals for legislation and for the promulgation of regulations or rules by Executive Departments and Establishments shall be accompanied by a statement which certifies that the inflationary impact of the proposal has been evaluated. The Director of the Office of Management and Budget (OMB) was designated to develop criteria and prescribe procedures for carrying out the Order. These responsibilities have been further delegated to Executive Department and Establishment heads by OMB order.
3. Definitions. For the purpose of this Order the terminology of E.O. 11821 and OMB Circular No. A-107 will apply.
4. Certification. The term "statement of certification" or "certification" as used in this Order means:
 - (a) A statement by the initiating agency, concurred with by the Office of the Solicitor and the Office of the Assistant Secretary for Policy, Evaluation and Research, certifying that the proposed actions, pursuant to the application of the identification criteria specified in Section 7 of this Order, do not warrant an inflationary impact evaluation; or

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- (b) A statement by the initiating agency, concurred with by the Office of the Assistant Secretary for Policy, Evaluation and Research, that the proposed actions, subject to an inflationary impact evaluation, have been reviewed in accordance with the criteria specified in Section 6.
5. Policy. It is the policy of the Department to delegate authority and responsibility for the efficient and effective compliance with E.O. 11821; it is Department policy that an integrated system for compliance be achieved through the exercise of initiative and cooperation at agency levels by the means of involvement of the Office of the Solicitor and the Office of the Assistant Secretary for Policy, Evaluation and Research.
6. General Description of the System. This system provides for maximum participation by the initiating agency in the determination of the type of certification (as defined in Section 4) necessary and also in the analyses of proposals according to the evaluation procedures in Section 8 of this Order.

The system operates as follows:

- (a) The initiating or lead agency (in the case of interagency task group) shall apply to all proposed legislation, regulations or rules the predetermined identification criteria as specified in Section 7 of this Order as soon as is practical in the formulation process. As these proposals undergo development, the criteria should be used as a continual reference.

Following the criteria set forth in Section 7 of this Order the initiating agency will evaluate, to the extent permitted by the existence of readily available data and presently existing resources and personnel, the inflationary impact of proposed actions for which certification is deemed necessary.

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- (b) Quarterly, each agency shall submit two copies of a report to the Office of the Assistant Secretary for Policy, Evaluation and Research, containing a three-month projection of all legislation, rules and regulations considered for proposal. A rationale as to the need or lack thereof for an inflationary impact statement shall accompany the description of each legislative and rule making proposal. The Assistant Secretary for Policy, Evaluation and Research will transmit a copy of each report to the Solicitor of Labor for his determination as to whether proposals are excluded from Inflationary Impact coverage under Sections 7a and 7b. The first of these reports is due March 15, 1975 and the subsequent reports are due the fifteenth of the last month of each quarter. Based on the analysis of these reports by the two agencies, the Office of the Assistant Secretary for Policy, Evaluation and Research will give guidance to the initiating agencies as to the need for and development of Inflationary Impact Statements for each of the proposed actions. The Assistant Secretary for Policy, Evaluation and Research shall indicate in writing to the initiating agency whether or not an Inflationary Impact Statement is necessary for each proposal.
- (c) In cases of proposed rule making and legislation where an Inflationary Impact Statement is deemed necessary under the criteria specified in Section 7 of this Order, the inflationary impact analysis along with the proposed certification statement shall be forwarded to the Office of the Assistant Secretary for Policy, Evaluation and Research within 10 days after the specifications of the rule or legislative proposal are finalized. The Assistant Secretary for Policy, Evaluation and Research will review the document for its appropriateness and analytical content. After the Assistant Secretary for

Policy, Evaluation and Research concurs with the inflationary impact analysis he shall indicate same in writing to the initiating agency. The certification statement, along with the Assistant Secretary for Policy, Evaluation and Research's letter of concurrence, shall be forwarded by the initiating agency to the Office of the Solicitor of Labor as part of the final proposal package. In cases of rules and regulations a summary of the inflationary impact analysis must also accompany the final proposal package.

- (d) In cases where an Inflationary Impact Statement has been deemed unnecessary, a statement by the initiating agency accompanied by the Assistant Secretary for Policy, Evaluation and Research's concurring letter should be contained in the final proposal package which is forwarded to the Office of the Solicitor.
7. Identification Criteria. This Order applies to each major piece of proposed legislation, rule, and regulation proposed by the Department where there is reason to believe there may be a significant inflationary impact.
- (a) Proposed Legislation. This Order covers substantive legislation proposed by the Department. It excludes: (1) legislation that is technical in nature which, for example, transfers functions from one agency to another and therefore does not add any new substantive requirements; (2) requests for appropriations either general or supplemental, which implement existing laws since the purpose of the Order is to require program managers to focus on the inflationary impact of the administration of programs.

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Legislation initiated by other Executive Departments or establishments or the Congress on which the Department comments, either in reports or testimony before Congress or in reports to OMB, is excluded.

- (b) Proposed Rules and Regulations. Rules and regulations covered by this Order are those which are discretionary and substantive, rather than descriptive and/or procedural in nature. Interpretative bulletins and other interpretations which merely state the Department's view of what the law or existing regulations require rather than adding new substantive requirements are not covered. An example of such interpretations would be: proposed regulations primarily intended to clarify or make more explicit the provisions of existing OSHA safety and health standards such as those included in the Standards Completion Project; procedural regulations, such as hearing rules or delegations of authority, do not add substantive requirements and accordingly are not covered; rules and regulations the substance of which is mandated by law and over the implementation of which the Department may not exercise any discretion, are also not covered. Examples of such nondiscretionary actions are:

- (1) Wage determinations whereby the Department only decides what wage prevails in the locality under the Davis-Bacon and Service Contract Acts;
- (2) Wage determinations for American Samoa, Puerto Rico and the Virgin Islands where industry Committees determine the applicable minimum wage rates and the Department has no discretion to vary such rates;

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- (3) Determinations of cost of living and other automatic increases in worker compensation payments which are required by law.

(c) Determination of "Substantive" Legislative and Rulemaking Proposals. Except for those types of legislative and rulemaking proposals specifically excluded by Section 7(a) and 7(b) of this Order, the following economic identification criteria are to be used in determining whether proposed legislation, rules or regulations are major, thereby requiring an inflationary impact analysis and certification. These criteria where applicable, are to be applied to each new legislative proposal, rule or regulation and an inflationary impact statement prepared should any of the economic effects enumerated below prevail.

(1) Effects on Factors of Production

(i) Total Cost

An inflationary impact statement is required whenever the proposed legislation, rule or regulation is expected to cause the total costs of production for a final product (or products) currently sold by the industry (or industries) directly affected to change by more than \$300 million (in 1975 dollars) over a two-year period.

(ii) Scarce Factors of Production

An inflationary impact statement is required whenever the proposed legislation, rule or regulation is expected to cause the industry (or industries) directly affected to alter its (their) derived demand for a

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scarce factor of production (important materials, products or services, and energy) in such a way as to affect the total aggregate (national) demand for that factor by more than 3 percent.

(iii) Employment

An Inflationary Impact Statement is required whenever the proposed legislation, rule or regulation is expected to affect an industry (or industries) so as to either:

- (1) Change its (or their) demand for labor by 50,000 workers over a two-year period; or
- (2) increase hours worked by 1 percent or more of the national total, without any compensating change in output;
- (3) increase industry (or industries) hours worked by 20 percent or more. without any compensating change in output.

(2) Effects on the Production of Scarce Goods and Services

An inflationary impact statement is required whenever the proposed legislation, rule or regulation is expected to cause the industry (or industries) directly affected to change the total national supply of a scarce good or service (important materials, products or services, and energy) by 3 percent or more.

(3) Effects on Market Structure

An inflationary Impact statement is required whenever the proposed legislation, rule or

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regulation is expected to cause a reduction in the number of firms in the industry (or industries) directly affected by 10 percent or more over a two-year period.

8. Evaluation Procedures. In designing an economic analysis appropriate for each proposal that requires an Inflationary Impact Statement the initiating agency shall consider where applicable.
 - (a) The principal costs or other inflationary effects of the action on markets, consumers, businesses, etc., and, where practicable, secondary cost and price effects.
 - (b) A comparison of the benefits to be derived from the proposed action with the estimated costs and inflationary impacts. These benefits should be quantified to the extent practical.
9. Responsibility.
 - (a) The Assistant Secretary for Policy, Evaluation and Research is responsible for the overall guidance of the system and for ensuring that evaluations are made available to interested agencies. It is incumbent upon the Assistant Secretary for Policy, Evaluation and Research to promptly review all proposed statements of certification and Inflationary Impact Statements.
 - (b) The agency heads are responsible for ensuring that provisions are made within the agencies for implementation of the system.
 - (c) The Solicitor shall be responsible for rendering legal advice concerning the coverage and applicability of the requirements of this Order.

Further, before any major proposed regulations, to which the requirements of this Order are applicable, are submitted by the Office of the Solicitor for clearance, the Office of the Solicitor shall ensure that a certification statement (as defined in Section 4) and a summary of the analysis accompany such regulations. After the specifications for any major proposed legislation to which this Order applies are submitted by the agency, the Office of the Solicitor shall ensure that a certification statement accompanies such specifications before the final proposal package is transmitted out of the Department. In any case where there is no such certification, when it is required, the Solicitor shall promptly notify the appropriate agency and the Assistant Secretary for Policy, Evaluation and Research.

10. Effective Date. This Order is effective immediately.
11. Expiration Date. This Order expires December 31, 1976.

Senator NUNN. Counsel for Senator Percy, for the minority, is going to ask a question.

Mr. VASTINE. Mr. Weiss, it is really more of a comment than a question. You referred at length to S. 765 and the "facile" treatment given to the duality of quality of work and productivity.

I should note in Senator Percy's absence that he has recognized that the two do not necessarily go hand in hand in terms of the result in productivity improvement, itself.

I would quote from his opening statement at our hearings in December:

The bill calls for equal emphasis on technological and human aspects of productivity. It is a delusion to believe that only technology and capital can improve productivity, just as it is a delusion to believe that only human motivation can improve productivity.

The steel industry has proved this. We must have more and more of both.

In other words, I think we do not intend to treat that relationship facilely or lightly.

Mr. WEISS. Sir, it was our belief and understanding that most of the members of this committee were aware of this nonidentity on occasion, of these two concepts. It was just a general statement. We thought it ought to be developed and surfaced so that people do not automatically assume an inevitable link between the two.

Mr. VASTINE. But you agree both are worth pursuing?

Mr. WEISS. And so we stated in our testimony.

Senator NUNN. Thank you very much, Mr. Weiss, for appearing. We hope to continue to work with you and your Department as we go through this legislation.

The last thing I want is an agency that duplicates what somebody else is already doing. We may have to develop an agency to duplicate what somebody else already should be doing but is not doing. Those are two different questions.

I would like very much, though, for you to continue to advise us as we work in this area.

Mr. WEISS. It will be a pleasure.

Senator NUNN. Thank you.

Our next witness is Mr. Dwight Ink, who is presently Deputy Administrator of General Services Administration. He has held this position since May 1973.

Mr. Ink, do you have members of your staff you want to bring up with you?

Mr. INK. Mr. Chairman, I thought I did. I don't see them. I think you were asking some questions they were afraid I could not answer.

Senator NUNN. If you will tell us which ones they were, we will be sure to ask them again. I was going to complete the introduction.

Prior to this appointment, Mr. Ink was Assistant Director of OMB, with responsibility for management. In 1971, a joint project on management and enhancement of productivity was organized by GAO, OMB and CSC. Mr. Ink has been involved as a senior member of this project since its inception. I have had an opportunity to be briefed on some of the good work this project has brought about.

We are pleased to have you here today.

**TESTIMONY OF DWIGHT INK, DEPUTY ADMINISTRATOR OF
GENERAL SERVICES ADMINISTRATION**

Mr. INK. Thank you, Mr. Chairman. On my left is Mr. Taché, who is in our Office of Federal Management Policy in the General Services Administration.

Mr. Chairman, I appreciate the opportunity to appear before this committee today to present the viewpoint of the General Services Administration concerning S. 765, National Center for Productivity and Quality of Working Life Act, and S. 937, National Productivity Act of 1975.

As you recall, I testified earlier very briefly before this committee on December 17, 1974, regarding similar legislation which you and Senator Percy introduced in the 93d Congress. In this testimony, I outlined some of the work undertaken over the past 4 years by the Office of Management and Budget, Civil Service Commission, Bureau of Labor Statistics, General Service Administration, and the General Accounting Office. During this period, major productivity efforts in the Federal Government have moved forward for the first time, and considerable credit for this should go to Comptroller General Staats and Mr. Tom Morris of the GAO and their staffs. For example:

We have developed a productivity measurement system covering over 60 percent of the current Federal civilian work force. We believe this measurement system to be as good if not better than the private sector system which measures only 16 percent of the work force in business and industry, at least, Mr. Chairman, insofar as coverage is concerned, although we have too great a lag in the Federal system in terms of the timely availability of the resultant information. These data are requested from the various agencies by GSA and processed by the Bureau of Labor Statistics for analysis.

We have established a productivity clearinghouse to facilitate the interchange of capital investment and productivity measurement information among Federal agencies. I believe we have made copies of the clearinghouse document available to the committee.

Mr. INK. Just last week, representatives from GAO, CSC, GSA, BLS, and JFMIP conducted a second productivity seminar in the city of Philadelphia for over 80 Federal regional officials. Our first similar seminar was held in December for Federal officials in the Atlanta, Ga., area. It was conducted by these same agencies as well as the National Commission on Productivity. The purpose of these seminars, sponsored by the Federal executive boards, is to promote the sharing of productivity related ideas and technology among agencies at the field level. It is our plan to conduct similar productivity seminars for Federal officials in all cities with a high degree of Federal activity.

Although we are very pleased with the results of these joint productivity efforts to date, the potential use of productivity measures for improving management, economic analysis, and resource allocation in the Federal sector is just beginning to be realized. Consequently, I think the legislation which is being introduced is very timely.

Although productivity information is very useful in several important areas, I would like to address my comments to the management area in which GSA is principally involved.

Senator NUNN. On this point, I think it is very important, what you are telling us is that within the Federal Government, in examining our own house, so to speak, you are developing techniques, methods and methodologies that perhaps could be disseminated on a wide basis, once you see whether they are working or not, and would not just be applicable to the governmental apparatus; is that correct?

Mr. INK. Yes, that is correct. By the same token, there are techniques developed in industry that have application to the government. That is, I think, one of the reasons that a center such as is proposed in these bills is useful.

Senator NUNN. You may get to this point in your testimony, but because I have the fear of being interrupted here with a vote, I want to press this point.

My idea of this center is a small central focal point for the development and dissemination of new ideas, rather than a new Federal agency that would compete with existing agencies.

In other words, I would like for all the expertise involved in your four agencies that you are working with to be fed into the center so that it could be disseminated, rather than having a new huge bureaucracy.

Mr. INK. We would agree with that. As I indicated, we would profit from the establishment of such a center by receiving through it information from other areas, from the private sector, that we would not normally have in our hands.

Consequently, I think it would be very useful in terms of both the transfer of information from the private sector to the public sector, and the transfer of research and information from the public sector to the private sector.

Senator NUNN. The private sector might be able to explain to the Federal bureaucracy how you go about obeying an Executive order of the President of the United States, might it not?

Mr. INK. I note that you have some concern about that process. It is one which, frankly, has baffled me for a number of years. If we had more time, which we do not, I would go over with you some of the experiences that we have had in which we have traced back the amount of time it takes various agencies to implement Executive orders and legislation, which is generally much, much too long.

Senator NUNN. I do not want to get bogged down on that. Go ahead and proceed.

Mr. INK. In this particular instance I am not familiar with where the agencies stand on implementation, but I do know that in other instances implementation has taken quite a while.

Productivity measurement provides a useful means for management to examine the trend that has occurred in a given operation, such as the decrease or increase of productivity in the maintenance of vehicles, so that analysis can be made of the factors which contributed to the rise or fall and this information be utilized in subsequent management decisions. Thus, the promotion and use of productivity measurement at all levels of Government can have a very significant management effect.

Another important potential use of productivity data is in manpower and budget planning leading to resource allocation. We have

not reached that point on a broad scale, but as the quality of the measures improves, and managers at various levels gain increased understanding and competence in productivity measurement and use, and as we learn better how to incorporate into the budget process itself, we are confident that significant benefits can be derived from this undertaking.

We urge that the committee, in its consideration of productivity, as you mentioned earlier, Mr. Chairman, take into account the productivity efforts now underway so that they can be strengthened and not inadvertently discouraged.

From the foregoing, I believe you can see, Mr. Chairman, that we fully appreciate the value of productivity, but it is also important to consider productivity within the broader framework of program effectiveness. In my previous testimony, I stated that: . . . important as productivity is, it is only a building block, a measurement tool, and not the end in itself."

Here, Mr. Chairman, may I insert that I am talking about productivity in the management sense. When we are talking about the economic capacity of the Nation as a whole, productivity has a much broader meaning.

Our efforts in the Federal sector must be directed ultimately to program effectiveness and achievement of program goals and objectives. The means by which we attain these ends, and fulfill the needs and resolve the problems of the private and public sectors of our economy, lead us into far reaching areas concerning programs of all agencies. Some of our Government agencies are primarily concerned with the private sector. Other Government organizations direct most of their efforts to the public arena and some are mixed in their daily endeavors. Thus, the question of organizational structure to promote the nation's productivity, both in the public and private sectors, is very complex and has many dimensions.

In the management of Federal programs, consideration must also be given to quality factors such as social and economic indicators, quality of services produced, and the quality of the work environment itself, along with the more readily quantifiable factors of productivity and efficiency. Only by looking at both the quantitative and qualitative factors in tandem can we develop a true overall measure of program effectiveness. The desirability of increased productivity in certain activities, for example, in a few cases may be more than offset by the need for improved quality which may require even reduced productivity, at least for a period of time.

Therefore, although I have devoted considerable time and effort to promoting the Federal productivity program, I consider it imperative that productivity be looked on as only one of several management tools, and as only one of several very important elements to be considered and used when making program decisions. Again, I point out, Mr. Chairman, that my note of caution has little relevance to those other applications of productivity, such as economic analyses. Here I am talking about productivity as a part of Federal management.

I strongly support the need for a clearer leadership arrangement and increased focus. There is also a need to better relate the public and private interest. But I urge great caution about embedding requirements in legislation which would single out productivity for special organizational or procedural arrangements:

I would not recommend, for example, that each Federal agency be legislatively required to establish a productivity staff for dealing with

productivity and related considerations as reflected in section 203 of S. 937.

I have reservations concerning the additional reporting requirements of a separate productivity impact statement being specified by law.

Senator NUNN. At this point, let me say that I have no intention of trying to push for a separate productivity impact statement, if we have an economic or inflation impact statement that is being successfully and properly used.

I joined with Senator Brock the other day in cosponsoring an economic and inflation statement in the consumer protection bill. Depending on how that legislation moves, it will reconsider this provision in my bill, because I consider a productivity impact statement aimed in the same direction as the economic impact statement required by the Brock amendment. I do not think you need both. So I agree with you on this point.

Mr. INK. I see.

Senator NUNN. At the same time I want to pursue this inasmuch legislation as we can to make sure that in some form or other it becomes law.

Mr. INK. I understand.

The provision of grant funds to States and local governments exclusively for productivity seems to run counter to the objective of reducing the use of narrow categorical grants. This concern, Mr. Chairman, is directed toward grants and not toward contracts, which can and generally are narrowly focused and targeted.

Finally, the proposed legislation, in certain provisions, appears to be unlimited and nonspecific in nature and could result in considerable funding pressure over time.

For these reasons, we would support changes in these bills which I understand are being incorporated in an Administration bill which is being submitted to the Hill.

I do not know if that has been received yet.

Senator NUNN. We have not received it, however, we have heard about it. I am delighted that the Administration is going to take a firm and specific position on this subject matter. I think that will be a very positive step and will assist us in coming up with the best product of all of these.

Mr. INK. In summary, and as indicated in earlier testimony, we do agree with providing a more effective focal point for the enhancement of governmental productivity efforts.

And I believe the economic situation of today, as I indicated earlier, emphasizes the timeliness of such action.

We agree that the existing mechanism is not adequate. I must say, Mr. Chairman, I believe the uncertainty of funding has also severely handicapped the existing mechanism. And I think the Commission and the staff are to be congratulated for holding together as much of a program as they were able to under extremely difficult circumstances, circumstances in which I think many people would have just given up. But these people did not give up. Mr. Koper and other continued to have an influence and an impact under extremely uncertain and tenuous circumstances.

We strongly support the emphasis in the proposed bill on the quality of the work environment. However, we are anxious that the legisla-

tion be perceived as enhancing the use of productivity for achieving management and economic objectives rather than as an end in itself. Any proposed legislation for productivity, we believe, must be viewed within the broader context of overall program and management effectiveness, insofar as management is concerned.

I would like to close by extending my appreciation to this committee for its interest in, and support of, productivity improvement efforts.

This concludes my prepared statement, Mr. Chairman. I will be happy to respond to any questions you may have.

Senator NUNN. We could go on with a good many different questions. I appreciate the work that you and your joint group have done in this area.

As we begin to mark up this legislation and when we receive the administration's official position in the form of a bill, I would hope you would continue to work with us because what we want here is to fill the vacuum we feel exists in this area in this country.

We do not want to duplicate, and we do not want to create an agency that would become a very Washington oriented top heavy agency that could not really disseminate the information to the field.

So we will be calling on you to assist us in this regard as we begin trying to come to a final conclusion on what form this legislation should take.

Mr. INK. We would be very happy to work closely with the committee. We have had that opportunity in several other instances, and we very much would like to do so in this instance.

Senator NUNN. I have two questions here from Senator Percy to be submitted for the record. If you could respond to those in writing, we would put it in the record at this point.

[The questions by Senator Percy to Mr. Ink, with responses, follow:]

UNITED STATES OF AMERICA,
GENERAL SERVICES ADMINISTRATION,
Washington, D.C., April 1, 1975.

HON. ABRAHAM RIBICOFF,
Chairman, Committee on Government Operations,
U.S. Senate, Washington, D.C.

Dear Mr. CHAIRMAN: I appreciated the opportunity of appearing before the Committee on Government Operations on March 20, 1975, to comment on the two Senate bills presently being considered by the Committee: S. 765, the "National Center for Productivity and Quality of Working Life Act," and S. 937, the "National Productivity Act of 1975."

The members of the Committee are to be commended for their efforts to focus attention on the subject of productivity, an area of vital concern to both public and private sectors of the economy.

At the conclusion of my testimony, Senator Percy requested that I respond in writing to two questions. My response is enclosed.

In closing, I would like to emphasize that if we in GSA can be of further assistance to the Committee, in its efforts to strengthen the Nation's productivity, please do not hesitate to contact us.

Sincerely,

DWIGHT A. INK,
Deputy Administrator.

RESPONSES TO SENATOR PERCY'S QUESTIONS FROM DWIGHT INK

Question 1. Mr. Ink, I understand that you have spent some of your personal time working with the United National ECOSAC on public administrative improvement in the developing countries. As you may know, I spent a good deal of time last fall working on the Economic and Social Council as a member of the

U.S. Delegation, representing the Senate. Could you briefly tell us of your experience, as it relates to our productivity improvement efforts?

Answer. In early March I served as the United States member of the United Nations Board of Experts which is assembled every three years to assess the work of the United Nations in helping developing countries strengthen their capabilities in the field of Public Administration and Finance. I also participated in the Asian conference called by the United Nations in Kuala Lumpur last fall to discuss management problems.

In these discussions, there has been considerable interest in efficiency and productivity, both positive and negative. On the one hand, there is a good deal of interest in improving efficiency of operations and in increasing productivity. On the other hand, there is also concern about the human aspect of management. In particular, I have encountered the view that many of the management experts concerned with improving efficiency tend to be out of the mainstream of agency efforts to meet human needs and tend to promote productivity and efficiency simply for the sake of productivity and efficiency.

With respect to the management application of productivity and other elements of efficiency, which I regard as extremely important, I suggested that these concepts "be considered within the broader goal of program effectiveness which incorporates not only efficiency, but also social and economic indicators and other factors of quality of programs designed to meet public needs." This concept was well received by my colleagues from around the world and agreed upon without dissent.

Although managerial background and program needs vary considerably from one nation to another, I believe this meshing of efficient management with people considerations simply recognizes characteristics of human nature which are universal.

I am convinced that the reason our Federal productivity effort has been much more successful during the last three years than previously, is the emphasis given to the quality of work environment and the fact that the principal focus of the interagency effort has been on productivity of programs, rather than individuals. These factors, combined with the shift in emphasis I mentioned above in which productivity management is looked upon as a part of a broader goal of program effectiveness, place productivity efforts in a far more positive light than was formerly the case. It is less threatening to individuals and places productivity within a far more people oriented context.

I am aware of your strong interest in the United Nation's activities, and also your support of the human elements of effective management. I hope this response will be useful to you.

Question 2. You have an outstanding reputation as an expert in government organization and administration. From your management perspective, do you favor creation of a rather strong, centralized productivity promotion unit, or do you prefer a weaker coordinating unit which relies mainly on the agencies to implement their own productivity improvement programs?

Answer. The concerted effort among the Civil Service Commission, the General Accounting Office, the Office of Management and Budget, the Bureau of Labor Statistics, the Joint Financial Management Improvement Program, and the General Services Administration over the past several years has resulted in a joint Federal productivity program that is very encouraging, and I would urge that the legislation permit this to continue. But this effort is concerned with only one portion of a national productivity program and we need a stronger mechanism with more stable funding arrangements to provide the broad national leadership and increased public focus.

The centralization of leadership responsibilities within a single independent agency as provided in S. 765 as well as in S. 937 and the Administration bill should meet these needs. However, it is extremely important to consider the concept to be followed in creating such an agency. I believe it would be important that such a central organization be strong from the standpoint of providing impetus to productivity policy and research. It should be equipped to deal with overall policy formulation and in serving as a focal point and conduit for the exchange of information between the public and private sectors. It should serve as a catalyst to encourage improved productivity and work quality. It needs sufficient strength to bring labor, industry and government together in joint undertakings.

Yet it should not be established in such a way that it develops over time as another layer of program operations in government organization. A central

organization for productivity should be policy oriented, not operationally oriented. Thus, this role does not require a large staff, but it is important to have sufficient skill and support that it can motivate both public and private leadership in striving for improved productivity.

The real strength of the Federal portion of the program depends heavily upon the actions of the various agencies. It is axiomatic that the agencies should regard productivity improvement as an inherent function of their management responsibilities and not as an extracurricular activity primarily the concern of a special commission. Otherwise, there is danger that a well staffed centralized productivity office, operationally oriented, would ultimately prove self-defeating, since it would tend to shift responsibility for this aspect of program management from the individual program manager to an outside group of productivity specialists not responsible for program operations.

Senator NUNN. Our next witness is Mr. Donald Ephlin. Mr. Ephlin is administrative assistant to Mr. Leonard Woodcock, president of the United Automobile Workers of America.

Mr. Ephlin, I understand you have been in this position, this important position, since 1970.

Since 1973, Mr. Ephlin has served as a member of the National Committee to Improve the Quality of Work Life, which is a very important part of the legislation we are considering.

Mr. Ephlin also has been recently involved in establishing a new plan using a group of similar techniques and employee participation in decisionmaking.

We are delighted you are here today. We know you have come a long way at considerable personal inconvenience. I apologize for not being able to get you on at the precise time.

Considering all the interruptions we usually have here, we are doing a little better than I anticipated. We would be delighted to receive your statement, and then we will probably have some questions.

TESTIMONY OF DONALD EPHLIN, ADMINISTRATIVE ASSISTANT TO THE PRESIDENT, INTERNATIONAL UNION, UAW

Mr. EPHLIN. It is a very great pleasure to have this opportunity to appear before this committee to present some of the views of our organization, the United Automobile Workers on the measures (S. 765 and S. 937) currently pending before this committee. We have a deep-rooted concern with improving productivity and the quality of working life.

Our union has long recognized the need for increasing productivity and this belief has been demonstrated in our agreements with the automobile industry which contain the following provision:

The improvement factor provided herein recognizes that a continuing improvement in the standard of living of employees depends upon technological progress, better tools, methods, processes and equipment, and a cooperative attitude on the part of all parties in such progress. It further recognizes the principle that to produce more with the same amount of human effort is a sound economic and social objective.

We have felt for many years that through improving productivity our members could receive real wages increases without causing increases in the prices of the products we manufacture and we also firmly believe that productivity should not be increased by imposing unfair work standards on our members.

A few years ago, the then chairman of the board of General Motors, Mr. Richard Gerstenberg, expressed it well when he said:

Productivity is not a matter of making employees work longer or harder—we must improve working conditions and take out the boredom from routine jobs... we must increase an employee's satisfaction with his job, heighten pride of workmanship and as far as is feasible involve the employee personally in decisions that relate directly to his job... (April 26, 1972)

Almost everyone is in favor of improving productivity, albeit, by different methods and I am sure many people will support the provisions of these two bills dealing with productivity improvements. However, increasing productivity is only a means to achieve desirable economic results. On the other hand, improving the quality of working life, which may also create other desirable results, is by itself a worthy objective. We feel, therefore, that S. 765, with its far greater emphasis on improving the quality of working life, is the more advantageous of the two bills you are considering. We share the view expressed by earlier witnesses before this committee that the provisions of this act designed to improve the quality of working life should not be undertaken only with a view to increasing productivity but, in fact, should be established as the policy of our Government with the sole purpose of making work more meaningful and rewarding for the millions of Americans engaged in manufacturing and the service industries.

The goals of increasing quality of work life and productivity are part of the much broader problem facing our Nation, which is covered in other pending legislation; namely, the Equal Opportunity and Full Employment Act. Leonard Woodcock, president of the United Automobile Workers, during his testimony before the Joint Economic Committee on February 19, described the Full Employment Act as potentially one of the most important and far-reaching pieces of legislation to come before the U.S. Congress.

Other members of our international executive board will be testifying in support of that measure in coming weeks. We would certainly hope that passage of one of the bills pending before this committee dealing with only two of the many difficult problems facing our Nation would not detract from the importance of passing the more comprehensive Equal Opportunity and Full Employment Act.

A few years ago the "Blue Collar Blues" and "Humanizing the Workplace" became very popular items for the media and almost every periodical from Playboy to the Harvard Business Review contained articles on these subjects. Unfortunately, much of what was written was romantic, unrealistic and totally unrelated to the realities of working life in America. Because so much of the material, broadcast and written up in magazines, was unrelated to the real problems facing American workers, efforts to research and correct the injustices that did exist were discouraged. Fortunately, serious efforts to understand the problems of working life and to find solutions for these problems went forward, although at a slower pace than might otherwise have been possible.

Sad to say European managements seemed more concerned with improving the quality of working life than their American counterparts and they undertook more innovative steps to seek solutions. Part of their concern was no doubt caused by their full employment economies.

In these past few years, our union has been involved in a number

of experimental projects dealing with improving the quality of working life. I would like to cite a few of these projects for you in order to demonstrate the importance we attach to these efforts. Prior to the 1973 negotiations in the auto industry, many experiments in organizational development were being undertaken on an unilateral basis by the corporations. We felt that it was our moral and legal responsibility as the representative of the workers involved to participate in any discussions leading to changes in the conditions under which work would be performed. It was obvious, however, that the efforts to improve the quality of working life could not be totally solved during one set of negotiations in a climate of crisis. We were desirous of establishing a mechanism for our union to participate fully in the efforts to improve the quality of working life on a year round basis. As a result of these discussions, agreements were reached to establish national committees to work on the problem in each of the automobile companies. The agreement with General Motors contained the following statement:

In discussions prior to the opening of the current negotiations for a new collective bargaining agreement, General Motors Corporation and the UAW gave recognition to the desirability of mutual effort to improve the quality of work life for the employees. In consultation with Union representatives, certain projects have been undertaken by management in the field of organizational development, involving the participation of represented employees. These and other projects and experiments which may be undertaken in the future are designed to improve the quality of work life, thereby advantaging the worker by making work a more satisfying experience advantaging the Corporation by leading to a reduction in employee absenteeism and turnover, and advantaging the consumer through improvement in the quality of the products manufactured.

It is important to note in that statement that both the General Motors Corp. and the United Automobile Workers agree that there are advantages to society in improving the quality of working life which are unrelated to productivity, per se, or at least to the usual definition of productivity.

The National GM-UAW Committee to Improve the Quality of Worklife has been functioning now for approximately 18 months. In spite of the severe layoffs in the automobile industry, the activities of the committee are being expanded constantly. Many studies have been undertaken on behalf of the committee in a constant effort to better understand the problems which exist. A number of joint labor-management programs in organizational development are underway.

Another major step forward was taken when the UAW and the Rockwell Standard Division of Rockwell International reached an agreement in August of 1974 to launch a joint experiment at a new plant to be opened in Battle Creek, Mich. Under the agreement, the company and the union are endeavoring to utilize a number of innovative concepts in setting up the new plant including:

Training of employees for widened responsibilities to maximize job interchangeability and manpower mobility.

Establishment of "work team" concepts within departments and/or specified work areas.

Employee participation in establishing production standards with due regard to competitive factors and job security for employees involved.

Employee participation in the determination of policies covering overtime, work-break periods, layoffs and leaves of absence which would take individual needs into consideration.

Emphasis on foreman-employee relationships designed to resolve work problems at the lowest possible level.

Another important experiment has been undertaken by the UAW and Harman Industries at the plant in Bolivar, Tenn. The present National Commission on Productivity and Work Quality funded some of the research in connection with this experiment. The Bolivar experiment has attracted a great deal of attention because it was one of the first such efforts in a large manufacturing plant covered by an existing labor agreement. From the outset, this program has not only been approved by top corporate officials and UAW officers, but they have been actively involved in this work improvement program.

In addition to these company-based projects, I have had the opportunity as a representative of the UAW to participate to a limited degree in the communitywide programs in Jamestown, N.Y., and Muskegon, Mich.

It is obviously far too early to gage precisely the end result of these efforts, but developments to date have convinced us that there is a tremendous potential for making improvements in the quality of working life which can benefit our membership, companies with whom we bargain, and the public at large.

This rather limited experience has convinced us that there are real problems in American industry that require a great deal of research and of the need for far greater experimentation seeking to find ways to improve the quality of working life.

Many of the functions for the proposed center as outlined in Senate bill 765 can fill a very important need. There is no question that a national clearinghouse is needed to collect and disseminate information about ongoing programs undertaken to improve the quality of working life.

Because of the UAW's involvements in some of these programs, we are constantly being contacted by a large number of professional associations, educational institutions, and management representatives, all seeking information, either written material about the experiments which are taking place, or inviting UAW speakers to address their groups.

Various studies, research projects, and grants outlined in the bill can be of tremendous value to the expansion of labor and management efforts to improve the quality of working life.

The structure that is proposed for the Center is to us a very important part of this legislation as we feel efforts to improve the quality of working life in America should properly be undertaken by a partnership involving labor, management, and government. We believe that the Government's role should be largely to support, encourage, and assist labor and management to carry out programs at the company or plant level. Just as worker participation in decisionmaking is a vital ingredient in improving working life, total participation and commitment by labor and management at all levels is necessary if we are to make meaningful progress in these areas.

It is my understanding that the proposed Center would seek to examine and identify existing laws and regulations which impair the growth of productivity and improved quality of work life. Another function would be the encouragement of labor-management cooperation in these fields.

In the course of the discussion on these bills, consideration should be given to the fact that the labor relations system in our country tends to discourage joint labor-management efforts.

For example, a large number of professional engineers at a major aerospace company decided they wanted union representation. When sufficient numbers signed cards indicating they wished to be represented by our union, a petition was filed with the National Labor Relations Board in April of 1972. In November of 1974, the NLRB finally ordered a representation election. The majority of people voting in that election voted in favor of UAW representation and we were certified as the bargaining agent by the NLRB in January of 1975. Now, however, the company, one of America's largest defense contractors has refused to bargain, making it necessary for the union to file an unfair labor practice charge against the company. The NLRB has now scheduled a hearing on this matter for late next month.

It is impossible at this time to estimate the additional delay involved before collective bargaining actually commences in an effort to reach an agreement. Under these circumstances, there are two questions which are quite difficult to answer.

1. What effect does this type of delay have on the productivity of the workers involved when their democratically expressed desire for union representation is constantly frustrated by loopholes in the law?

2. What will be the attitude of these workers when an agreement is finally negotiated and it is suggested to them that they undertake the joint effort with management seeking ways to improve productivity?

The problem exists even in large multiplant corporations with whom we have a long standing collective bargaining relationship as well as functioning labor-management committees seeking to improve the quality of work life.

When new plants are to be opened, we are oftentimes confronted with bitter antiunion campaigns intended to prevent the organization of the workers in the plant. It is rather inconsistent to condemn and vilify organized labor at one point in time and shortly thereafter endeavor to establish meaningful cooperative efforts to improve productivity and the quality of working life.

Before closing, let me say that we are pleased with many of the provisions of S. 765. We especially support the provisions dealing with finding a means to alleviate the human problems created by productivity improvement. These measures would help to eliminate the very natural fear on the part of the workers and their union that increased productivity measures might mean more layoffs.

We would urge that the provisions dealing with these matters as well as retraining, displacement allowances, and the like be strengthened so that productivity improvements made in the national interest are not made at the expense of individual workers.

Senator NUNN. Thank you very much, Mr. Ephlin. That was an excellent presentation from one of our outstanding labor unions in the country representing thousands of people.

I particularly agree that we need to provide ways of having better and ongoing management-labor relations. I think this is one of the real weaknesses of our country in our competitive world environment because we are all in the same boat when you analyze it and when you consider we are competing.

Again, I would like to ask a lot of questions, and there are several that I have, but I am going to have to defer to Senator Percy at this time as we have a vote on.

I know he particularly wants to ask a couple of questions. I might add, and I have already expressed—I do not know whether you heard it—that I think some of the provisions in Senator Percy's legislation dealing with the quality of work are very positive. I agree with you in that.

I am certainly receptive to them becoming a part of the final legislation. Senator Percy.

Senator PERCY. Thank you, Mr. Chairman.

Mr. Ephlin, I would like to express great appreciation to you for being here. We had the pleasure of having Leonard Woodcock testify just a week or 10 days ago, I guess, before the Joint Economic Committee. He sat alongside Henry Ford, they both testified. And very much along the same lines.

I think when you reference as much as you did General Motors, it is not necessarily saying that what is good for General Motors is good for the country. But in this particular case, when General Motors is working so much in harmony with the thinking that the UAW has expressed, I think it is a great demonstration where management and labor can work together.

I think this whole attitude that you have expressed again reinforces what I said 2 weeks ago.

Leonard Woodcock is one of the great labor leaders of all time in America. I think the UAW is one of the greatest labor unions I have ever worked with, and I have worked intimately with them, as you know. I visited your international headquarters, attended your international board meetings at Black Lake, and I am just constantly amazed at how far ahead UAW is in social concern. It constantly is working for what is good for the United States of America, not just parochially looking in the short run at what is particularly good for the UAW membership.

You go way beyond that.

I think that attitude is certainly expressed in your very brilliant testimony this morning. I wonder if you could comment first, because you are in touch with other labor groups, other major unions, what do you think the attitude of other labor unions would be in this regard? Have you had an opportunity to discuss it with any of them? Do you know from their background and philosophy whether they would be of like mind in some of the recommendations that you have made with regard to quality of working life and productivity?

Mr. EPHLIN. I cannot speak confidentially, Senator. But over the last couple of years, whenever there are large seminars held on this subject as a rule they invite us to speak on one side of the issue, and other labor representatives to speak on the other side. Because, frankly, there has not been too much support from other unions to efforts to improve the quality of working life in the same fashion as we have supported it.

I think that if these programs are properly developed and explained, removing some of the fears that they are really not intended to take advantage of the workers, but to help them and so forth, that there would be much greater support.

Senator PERCY. Let us take a look at the worker that you are dealing with. I have been associated with blue collar workers for many, many

years. I worked on assembly lines and worked on drill presses and machine tools with them in tool rooms and grew up with them and had a lot of them train me.

But over a period of time they have changed a great deal. Their education seems to be at a much higher level. Their degree of sophistication is much higher than I have experienced it.

In recent meetings in Ottawa a couple weeks ago of 11 UAW local union presidents, I was stunned at how far I had gotten behind some of their thinking about concepts. They were peers with the heads of industry, very major companies that were meeting with them in that particular conference on economy.

Has this factor, constant steady increase in education, understanding, knowledge and so forth, brought about a dissatisfaction with work as we have known it before, and that you cannot just assign a person who has that skill, that ability and that mental capacity for creativity to just do the routine things which a machine or brute force could have done before?

Is that one of the reasons why industry must be very cognizant of this and move very rapidly?

Mr. EPHLIN. I think very definitely that this is a factor, Senator. However, I do not think that this problem is as new as we sometimes think of it, as being.

There was a study done of an automobile assembly plant in 1949, about which a book was written called "The Man on the Assembly Line." If you read that book today without knowing when it was written, you would think it was done in recent months. That particular plant had a higher than average educational level, however, at that time.

The work force was young and was not accustomed to that type of work. I do feel though that the workers' attitudes on many of these issues have changed, as our country has changed.

However, I think it has changed for the better in most respects. I am certainly not condemning the newer members of the work force. I think they are ahead of us, and we have to work harder to catch up with them.

Senator PERCY. I agree with you.

Lastly, you indicate that consideration should be given to the fact that the labor relations system in our country tends to discourage joint labor-management efforts. I have been very much impressed in some other countries where labor and management seem to have much more of a commonality of goal. The enemy is the fellow competing against them, taking their jobs and business away. I think the UAW has been unique in trying to get on the side where there is a definite goal and objective to increase the size of the pie, rather than just argue over who gets what slice of the pie.

Certainly, there are Leonard Woodcock's statements on the necessity of companies having reasonable profits as essential. He knows that that is the capital for new job creation.

Do you have any other specific ideas or suggestions as to what we can do to improve our collective bargaining to create a better atmosphere for us working together in the same direction, rather than going off in different directions?

Mr. EPHLIN. I do not think it is so much in collective bargaining, Senator, as we start off under our law as adversaries in organizing a campaign which quite often is very bitter.

The labor union is not accepted as being an acceptable partner in the system at that point in time. It often gets very bitter and is very time consuming.

It is rather difficult then to change hats and become partners overnight. I think this is one of the reasons that we are behind some of the European countries, where the labor movement is an acceptable part of society and plays a different role than we do.

Senator PERCY. My judgment would be that, if more unions would do exactly what you are doing, sit down with management, work out and walk in their shoes and see some of their problems and the necessity of reducing costs, eliminating excessive unnecessary costs, and so forth, I think this word would get around and there would be a much more receptive attitude toward organized labor.

I think you are working in an enlightened self-interest, but also I would say in the national interest.

I would like to commend you very much, indeed. We very much appreciate your being here. I hope you will express our deep appreciation to Mr. Woodcock, also.

[Supplemental information supplied by Mr. Ephlin follows:]

GENERAL MOTORS CORP.,
November 19, 1973.

Mr. IRVING BLUESTONE,
Vice President and Director, General Motors Department, International Union,
UAW, Solidarity House, Detroit, Mich.

DEAR Mr. BLUESTONE: In discussions prior to opening of the current negotiations for a new collective bargaining agreement, General Motors Corporation and the UAW gave recognition to the desirability of mutual effort to improve the quality of work life for the employees. In consultation with Union representatives, certain projects have been undertaken by management in the field of organizational development, involving the participation of represented employees. These and other projects and experiments which may be undertaken in the future are designed to improve the quality of work life, thereby advantaging the worker by making work a more satisfying experience, advantaging the Corporation by leading to a reduction in employee absenteeism and turnover, and advantaging the consumer through improvement in the quality of the products manufactured.

As a result of these earlier discussions and further discussions during the course of the current negotiations for a new collective bargaining agreement, the parties have decided that a Committee to Improve the Quality of Work Life composed of representatives of the International Union and General Motors will be established at the national level.

This Committee will meet periodically and have responsibility for:

1. Reviewing and evaluating programs of the Corporation which involve improving the work environment of employees represented by the UAW.

2. Developing experiments and projects on that area.

3. Maintaining records of its meetings, deliberations and all experiments and evaluations it conducts.

4. Making reports to the Corporation and the Union on the results of its activities.

5. Arranging for any outside counseling which it feels is necessary or desirable with the expenses thereof to be shared equally by the Corporation and the Union.

The Corporation agrees to request and encourage its plant managements to cooperate in the conduct of such experiments and projects, and recognizes that cooperation by its plant floor supervision is essential to success of this program.

The Union agrees to request and encourage its members to their local union representatives to cooperate in such experiments and projects, and recognizes

that the benefits which can flow to employes as a result of successful experimentation is dependent on the cooperation and participation of those employes and the local union representatives.

Very truly yours,

GEORGE B. MORRIS, Jr.,
Vice President.

QUESTIONS AND ANSWERS ABOUT THE WORK IMPROVEMENT PROGRAM

(A Joint Effort by Harman International Industries and UAW)

WHAT IS THE WORK IMPROVEMENT PROGRAM?

The Work Improvement Program is a joint effort between management and the union to improve the quality of work life for all employees in the plant. It is supported by Harman International and the United Auto Workers.

WHAT ARE THE GOALS OF THE WORK IMPROVEMENT PROGRAM?

The goals of the program include improving work in four areas:

Increased security.—The first area of security involves health and safety, which we intend to improve by creating the best possible environment, with a minimum of hazards.

Security against loss of job is more difficult to achieve, as the Harman Automotive Division is part of a market which is subject to fluctuations that are beyond our control. No one can promise that a worker will never be laid off. In the overall sense, security from loss of job depends on effectively operating the plant to assure receiving the major portion of the available business, so the plant continues in business and continues employing workers.

Increased equity.—By making the distribution of work, the organization of work, the rewards of work, and the rules under which we work as fair and as reasonable as they can be.

Increased individuation.—By recognizing that all people are not the same, but have different interests and needs, and by increasing the opportunities for people to develop in their own ways.

Increased democracy.—By giving each worker more opportunities to have a say in the decisions that affect his life, including his work life.

To achieve these goals, it is necessary for all participants to work together in a spirit of mutuality. Furthermore, for the project to succeed, the company must stay in business, and grow and prosper. The growth of the business should be consistent with security, equity, individuation, and democracy.

WHY SHOULD WE HAVE A WORK IMPROVEMENT PROGRAM?

We spend more time in our lives working than we spend doing anything else. Improving work should improve our lives in general.

The company is interested in a Work Improvement Program because it recognizes that there is a need to make work better and it has a part of the responsibility.

The United Auto Workers has as its main purpose improving the situation of working people; it is not only interested in improving work in this plant, but has negotiated agreements with the major automobile companies to start programs with them also.

WHY WAS ALL THAT INTERVIEWING DONE LAST YEAR?

The men and women who were interviewed in 1973 will remember that many questions about working conditions and general attitudes were asked. This was done to find out more about how the people in the factory and the offices rated their work in terms of security, equity, individuation, and democracy.

By having information about how things stood in 1973, it should be possible to get some idea of how much things have changed in about two years, as a result of the Work Improvement Program. In the meantime, short surveys are being carried out with the various experiment groups to see if changes are already happening.

The questions that were asked were also helpful to stimulate people to think about their work and what can be done to improve it.

This year, the people who were interviewed last year were asked to cooperate with a brief health examination, as the idea of work improvement includes improving health and safety.

WHO WILL SEE THE RESULTS OF ALL THE INTERVIEWING AND OTHER INFORMATION?

The results of the large survey carried out last year are available—on a loan basis—to any person in the company. We hope to prepare a smaller, summary report in the near future.

There is also a "Progress Report" that was prepared in June 1974. Any employee of the plant may have a copy of this report to keep by requesting it from the project staff.

WHO WILL BENEFIT FROM THIS PROGRAM?

Everyone. It is a plantwide program. But it does take time to try the ideas for improvements out experimentally, before they are extended to others. Furthermore, the improvements in one department may not be exactly the same as those in another, because jobs are different and the problems are different.

WHY DOES IT TAKE SO LONG FOR EVERYONE TO BENEFIT?

Each change in the way work is organized requires adjustments to be made in other areas of the plant operation. It takes time to see if a new idea really works.

It is very important that as many people as possible have a say in what will be tried and how it will be tried, and this takes time. In this program we want to be as sure as we can that the changes mean real benefits to the people who will have to live with them.

DOES THE WORK IMPROVEMENT PROGRAM TAKE AWAY ANY OF MY RIGHTS AS A WORKER?

No. All of the rights that you have under the labor contract are still there, whether you actively participate in the Work Improvement Program or not.

IS THERE AN AGREEMENT BETWEEN THE COMPANY AND THE UNION ABOUT THE WORK IMPROVEMENT PROGRAM?

Yes. They have both signed an agreement that reads as follows:

The purpose of the joint management-labor Work Improvement Program is to make work better and more satisfying for all employees, salaried and hourly, while maintaining the necessary productivity for job security.

The purpose is not to increase productivity. If increased productivity is a by-product of the program, ways of rewarding the employees for increased productivity will become legitimate matters for inclusion in the program.

A Review Committee will meet monthly to hear reports on and review the activities of the Work Improvement Program. The Review Committee will consist of members of the Bargaining Committee of the local union and three people designated by management.

A Working Committee will plan and coordinate the day-to-day Work Improvement Program. The membership of the Working Committee will be: The President of the union local, four members of the union selected by the President of the union local, subject to the review of the Review Committee, and five people designated by management. One member of the Bargaining Committee will attend each Working Committee meeting.

No worker will lose his job, pay, or seniority as a result of a work improvement experiment conducted in the plant, whether he is a participant in the experiment or not.

Participation in an experiment in the Work Improvement Program is voluntary. No one will be forced to participate.

Trying new ideas requires extra flexibility on everyone's part. The union and the company will both cooperate in trying new ideas in experimental groups, giving new ways of doing things a chance to prove themselves. This does not mean that either party relinquishes its contractual rights.

Termination by either party will require 30 days notice.

IS THE PROGRAM PARTIAL TO CERTAIN GROUPS MORE THAN OTHERS?

No. It is necessary to start some of the changes on a small scale first, to find out what works and what does not, and the different experiment groups progress in different ways and at different speeds, depending on their particular interests and ideas, but the purpose of the program is to benefit everyone.

WHAT ABOUT SALARIED WORKERS?

Salaried employees are also a part of the program. Work improvement should benefit everyone, and should not be for one group at the expense of another. In recent weeks, the first steps have been taken to involve salaried workers in discussions about their work and possible improvements. These discussions will continue as a part of the overall expansion of the program.

WHO DECIDES WHAT CHANGES WILL BE TRIED OUT IN THE EXPERIMENTS?

The employees in the experiment groups make these decisions, with the approval of the Working Committee. This is a part of the idea of increasing democracy where the people affected by the decisions have a say in what the decisions will be.

ARE PEOPLE FORCED TO PARTICIPATE IN THE EXPERIMENTS?

No. All the experiment participants are volunteers. In fact, even after volunteering, a worker may decide to drop out of the program. Some of the people who started out in the first experiments have asked to drop out and they have done so.

JUST WHAT IS THE WORKING COMMITTEE?

The Working Committee is the group that has the responsibility for coordinating all of the efforts of the Work Improvement Program. It is made up of equal numbers of managers and union members.

DOES THE PROGRAM WORK ONLY THROUGH EXPERIMENTS?

No. There have been several plantwide improvements that have been initiated in the Working Committee: The Credit Union, the addition of fans to improve ventilation, the relocation of the time-clocks to reduce congestion.

There are also plans underway that will improve the working conditions in the plant in general. A new die cast and trim building will be built, creating more space in the existing plant and making it possible to make the work areas more pleasant and comfortable. It is a big project, and will probably take one and a half to two years to complete.

WHO PAYS FOR THE WORK IMPROVEMENT PROGRAM?

Harman International and the United Auto Workers International have both contributed to the support of the program. Additional money has come from the federal government and from non-profit foundations. This supports the work of the project staff. The Steelworks of Canada have also made a contribution to support the program.

Harman International pays the expenses of the changes themselves, including the costs of building, new equipment, and the time that the employees of the company put into the program.

WHO PAYS THE SALARIES OF THE PROJECT STAFF?

The project staff receive their paychecks from Harvard University, out of the contributions to the program made by the company, the union, the foundations, and the federal government. The project staff do not receive direct pay from either the company or the union. They work for the Work Improvement Program.

WILL THE PROJECT STAFF ALWAYS BE HERE AS A PART OF THE PROGRAM?

Eventually, we hope soon, the Work Improvement Program should be running on its own, without the constant participation of the project staff (Bob and

Maggie Duckles, Hal Sheppard, and Michael Maccoby). The management and the union might want the project staff (along with technical advisors) to come back every few months to check on the progress made. The real success of the program depends on how much everybody here makes it their own—permanently—without outside assistance.

HOW CAN I SUPPORT THE PROGRAM RIGHT AWAY?

The most important way that anyone can support the program right away is by thinking about ways of improving the quality of work life either in your area or plantwide and making your ideas known to the Working Committee. It is never too soon to talk with your fellow workers about better ways of doing things and trying to put together a plan.

Be patient. Every idea cannot be tried out immediately, and every person who wants to be in an experiment cannot be included right away.

DOES THIS MEAN I SHOULD TELL THE WORKING COMMITTEE ABOUT EVERY COMPLAINT OR PROBLEM?

No. Complaints and grievances should be handled in the usual manner. The Working Committee is not a substitute for the grievance procedure. What are needed most are suggestions for new ways of doing things that will solve problems before they become problems.

HOW DID THE PROGRAM GET STARTED?

The program started when Sidney Harman, President of Harman International, and Irving Bluestone, Vice-President of the UAW, met and discussed the need for finding ways to improve the quality of work life.

WHAT HAPPENED AFTER THAT?

In the fall of 1972, a meeting was held in the plant with most of the employees. Sidney Harman, President of the company, and E. T. Michael, Director of Region 8 of the UAW, spoke to the meeting about the idea of starting the program.

HOW DID THE PROGRAM STAFF GET INVOLVED?

Dr. Harman, Mr. Michael, and Mr. Bluestone asked Dr. Maccoby to assist in the implementation of the program. The staff of the Work Improvement Program work under his direction, with the approval of the Working Committee.

The Working Committee is made up of the following people: Joe Cooper, Mac Hobson, Terry Ingle, Bill Kirk, John Lyle, Arthur McCarver, Lubie Overton, Mannie Perkins, Vann Pettigrew, and Frankie Rainey.

Senator PERCY. These hearings are recessed until 10 o'clock tomorrow morning when we will reconvene in the same room.

[Whereupon, at 12:40 p.m., the committee recessed, to reconvene Friday, March 21, 1975 at 10 a.m.]

1. The first part of the document is a letter from the President of the United States to the Congress, dated January 1, 1861. It is a very important document, as it contains the President's message to the Congress at the beginning of his first term.

2. The second part of the document is a report from the Secretary of the Treasury, dated January 1, 1861. It contains information about the state of the Treasury and the country's finances at the beginning of the year.

3. The third part of the document is a report from the Secretary of the Interior, dated January 1, 1861. It contains information about the state of the Interior and the country's resources at the beginning of the year.

4. The fourth part of the document is a report from the Secretary of the Navy, dated January 1, 1861. It contains information about the state of the Navy and the country's naval resources at the beginning of the year.

5. The fifth part of the document is a report from the Secretary of the War, dated January 1, 1861. It contains information about the state of the War and the country's military resources at the beginning of the year.

6. The sixth part of the document is a report from the Secretary of the State, dated January 1, 1861. It contains information about the state of the State and the country's diplomatic relations at the beginning of the year.

7. The seventh part of the document is a report from the Secretary of the Agriculture, dated January 1, 1861. It contains information about the state of the Agriculture and the country's agricultural resources at the beginning of the year.

8. The eighth part of the document is a report from the Secretary of the Commerce, dated January 1, 1861. It contains information about the state of the Commerce and the country's commercial resources at the beginning of the year.

9. The ninth part of the document is a report from the Secretary of the Education, dated January 1, 1861. It contains information about the state of the Education and the country's educational resources at the beginning of the year.

NATIONAL PRODUCTIVITY AND QUALITY OF WORKING LIFE—1975

FRIDAY, MARCH 21, 1975

U.S. SENATE,
COMMITTEE ON GOVERNMENT OPERATIONS,
Washington, D.C.

The committee met, pursuant to recess, at 10 a.m., in room 3302, Dirksen Building, Hon. Sam Nunn presiding.

Present: Senators Nunn and Percy.

Staff members present: Mr. W. P. Goodwin, Jr., chief counsel and staff director, Subcommittee on Oversight Procedures; Mr. J. Robert Vastine, Chief Minority Counsel to Government Operations Committee; Mr. Roy Jenney, congressional fellow—Senator Nunn; Mrs. Betsy Pritchard, chief clerk, Subcommittee on Oversight Procedures; Mr. Lyle Ryter, minority counsel to Subcommittee on Reports, Accounting and Management.

OPENING REMARKS OF SENATOR NUNN

Senator NUNN. The committee will come to order. Today is the second day of hearings by the Senate Government Operations Committee on Productivity.

Senator Ribicoff has asked me to be acting chairman for the purpose of having these hearings.

We have been specifically discussing two bills: S. 765 and S. 937 which Senator Percy and I have introduced and which has been cosponsored by several other Senators. I might add we have both cosponsored each other's bills so the differences we are talking about between the two bills are really not great chasms of difference.

Yesterday, we heard from representatives of the Department of Commerce, Department of Labor, General Services Administration, and United Auto Workers.

One major issue developed centered on whether there is a need for separate and distinct productivity impact statements. The administration witnesses criticized the proposed productivity statements because inflation impact statements were already mandated by Executive order. Yesterday during the hearing, I made a point that I think we needed productivity impact statements along with economic or inflation impact statements.

I do think we need something that will tell us here in Congress and the American people what the economic impact of given Federal decisions are. If the Executive order will really be implemented and working, then certainly I would agree with some of the criticisms.

I have cosponsored with Senator Brock an economic inflation impact statement, which is now part of the Consumer Protection bill, that would go along way toward this objective. As we move along in this area, I want to make it clear that I do not intend to be part of any effort to duplicate statements, one thing we do not want to do is proliferate paperwork. In my mind, productivity impact statements and economic or inflation impact statements are all, generally speaking, aimed in the same direction.

I will have to add that I was disappointed yesterday to find out from the Commerce Department and the Labor Department that even though the President has issued an Executive order requiring inflation impact statements—complete with a national television speech last November—that there has not been a single inflation impact statement issued. This leads one to question whether our government really works.

I understand the Labor Department, after 4 months, has now gotten their proposals over to the OMB and the OMB is now reviewing those procedures. This is one of the reasons that some of us in Congress feel that we need to codify this effort. Executive orders simply do not seem to be able to properly motivate and move the bureaucracy, particularly within a given time frame.

We are delighted to have this morning with us Mr. Elmer Staats, the head of the General Accounting Office and I would say the leader in productivity, as far as the Federal Government is concerned.

Mr. Staats has a long history of interesting productivity. Since 1970, the General Accounting Office has worked with OMB, the Civil Service Commission, the Bureau of Labor Statistics, and the General Services Administration in developing efforts to measure and enhance the productivity of Federal activities. I think of all people we have heard that Mr. Staats has more of a working knowledge from the governmental sector, as to what not only is being done but what should be done in this area and also, just as important, what should not be done. So many times, in our anxiousness to cure all problems in a very short time, we go overboard and sometimes create additional problems while we are solving the existing problems.

We are delighted to have you, Mr. Staats, and your capable assistants, Mr. Tom Morris, Mr. Donald Kull, and Mr. Fred Shaffer.

We particularly appreciate your having someone on here yesterday. I know you had a couple of people sitting in on the hearing and I think that will be valuable as we solicit your input, as we mark this bill up sometime after recess. We are pleased to have you and we look forward to hearing your testimony.

TESTIMONY OF ELMER B. STAATS, COMPTROLLER GENERAL OF THE UNITED STATES

Mr. STAATS. Thank you very much, Mr. Chairman. I would like to say at the outset, that since we were here last year discussing productivity, we have seen emerge the two bills which you and Senator Percy are cosponsoring.

Both of these bills make a landmark contribution in our opinion and either one as now written is a significant improvement over the current statute establishing the National Commission on Productivity and Work Quality.

It is my understanding you would like us to offer our views on the key provisions of the two bills, especially to comment on their differences where we have a useful opinion.

In order to do this systematically, I would like to compare the provisions of the bills with respect to:

- Their statements of findings, policies, and purposes.
- Organizational arrangements and functions.
- Responsibilities specified for other Federal agencies.
- Uses of contracts and grants.
- Duration of authorization and levels of funding.

Title I of each bill contains a forceful presentation of the problem of declining productivity growth in the United States, and the importance of action to arrest this trend. While the detailed provisions in title I of each bill differ, we find that the full range of points made are useful.

For example, we endorse the statement in section 103 of S. 937 that the Federal Government in cooperation with State and local governments shall provide leadership and assistance to stimulate a high rate of productivity growth in all sectors of the economy.

We also believe that the detailed provisions of S. 765 (sec. 101, 102, and 103) add elements which are necessary to a comprehensive statement of policy and purpose.

Especially relevant is the stress on removing barriers to productivity improvement, the need to strengthen employee security, the importance of expanding joint labor-management research and experimentation, the desirability of improving the utilization of institutions of higher learning, and the need for improved measures of productivity and the quality of working life.

We believe that title X of the two bills should be integrated in order to produce a strong charter.

Both bills establish an independent agency in the executive branch and abolish the present National Commission on Productivity and Work Quality. We fully concur with this. Our preferences in respect to the specific provisions are discussed below.

(1) OVERALL GOVERNING BODY

S. 765 establishes a 12-man "Board" appointed by the President and confirmed by the Senate. Its Federal members would be the Vice President; the Secretaries of Labor, Commerce and Treasury; and the Director of the Federal Mediation and Conciliation Service. S. 937 provides for a similar 11-member "Council" but omits the Vice President and the Director of Federal Mediation and Conciliation Service. We find either membership appropriate.

Mr. Chairman, I would like to digress here to say, in thinking about this further, since the preparation of this statement, it occurred to us that it might be useful to have the membership from the Federal side left flexible. We could suggest that the President appoint not more than, say, five from the Federal Government and leave it open, as to who these appointees should be, because I think it will change from time to time with respect to the needs of the President, and I would think from the standpoint of a more effective board.

For example, the Secretary of the Treasury has not always had the economic role he plays today. It might well be that at some point the

President will find it useful to have the Secretary of Agriculture on the Board, for example, but it would seem to us that perhaps an improvement would be to leave the membership open, but to specify not more than a specific number from the Federal Government.

Now, in respect to private sector members, each bill provides for three members representing private sector management, three representing labor, and one representing State and local governments—all confirmed by the Senate. In addition, S. 937 provides a member from academia appointed by the President and confirmed by the Senate. We consider this to be a most desirable addition in the light of the strong emphasis contained in both bills on utilizing the resources of institutions of higher learning.

(2) EXECUTIVE DIRECTION OF THE NATIONAL CENTER

Both bills provide for a Director—or Executive Director—appointed by the President, but S. 937 would also have the Director and his Deputy Director confirmed by the Senate. We believe there is merit in Senate confirmation of the Director, and recommend that this position be placed in executive level III rather than executive level IV as specified in S. 765 (S. 937 does not specify the level), which would mean unless the President had the authority to appoint at level V, where he would have discretion, it would have to be at the top of the civil service.

We think the level ought to be raised in order that the incumbent may have the same status as Under Secretaries and the Deputy Director of OMB. We likewise suggest that the restrictive language which requires that the Director “shall be appointed from private life” (S. 937) be deleted to provide for the possibility of choosing someone already serving in Government for this post.

(3) ESTABLISHMENT OF A SEPARATE NATIONAL ADVISORY COUNCIL

S. 765, in addition to a Board of Directors, establishes a National Advisory Council to “review and evaluate the administration, operation, and performance of the Center.” The Council would report its findings and recommendations to the President and the Congress annually. We do not believe that this additional oversight body is required and we feel it would detract from the exercise of the responsibilities of the Board or Council.

(4) SIZE AND COMPOSITION OF STAFF

S. 937 limits the staff to a number not to exceed 100. S. 765 does not specify a limitation but cautions that funds expended for the payment of staff should be held to a minimum. As we testified in December, we believe that the Center’s professional staff should be chosen to provide a wide range of competencies—both in public and private sector activities—as well as in the technological and human aspects of productivity. Thus it would be preferable not to specify the size of staff by statute in order to allow the Center to use the funds made available to achieve the best and fastest results, depending on the specific projects and priorities established.

We would like to suggest here that in lieu of the statutory provisions, there be a strong statement in the legislative history, in the committee report, and in the floor discussions, which would be helpful to the appropriations committee in passing on annual budgets, but we do shy away from a statutory prescription of staffing.

(5) RESPONSIBILITIES AND AUTHORITY OF THE CENTER

It is in this area that the two bills appear, on the surface, to have extensive differences. However, a close reading of the provisions of each (secs. 103 and 207 of S. 765 and secs. 303 and 306 of S. 937) suggests that these differences may be subject to reconciliation and integration in respect to most points.

In each case, the Center's operational responsibilities consist of establishing a national clearinghouse, engaging in an aggressive public education program, arranging or providing technical assistance, and awarding contracts and grants to support research, educational assistance, and demonstration projects.

Otherwise, the Center's role is to be the recognized focal point for leadership in the Federal Government, responsible for (1) conducting studies, examinations and assessments; (2) formulating recommendations for the President, Congress, and agency heads, and (3) stimulating improvements through programs of encouragement, support, and, when necessary, authoritative coordination.

We believe these are all appropriate techniques and that the implementation should be carried out through the normal Government structure. We would consider it appropriate, however, for the Center to develop formal coordinating procedures—such as prior review and approval of certain types of R. & D. projects which are directly concerned with improving productivity and quality of working life—and such as participation in budget reviews of R. & D. and capital projects.

One difference in philosophy between the two bills is the implication in section 305 of S. 937 that the Center's influence may be exercised primarily through States, units of local government, and institutions of higher learning who would be encouraged "to develop and implement centers, programs, and projects to improve and stimulate productivity growth * * *". By contrast, S. 765, section 205, specifies that the Center shall "seek to maximize the active participation and expert contribution, in equal measure, of labor, industry, and the Federal, State, and local governments of the United States * * *".

While the role of State and local governments and universities should be optimized, it is believed that the broader language contained in S. 765 is preferable. For example, the establishment of independent nonprofit productivity centers (such as those in other countries) may prove to be important mechanisms.

We believe that time will demonstrate how we can best build these strengths, Mr. Chairman, and again, we would urge some flexibility in this respect.

Now, with respect to the responsibilities specified for Federal agencies, the bills touch upon the role of individual Federal agencies in respect to (1) organization structure, (2) the identification of impediments to productivity improvement resulting from agency regulations or programs, (3) the preparation of productivity impact statements, and (4) the improvement of internal Federal productivity.

We fully endorse this expanded support for improving Federal productivity—an effort in which we have been actively engaged since 1970, in collaboration with the Office of Management and Budget, the Civil Service Commission, and the General Services Administration.

In respect to organization structure, S. 765 requires the Secretaries of Commerce and Labor each to establish an "Office of Productivity and Quality of Working Life," and specifies that all agencies designate a liaison with the Center.

S. 937 provides that each Federal agency should promote internal productivity improvement by establishing a small "director level staff," and, on request, render assistance to the center.

We believe it is desirable to avoid specifying internal agency organization structure in this statute, and suggest that the final bill require each agency (1) to cooperate fully with the National Center, (2) to conduct a vigorous internal productivity improvement program, and (3) to establish high-level oversight and coordination of all agency activities concerned with improving productivity.

The provisions of each bill in respect to identifying and eliminating barriers to productivity resulting from agency regulations and programs appear appropriate. The language of the two bills should be reconciled to provide for consistent application (S. 765, secs. 103(2)–207(4); and S. 937, sec. 204).

Finally, in respect to productivity impact statements, S. 765 (sec. 303) requires a statement that such impacts have been evaluated in connection with the inflation impact statements called for in Executive Order 11821. S. 937 in section 201 requires that a detailed discussion and analysis of productivity impact accompany each report on proposed legislation, major program recommendations, and other major Federal actions.

As indicated in our testimony on December 17, we suggest that detailed procedures be omitted from the bill. The report accompanying the bill can discuss the importance of such evaluations but leave the implementation to the determination of the National Center and its Board or Council, based on experience with various review techniques.

Furthermore, we believe that it should be a continuing duty of the Center to assist the President and agency heads by selectively reviewing and assessing the productivity implications of existing and proposed regulations, legislation, and programs.

Both bills have provisions covering the use of the contracts and grants. Both specify a preference for matching funds in the case of grants.

One principal difference lies in the fact that S. 937 provides separate funds (1) for grants for the purposes of developing productivity centers to carry out demonstration and technical assistance projects, and (2) for grants and contracts supporting research designed to develop new methods, techniques, systems, and so forth.

Government units and universities would participate in both, while private organizations would participate only in the latter. We question whether this separation and earmarking of funds is desirable.

Furthermore, if limited grant funds are spread widely among State and local agencies before establishing and testing criteria for awards, their effectiveness could be diminished.

A second difference in the requirement in S. 765 that "equal emphasis" be given to projects designed to improve technology on the one hand, versus those aimed at improving the utilization of human resources and quality of working life on the other hand. (S. 765, sec. 210(3d).) This emphasis appears desirable as indicated in our December testimony.

We urge that the Center have latitude under the direction of its Board or Council to select those projects and performing organizations which appear to offer the most fruitful opportunities. The Center would, of course, be fully accountable to the Congress each year for the results achieved.

In this connection, the experience of productivity centers in other countries merits careful study to determine how some have succeeded in minimizing government investment and maximizing private sector support for such efforts.

As noted in our December testimony, it is of interest that in Japan over 90 percent of the support of the Japan Productivity Center is from private sources—and that in Germany, Israel, and Norway private support is reported to be one-third to one half.

The provisions in section 207(12) of S. 765 calling for maintaining liaison with foreign productivity centers is highly desirable.

It is suggested that the participation of the Department of Justice be obtained in developing the criteria for the award of projects and grants in order to avoid antitrust problems.

LIFE OF CENTER AND LEVEL OF AUTHORIZATION (SEC. 305 OF S. 765 AND
SEC. 601 OF S. 937)

The two bills provide for the following :

APPROPRIATIONS AUTHORIZED (AVAILABLE UNTIL EXPENDED)

Fiscal year	By S. 765 (millions)	By S. 937 (millions)
1976 (15 months).....	\$5	\$20
1977.....	10	20
1978.....	15	25
1979.....	20	(1)
1980.....	20	(1)
Total.....	70	65

¹ The sectional analysis states that the intended life of the Center is 5 years.

Now, with respect to the life of the Center and the level of funding, we believe that a life of at least 5 years for the Center is essential since the lead time for major technology improvements (such as in manufacturing) may require an extended period. Sustained leadership by the National Center in such projects may be crucial to their success.

It is also hoped that the possibility of continuing central leadership at the Federal level will be left open for later determination based on the results produced during the first 5 years—even though we agree that the main initiatives should shift progressively to individual units of government and private sector organizations.

We also believe that first-year funds should be adequate to build the high quality professional staff discussed earlier in this statement. Without such a foundation of staff expertise, only limited progress can

be made in launching programs of the scope and complexity envisioned in these bills.

We suggest that first-year funding of at least \$10 million be provided to cover startup costs and initial contract and grant programs.

Funding in subsequent years should be based upon the merits of the program presented to the Congress in the President's budget.

In conclusion, we will be pleased to continue working with the committee and its staff on any of the points covered in this statement, as well as to discuss our continuing studies of productivity improvement opportunities.

We are delighted with the progress made in developing these two bills since we were here last December. We would be happy to work with you in any way that is useful to you in reconciling these bills and in any other way.

This concludes our statement and we would be glad to respond to any questions that you have.

Senator NUNN. Thank you very much, Mr. Staats. This has been most valuable because what we really wanted you to do and what you have done is to get into some degree of detail and to really critique both of these pieces of legislation. I find this to be a very, very valuable analysis.

I have several questions: one is, have you had a chance to see or has anybody discussed with your staff the administration's bill on this subject that is obviously being formulated and I understand will be submitted later?

Mr. STAATS. Members of our staff have had informal discussions and I think generally are pretty familiar with the bill, as we understand it to be today.

We do not know what form it will be, of course, when it is finally submitted.

Senator NUNN. I told the witnesses yesterday that I welcomed this administration's bill because what I basically had in mind when I introduced this legislation a good many months ago—back in October—was to give productivity some thrust, knowing full well that the first version and even the second version would be a long way from what I would want. The administration's submission of a bill now will be very helpful.

If you have any ideas on that bill this morning, I would like to have them.¹ If you do not, when it is introduced or when it comes to your staff, I would like for you to submit to us, for the purpose of this committee's use, your analysis of that bill, pointing out as frankly as possible, the strong points of that bill and the weak points and which of these points should be incorporated in the final committee version.

Mr. STAATS. My feeling about that, Mr. Chairman, would be that it would be best for us to do it when we actually see the bill as it comes forward.

We are pretty familiar, I think, with the bill in its present form but that does not necessarily mean it is the final form and I think it would be more useful if we would supply that to you as soon as it is available in an official way.

Senator NUNN. Fine. I think that would be very helpful.

¹ See Attachment A on p. 168.

On the subject of grants and contracts, yesterday we had testimony from the Department of Commerce and the Department of Labor, that they would prefer we use a contract method as opposed to the grant method. I know you go into this in some degree but I am having difficulty in determining what is really the difference between grants and contracts, as far as the Federal Government is concerned. What is the substantial difference. We did not go into real detail with the witnesses yesterday on this—what are the advantages and disadvantages of both methods?

Mr. STAATS. First, Mr. Chairman, we believe that the bill should provide for both. In our opinion, the function of a grant made by the Federal Government is different from that of the contract.

The Congress has before it legislation now to try to establish some statutory guide lines, as to when agencies should use one form versus the other.

We testified before the House on this last year. The Federal Commission on Government Procurement made recommendations for legislation in this area, as well. The legislation I referred to, which is pending before Congress, emerged as a result of the Commission's recommendations.

We feel very strongly that the bill should provide for both contracts and grants because the Center will need the flexibility that goes with both. Also the function of a grant is different from the function of a contract.

A contract is subject to many statutes of the Government that are not applied when a grant is made. Moreover, as we see it, the contract is entered into when the Federal Government is interested in buying a product that is primarily for a specified Government use—such as buying airplanes, or buying a research report or something of that type.

A grant is made in the nature of assistance to encourage some national purpose. The rules and regulations that apply are quite different, and we think it should be that way.

So that, for reasons of the statute, we hope the Congress will enact on this subject and for reasons of giving the Center the kind of flexibility it needs. I would argue very strongly for continuing both authorities.

Senator NUNN. Another important area where we have had some differences is on the so-called productivity impact statement.

I already made reference to that subject and gave my ideas as we started the hearing, but one of the things that I find is that Executive orders just seem to be disregarded in many respect after they are made, unless the White House continues to more or less ride herd on them.

I am not saying something will not emerge later from the order but certainly it will be a long time in coming.

What are the advantages of putting some kind of qualified congressional statement of intent in terms of either productivity impact statements or what we call economic impact statements; in this legislation or some other legislation.

Mr. STAATS. Let me comment, if I may, then I will ask Mr. Morris or others to comment if they wish.

They might have additional thoughts but my own feeling would be very much along the lines that you expressed in your opening remarks;

namely, that productivity impact is really part and parcel of economic impact or inflation impact.

I would personally prefer "economic impact" as the title, because I think it is a little broader.

That is what we are talking about but certainly, productivity and the impact on productivity ought to be a part of it. In Executive Order 11821 this is specified.

Now, how well that will be observed remains to be seen and one of the things that we have on our agenda in GAO is to follow up at a reasonable point of time to see what has developed as a result of an Executive order and report to the Congress on it. We think this is a part of our job.

Certainly I would think, as a minimum, there ought to be a statement of intent in a committee report and in the legislative history to support this kind of objective but Mr. Morris might have something to add, some additional thoughts.

Mr. MORRIS. I think that is the way we all feel. We believe that it is important to avoid too much procedural detail in the statute, which procedural detail might prove to be difficult to implement.

The Executive order as now written will expire anyway in 1976, so that a strong statement of intent in the bill, and a discussion in the legislative history should then give a mandate to the Board to develop and report back to you on the procedure they find most useful.

Senator NUNN. Do you think the Center should be the focal point for requiring this kind of economic impact statement or would another department of the Government be more appropriate than the Center?

Mr. MORRIS. We have quite an appreciation for the Executive order system. The OMB implementation of Executive Order 11821, which I understand is now in process is the appropriate Government procedure.

We believe the Center in respect to the productivity aspects of this statement has a study to oversee how well the system is being implemented, and to look for still better procedures.

Senator NUNN. What about Congress; what do you suggest we should do here as to legislation that originates not in the executive branch, but legislation that originates here in Congress? Who should play a role in determining the economic impact that the initiated legislation will have on the country?

Mr. STAATS. I think one obvious point within the Congress would be the Joint Economic Committee to have a concern here and without having given more thought than that to it, I would suggest that that would be the most logical point within the Congress.

Senator NUNN. How about the Budget Committee?

Mr. STAATS. I would see it more as a Joint Economic Committee function because that committee has already, from time to time, concerned itself with this kind of an issue.

For example, I think it was 2 or 3 years ago, they held extensive hearings on productivity in the private sector. We appeared before them on the public sector also.

I think there might be some aspects of it that the Budget Committees would be interested in, but we are talking about monitoring now, for which I would lean toward the Joint Economic Committee.

Senator NUNN. I know it will take some thought on this subject,

but I would like to ask you to pay particular attention to this area because I think we have an opportunity to do something meaningful. It needs to be done and we need to do it carefully and in the right framework.

If you could address yourself to the general question of economic impact statements and then to the questions of how productivity fits into it; then how the Center, assuming we establish a Center under this legislation, fits into it, how the so-called Brock amendment to the consumer protection bill as it now stands, would interrelate to this area; and how the Executive order, assuming that at some point it will be implemented, interrelates. In summary, what should we have in this legislation with reference to all of the above.

That is a rather broad outline, but I think as we move we need to give the correct emphasis on this legislation. I personally feel that whenever we come up with, should take into the viewpoint all of these areas.

We ask you to divide your final summary into two parts:

One is what should be in this legislation and two, what should be the overall effort legislatively speaking in this area? I say that for these reasons, as you well know, sometimes certain bills are inevitably going to be passed; other bills are going to get bogged down and it is difficult to tell which bill is going to do what until you get it to the floor, if we had an overall view of the legislation, then it may well be that some of us would want to put it in the consumer protection bill, which I think is destined to become law—with or without my support.

I think the consumer protection bill might be the proper vehicle to address the broad issue. In doing so, I would hope we would consider S. 937 as well as any others that might fit into the framework.

I really would appreciate it if in the next 2 or 3 weeks you could get someone to do a pretty thorough analysis in this area.¹

Mr. STAATS. I would be very happy to do that. We could give you a discussion paper and it might be useful if on some of these points, we could discuss the pros and cons and alternatives.

Senator NUNN. Fine. That would be very helpful.

Senator Percy's minority assistant may want to make a comment on this.

Mr. VASTINE. First, I want to say that Senator Percy regrets very much not being able to be here. He is on the floor, offering two amendments to the tax bill and he is tied up with that.

He does have some questions which perhaps we could submit for the record with the chairman's permission. But just to capsule one concern that Senator Percy does have in general, that is the center's coordinating function vis-a-vis the other agencies, for example, the National Science Foundation, with its multimillion dollar grants for productivity research and the Commerce Department's standard operations productivity. How strong do you think the Center should be in being able to coordinate, to guide, to influence those productivity-related activities of other agencies?

Mr. STAATS. We would like to see it strengthened in any way possible, obviously you get into questions of budgetary levels, things of this type.

¹ See attachment B on p. 171.

It can only function in an advisory role, it cannot direct the one what to put in their recommendations to the President but we are suggesting for example the status of the director be raised to a higher salary level.

We would like to see language at least written into the functions of the Center so as to give it as strong a position as possible within the framework of the fact the director will still have to serve under the Council and the President, so as to enable him to have a real input on matters of proposed legislation, budgetary proposals, regulations and things of this type on which we think he ought to have an important role in the decisionmaking process.

Mr. VASTINE. Do you think this would perhaps require too large a central staff, that perhaps we are building another bureaucracy?

Mr. STAATS. We feel this way. We would not like the statute to prescribe the size of the office. I think this can be done by expressing the intent of the legislation, without putting an absolute limit on size of staff and let that be determined from year to year by actions of the President and the appropriations committees.

Another point we would like to make here—and this is really quite fundamental—we think the size of this operation is directly related to our ability to get this kind of a program picked up in the private sector.

This ought to be one prime objective and I would hope you could emphasize this in any way possible because, ultimately, this is where the real strength of it has got to be.

I am not suggesting that you could abolish it completely but I think the size of it and the role it will play will depend a great deal on whether we can be successful in getting the private sector to establish a center, or centers, to take the leadership in this area.

Senator NUNN. Thank you.

I agree with you about the flexibility. I think that is desirable, but based on my own observations and experience, the great tendency in any kind of Federal agency, no matter what the purpose of Congress, is not to turn anything over to the private sector or, for that matter, to anyone else. The trend is to create more staff or more responsibility, in order to enhance its own budget, its own number of employees, et cetera. That is the whole experience of all governments, not just the U.S. Government.

How do we do this, how do we give the Center flexibility without having some kind of limitation? For instance, should we limit the percent of the funds that can be spent on administration? I think almost every agency starting out has the purpose in mind of not growing by leaps and bounds and yet it just always happens.

Mr. STAATS. We would prefer to see any limit that is put into the bill in terms of dollars, rather than in terms of numbers of people. I think that you might also want to consider, Mr. Chairman, the possibility of writing a strong directive in the statute itself, that one of the functions of the Center would be to work with the private sector and to urge the private sector to pick this responsibility up as much as possible.

Now, I would suggest we have organizations in the private sector today that have a strong enough interest in this field to serve as the

catalytic agent to bring this about—if there was some point within government they could work with.

I am thinking here, for example, about the Committee for Economic Development which has already done work in the productivity field.

The conference board would be another type of organization that might serve as a catalytic agent. I do not see this as an insuperable problem at all.

I know enough heads of corporations to know there is a very strong interest here. Somehow there has to be a way to bring it into being and I think government can encourage it, and I think government could provide some assistance to bring it into being.

Senator NUNN. Could you submit for us some language which you think would give the proper thrust to the legislation, along with perhaps some realistic suggestions as to how we can make our legislative intent very clear, as to not having this a top-heavy bureaucratic organization.¹

Mr. STAATS. We would be very glad to.

Senator NUNN. Perhaps in terms of percentage of the total amount of funds for administration or perhaps in dollar total. I agree with you on the people part and I think that is best left out.

What has been the experience of the present National Commission on Productivity and Work Quality, which has a rather large membership on the board—is a large board really workable?

Mr. MORRIS. Sir, I do not think we can give you an assessment of how that group has functioned, except to make the observation that the present Commission and the Board which you are envisioning are really two different mechanisms.

You are setting up an authoritative, directive, oversight group, with the responsibility for approving programs and approving certain projects above certain size limitations. I might say, further, that your Board would be confirmed by the Senate giving it a very official status. Thus, the present Commission does not have all the characteristics which I believe you are seeking.

[The information submitted by Mr. Staats follows:]

¹ See letter from Mr. Staats, p. 166.



COMPTROLLER GENERAL OF THE UNITED STATES
WASHINGTON, D.C. 20548

April 22, 1975

The Honorable Senator Sam Nunn
Chairman, Oversight
Procedure Subcommittee
Senate Committee on Government
Operations

Dear Senator Nunn:

During our testimony on March 21, you asked that we separately submit our views to you on three matters.

One of these is our evaluation of the Administration bill which was submitted by Secretary Simon on March 20, 1975, and has been introduced in the House as H.R. 6078. Attachment "A" to this letter sets forth our views on this bill.

Secondly, you requested that we submit a discussion of how to provide, by statute, a requirement for economic impact statements and, as a part of such statements, an assessment of the productivity implications of proposed legislation and regulations of the executive agencies. Our views on this matter are enclosed as Attachment "B".

Thirdly, you asked us to comment further on how to restrain any tendency of the National Productivity Center to establish an unnecessarily large staff which would tend to perpetuate its existence, or to absorb funds which might otherwise be applied to contract and grant arrangements.

We believe that in the appropriate section of the final bill (such as in Section 305 of S. 937 or in Section 103 of S. 765) appropriate language might be inserted to clearly express the intent of the Congress in respect to the long-term objectives of the National Center. The sense of this statement might be as follows:

"It is the intent of the Congress that the National Center established in Section of this statute shall have the long-term objective of fostering the creation of non-Federal sector programs--self-supporting to the fullest practicable extent--to conduct the research, educational, and technical assistance programs needed to improve productivity and quality of working life in all segments of the U.S. economy. The National Center itself should phase-down its efforts to the extent that the initiatives, funding, and support are assumed by non-Federal sector activities."

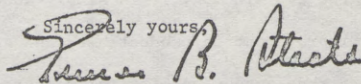
- 2 -

I believe we are in agreement that the basic purposes to be served by the National Center are those of energizing research, educational and technical assistance in support of public and private sector needs, and that the role of the National Center should be that of a dynamic catalyst, with sufficient funding and authority to start a series of initiatives (education, research, and technical assistance), to coordinate existing governmental efforts, and to furnish the seed money for the inauguration of new non-Federal efforts, such as those envisioned by Mr. Jerome Rosow and Dr. C. Jackson Grayson.

It must be stressed that the National Center, if it is to achieve these goals, must be supported at the highest levels of the Federal Government, have adequate funding and staff of exceptional competence. We believe it unwise to set any precise limit on the size of staff since in its initial years a staff of great diversity, competence and leadership ability will be needed to perform the tasks which are laid out. However, by stating a long-term phase-down objective, it should be possible to avoid the tendency to perpetuate a large bureaucracy. If it is desired to apply any limitation, it is suggested that in each annual appropriation, a dollar limitation be stated. For example, in the first year an appropriation limitation of \$5 million for salaries and other operating costs of the National Center--within an overall total appropriation of \$10 million--might be appropriate.

Again, we congratulate you and your committee for its forward-looking leadership in the introduction of these bills. We hope that they will proceed to a favorable conclusion.

Sincerely yours,



Comptroller General
of the United States

Enclosures

ATTACHMENT A
4/21/75

GAO COMMENTS ON ADMINISTRATION DRAFT BILL ENTITLED
THE NATIONAL CENTER FOR PRODUCTIVITY ACT OF 1975 H.R. 6078

The basic purposes of this bill are similar to the purposes of S. 765 and S. 937. The draft bill includes a clear statement of purposes and provides desirable flexibility in structure and approach. However, the National Center envisioned by this bill is not as strong as that contemplated in the other two bills and thus would be subject to some of the problems which the present organization has encountered. A consolidation of the three bills could produce legislation which could have a very substantial impact on productivity improvement.

The major areas of concern to us in H.R. 6078 are summarized below:

1. The term "output quality" needs clear definition. As currently used in the legislation, it is simply added to the repeated phrasing calling for improvement in productivity and quality of work life with the inference that output quality is among the problems faced by the Nation today, and that quality needs to be constantly improved. We know of no finding which has asserted this or which links productivity improvement with the need for concurrent quality of output improvement. In fact, the two might work in opposite directions. It seems to us that the essential policy in respect to output quality is that it should meet an acceptable standard and not be subject to degradation as productivity or unit cost performance is improved. A general policy statement along these lines at the outset of the bill would be useful but, thereafter, we would recommend deletion of the words "output quality" wherever they now appear.

- 2 -

2. A Council of 30 members is cumbersome and impractical for decision-making. A small governing body of 10 - 12 members is preferable to the proposed combination of a 30-member Council and smaller Executive Committee. If, however, a large Council is provided, the chief decisionmaking group should be a small Executive Committee with clearly defined responsibilities. Members should be Presidential nominees, confirmed by the Senate, in the case of the governing body.

3. As indicated in our testimony on S. 765 and S. 937, Executive Level III is considered a more appropriate level for the position of Executive Director than the Level V specified in the Administration bill. The Executive Director would then have the same status as the Deputy Director of OMB and Under Secretaries. Senate confirmation is desirable.

4. Because of the importance of sustained leadership, the Center should have an assured life of at least 5 years rather than the 3 years specified in the draft bill.

5. The bill should specify a funding level at least for the first year. As indicated in the Comptroller General's previous testimony, the funding level for the first year should be about \$10 million, with funding in subsequent years based upon the merits of the program. About half of this funding should be for purposes of building and operating the staff and activities of the Center, and about half for contracting.

6. The bill should give the Center a strong coordinating role, for guiding the productivity efforts of other Federal agencies. This should be founded in a Presidential Executive Order. H.R. 6078 as now written provides for "encouraging" and not "coordinating" other Federal activities.

7. The bill does not give the Center the authority to make grants. While use of contracts is suitable in many cases, there are some circumstances where grants may be more appropriate. The Center should have this authority.

8. There should be a stronger emphasis on the need for improving technology, including manufacturing technology in areas where the United States may be in danger in dropping behind.

9. Cost-sharing by non-Federal organizations should be encouraged.

10. Positive responsibilities for the Center should be stated, covering:

- Conducting or fostering research requisite to improve productivity and quality of work life.
- Fostering the formation of non-Federal productivity centers or institutes such as those in other countries.
- Providing or arranging technical assistance.

As noted, most of the suggestions made to improve H.R. 6078 have already been incorporated in S. 765 and S. 937.

DISCUSSION OF GAO VIEWS ON
ECONOMIC IMPACT STATEMENTS

The basic objective of requiring economic impact statements should be to assure that decisions are made in the light of the best available information and analysis of economic consequences. With respect to legislation being considered by the Congress and regulations being considered within the Executive Branch, one of the economic consequences most frequently encountered, and often with the greatest potential significance, is the impact on productivity. Therefore, we would see an assessment of any potential impact on productivity (whether favorable or adverse) as being a major element of any effort to analyze the economic impact of a particular action. Thus, it should be part of the overall assessment of economic impact, rather than being a separate analysis.

The process of assuring that decisions are made in the light of the best available information and analysis has two essential parts. First, the process must assure that the decision-maker is presented with--and considers--the analysis and information which is available. Second, the process must assure that those who are affected by the decision have the opportunity to present their own analysis and information in confidence that it will be considered, on the merits, by the decision-maker.

The only way to be absolutely certain that these elements are present in the process is to lay down (in statute or by regulation) an explicit and highly detailed procedure which must be followed in every case at the risk of having the decision overturned in the courts if the procedures are not followed. Even this does not guarantee the desired result. While a detailed process can assure the opportunity to present analysis, it cannot guarantee that fair and objective consideration will be given to the analysis.

Moreover, a highly detailed process carries serious risks of its own. First, it would tend to generate large amounts of paper (to meet the procedural requirements) which may actually cloud the issues rather than illuminating them. Second, the more detailed the requirements, the more likely it is that the process will lead to serious delays in decisions

while the procedural requirements are satisfied. Finally, a mandatory and detailed procedure offers opportunities for special interest groups to delay or avoid actions to which they may be opposed for reasons having nothing to do with the objectives of the process.

We are convinced that these risks are sufficiently serious for us to recommend that the Congress avoid the imposition of highly detailed procedural requirements except in the most unusual circumstances. Under most circumstances, the objectives can be achieved by a clear statement of policy on the part of the Congress, backed up by effective use of the oversight powers. This is particularly true if one assumes that Executive Branch officials are reasonable and conscientious in the exercise of their responsibilities. Unless that "reasonableness" is present, no set of detailed procedures will guarantee reasonable decisions.

Accordingly, we recommend that the Congress limit its action on this issue to a policy statement along the following lines:

"It is the policy of the United States that decisions with respect to proposals for new legislation and decisions with respect to new or revised regulations or regulatory policy, in any case in which the action being proposed may be reasonably expected to have significant economic consequences (including any impact on productivity), shall be made after consideration of those potential consequences. Such consideration shall include, where appropriate, seeking analysis and comments from recognized authorities, including the National Center for Productivity and Quality of Work. The President shall establish such procedures as may be necessary to assure the effective implementation of this policy and to assure that the written record of decisions affected by this policy reflects the considerations set forth herein and is available for examination by the Congress and other interested parties."

A statement of policy along these lines would clearly establish the intent of Congress that the impact on productivity

and the economy is a major factor to be considered in Executive Branch decisions, and that the independent views of recognized authorities (including the National Center) are to be sought in evaluating these factors.

This would have the effect of placing the force of congressional intent behind Executive Order 11821 and would give the National Center an important role under that Order. As we recommend, however, it would leave to the Executive Branch the responsibility for implementation of the policy. At the same time, it would provide for congressional oversight of implementation and would reserve to the Congress the right to legislate more detailed requirements if that should prove necessary at some future date.

QUESTIONS SUBMITTED IN WRITING FROM SENATOR NUNN TO ELMER STAATS AND
THE RESPONSES SUBMITTED FOR THE RECORD

Question. 1: A number of agencies, apart from the Productivity Commission, now engage in activities aimed to improve productivity and the quality of working life. The National Science Foundation spends far more even than the Productivity Commission in this endeavor. Other units such as the Civil Service Commission, the Commerce Department, and the Labor Department now spend sizable amounts in this area. Do you think that these activities ought to continue to be spread among these various agencies, or should they become more centralized and coordinated by the Center?

Answer: The above question has three parts which I would like to answer separately:

1. Should activities of the National Science Foundation, the Labor Department, the Civil Service Commission, and others be more centralized in and coordinated by the Center?

We believe that the present assignment of responsibilities to the various Departments and Agencies is appropriate. What is missing is in a focal point for leadership to assure (1) that overlapping and duplicating projects are minimized, (2) that Federal funds are invested in new projects in relation to priorities of importance, and (3) that the results of such efforts are promptly communicated to those who can benefit from them. We believe it is this role which the proposed Center should play with the full support of the President and the Congress. Thus, we envision an authoritative coordinating role for the Center, but with a minimum of operating responsibilities.

2. The second question is whether we favor a "stronger, rather than a weaker Center."

Without question, we favor a very much stronger leadership than has existed in the past, with unquestioned responsibility assigned to the Center as the agent of the President and the Congress to provide leadership and coordination throughout the Executive Branch. However, since the Center by its very nature is not envisioned as a permanent organization, but rather as one to conceive and initiate new techniques of planning, coordination, communication, and education, it should get these tasks done throughout the established permanent structures and avoid assuming operating responsibilities.

3. The third question is whether agencies should be left to their own devices in promoting "internal productivity programs."

The Federal Productivity Improvement Program was inaugurated on a permanent basis by the Director of the Office of Management and Budget. It is under the oversight of OMB, CSC, GSA, and the Joint Financial Management Improvement Program. Further oversight by the new Center is not needed—although the Center should support these efforts with research funds and disseminate information on lessons learned to other organizations.

Question 2: I understand that members of your staff have made extensive comparisons of productivity centers in other countries. I am impressed by their finding that many such Centers receive a substantial part of their funding from the private sector. Is there any reason why this arrangement could not be built into the Center's charter? How would this funding be obtained?

Answer: The above question has two parts which I would like to answer separately:

1. Is there any reason why the Center cannot receive partial funding from the private sector just as foreign productivity centers do?

I am attaching a supplementary discussion of the types of foreign productivity centers which we have examined. Their methods of operation may not be directly transferable to the United States, but the principle of promoting privately-supported research and educational activities as the primary means for long-term productivity improvement is certainly very sound.

We believe this can be brought about in the United States environment in two stages:

Stage One—is the establishment of a National Productivity Center such as envisioned in S. 765 and S. 937.—This Center should stimulate a wide range of new initiatives using contracts and grants. Joint funding and cost sharing arrangements should be encouraged, as well as the donation of personal service time and resources to the Center.

Stage Two—During stage one, various mechanisms should be established in the private sector which in stage two will become permanent, self-supporting activities. In fact, the fostering of such developments should be a key objective of the National Productivity Center.

Jackson Grayson has captured this concept in his testimony before the Committee last December, which I believe it appropriate to cite:

"But what I think is an important missing element is a private sector productivity effort, paralleling the public sector. Therefore, the thrust of my testimony is to urge that such a private sector effort be launched through the creation of a labor-management 'American Productivity Center'—encouraged and financially supported through a one-time seeding grant of \$5 million, to be matched on a two for one basis by the private sector.

"Thus, the private sector American Productivity Center, (hereinafter APC) would be launched simultaneously with the public sector effort with an initial funding of \$15 million. Thereafter, it would exist with no special Government funds, outside of normal grants and contracts which it might merit from any agency of the Government."

2. How would funding for privately supported productivity centers be obtained?

The supplementary discussion attached describes the various sources of revenue obtained by foreign centers. These include subscriptions by supporting organizations, payment for publications and training programs, and contracts for expert and consulting services.

As Dr. Grayson points out the Government would be just one among many customers for the services of such an organization.

SUPPLEMENTARY INFORMATION ON PRODUCTIVITY CENTERS OF OTHER COUNTRIES

The following summary of foreign productivity centers was developed from various sources including direct observation by GAO personnel, foreign publications, and unpublished research of the National Commission on Productivity and Work Quality.

What should be made clear is the fact that most foreign industrialized nations really have both *formal* and *informal* productivity centers. Their formal productivity centers concentrate on the application of soft technologies (e.g., social and behavioral), education and consulting services.

The "informal centers" concentrate on hard technologies which are primarily associated with the process of manufacturing. A current example of emerging hard technologies is the intensified application of computers in manufacturing for actual design and production of products. For simplicity this technology is frequently called CAD/CAM (Computer-Aided Design and Computer-Aided Manufacturing).

The literature is replete with information about these formal productivity centers. Very little is written about the informal ones. Consequently, it is not until one actually visits other countries that it becomes evident that both their formal and informal centers each play a major role in their substantial productivity gains.

A. FORMAL CENTERS

A description of the West German (FRG) and Japanese formal productivity centers will serve as typical examples of the centers of most industrialized foreign countries.

1. Germany

The Rationalisierungs-Kuratorium der Deutschen Wirtschaft (RKW), literally, the Rationalization Commission of the German Economy) which is the West German productivity center, was originally established in 1921. In 1951 while Germany's economy was still in a period of reconstruction and recovery, it was totally reorganized under the auspices of the U.S. Mission. As presently constituted, the RKW actually plays a dual role—productivity center and management association.

The objective of the RKW is to encourage "rationalization work, to coordinate and summarize this work as well as translating its results to practice, and to support all governmental and administrative bodies as regards rationalization questions." In recent years the RKW has concentrated especially on the second objective: translating theoretical rationalization work into practical applications.

The RKW is a private, non-profit institution. In its highest organization is the 65-member Gesamtsprossstand (Managing Board) which is elected by the 9,300 member firms. They are chosen for their individual competence with some consideration given to ensuring that they are from organizations representative of the German economy. A Board of Directors provides for more continuing direc-

tion. It is made up of 10 representatives from industry, 5 from labor, and 2 from the Federal Government.

The staff is divided into two sections, scientific production and dissemination. The former is involved in project development while the latter handles training, publications, consultancy, public relations, and relations with foreign productivity and managerial organizations. There is, however, a conscious attempt to keep these functions as integrated as possible with a continuing exchange of information and opinions.

One of the most important organizational aspects of the RKW is the heavy reliance on its 12 regional centers. These centers are especially important for the consultancy and training programs. As a rule, a program is first developed and tested by one regional center. After the success of the program has been established, it is taken over by the other centers and adapted to their own needs. Thus, the RKW is able to reach companies throughout the Federal Republic with a minimum expenditure of traveling time and money. In 1972 RKW courses and seminars took place in 136 towns all over the Federal Republic. These regional centers employ 300 people, twice the staffing level of the main office.

The 1972 budget of the RKW was approximately \$8 million. Sixty percent of that came from the Federal Government, and most of the balance came from Industry through membership fees and fees for services rendered and materials sold to its members.

2. Japan

The Japanese productivity movement was initiated in December 1953, with assistance from the United States. The Japan Productivity Center (JPC) was established on March 1, 1955. United States assistance was terminated in 1961.

Between 1960 and 1972 Japan had an average annual productivity increase of 10.4 percent compared to the United States' rate of 3.1 percent. Much of Japan's remarkable productivity growth can be attributed to factors other than JPC programs. Nevertheless, the programs of the JPC were instrumental in establishing the necessary conditions for that growth.

The JPC is a private, non-profit institution with a tripartite Board of Directors representing management, labor and academia. Funds come from membership fees (7 percent), fees for services rendered or products sold (8 percent), fees for services performed for or products supplied to the government (7 percent), government subsidy (3 percent), and miscellaneous (2 percent). This income structure makes them rather independent, and it also provides a form of feedback on the usefulness of their services and products. If these services and products did not meet the needs of their clients, the JPC would quickly run out of funds.

The JPC has 300 professional and administrative employees. In addition, there are 400 people employed in the eight regional centers. These centers are completely autonomous. The JPC makes available to them its own products and services which the centers can in turn sell to the businesses, trade organizations and labor unions in their area. The regional centers, however, can also produce their own materials and perform services just as the JPC does. But, just as with the JPC, these products and services must be marketable.

3. Other formal centers

In addition to the two centers described above, there are many others. In Europe 15 of these centers formed an autonomous body in 1966 called the European Association of National Productivity Centers. Membership includes:

Belgium, Czechoslovakia, Denmark, France, Germany, Greece, Hungary, Ireland, Italy, Luxembourg, Netherlands, Norway, Spain, Turkey, and Yugoslavia.

The purpose of the Association is to "facilitate and increase exchanges of information and experience, and arrange cooperation among the participating bodies, with specific reference to scientific research."

A similar association of Asian countries was formed in 1961. This group, called the Asian Productivity Organization, is made up of 14 member countries:

Ceylon, Republic of China, Hong Kong, India, Indonesia, Iran, Japan, Republic of Korea, Nepal, Pakistan, Philippines, Singapore, Thailand, and Vietnam.

Significant support for the organization comes from the United States and from the Japan Productivity Center. The purpose of the organization is to:

- Establish linkage between productivity and economic planning.
- Hasten and strengthen productivity management in entire region.
- Foster cooperation.
- Disseminate productivity knowledge.
- Render assistance to national productivity organizations.

B. INFORMAL CENTERS

With variations to fit their own environments, the informal centers in Germany and Japan are typical of the arrangements for "hard technology" development in the industrialized societies.

1. *Germany*

Complementing the formal efforts in Germany is a loosely knit federation of industry, government, university, labor and trade associations which form the "informal productivity centers." These are not centers physically located under one roof or under a single organization hierarchy. To the contrary, the organizations making up the federation are dispersed throughout the FRG and are interwoven by mutual representation on each other's decisionmaking bodies. Moreover, the governing bodies of each usually include representatives of Federal and State Governments, industrial associations, universities, labor and private enterprises.

This complex inter-representation mechanism supports decisive action in developing the hard technologies through:

- Formulating and achieving National goals for improving productivity.

- Effective channelling of available public and private funds.

- Disseminating information between organizations.

- Carefully screening potential projects.

- Better utilization of research and manufacturing facilities.

As a result of the unusual nature of the "informal centers," the FRG is able to initiate actions to improve manufacturing productivity on a national scale with a minimum of lost motion.

The government supports these efforts mostly through grants. Except for contract research, the Government rarely furnishes more than 80 percent of the costs. Industry initiative is counted upon to provide its own contributions for projects it wishes to undertake either by itself or jointly with the Government.

As an example, a current national program, funded at \$150 million per year, and known as the Second Data Processing Programs, has as one of its objectives to accelerate the application of computers to improve productivity both in the design and manufacturing processes. As mentioned earlier, this technology is called CAD/CAM. This program is provided federal funds of up to 50 percent for research projects. The remainder must come from the organization proposing the project. A brief description of this CAD/CAM effort will be illustrative of how the informal centers work.

Although public and private financial support for CAD/CAM is funneled through such government and private organizations as the Federal Ministry of Research and Technology, Max Planck Institutes, German Research Associations, Industrial Research Institute, and others, the bulk of the effort is carefully, but informally, distributed to the Universities of Berlin, Aachen, Stuttgart, and Hanover. Each of these Universities has informally developed expertise in hard technology focused on an individual function of manufacturing, such as turning, milling, grinding, forming computer control and computer design.

The performing staffs of each University meet about every two months to discuss their progress, recommend new projects and directions, and eliminate unnecessary overlap and duplications. Additionally, the senior staff members are also members of advisory bodies to the Federal Ministry of Research and Technology, as well as the other public and private organizations doing similar work. In a very real sense each University functions as a productivity center for its area of expertise.

2. *Japan*

We have not developed firsthand information on the informal productivity center structure in Japan. However, from information we have obtained, it appears that there is a very close relationship between their National Engineering Laboratory, National Electronics Laboratory, universities, trade groups and industry which is orchestrated by the Ministry of International Trade and Industry (MITI) and geared toward the rapid applications of productivity improving technology.

For example, under MITI's sponsorship Japan has undertaken a national program for developing a totally automated manufacturing plant by 1980. The program is called "Methodology for Unmanned Manufacture (MUM)." The governing MUM Committee identifies its membership sources as follows:

- Two Government Agencies.

- Thirty-two Universities.

One Trade Association.
 One Industrial Journalist.
 One Trade Union.
 One "Think Tank."
 Six Industries.

Government funding is in the vicinity of \$116.6 million. In addition, the industrial participants bear a significant part of the remaining cost themselves. We do not know the specific level of their funding participation.

It is anticipated the unmanned plant will be approximately 250,000 square feet, and staffed by a control crew of about 10 persons. (Conventionally, a factory of this size would require approximately 750 workers). The product would be some 2,000 different machinery parts in lot sizes of 1 to 25 pieces. These would then be automatically assembled into some 50 different machine components (e.g., gear boxes, spindle heads, motors, etc.). The processes carried out automatically would include forging, heat treatment, welding, presswork, machinery, inspection, assembly, and painting.

In essence, the activity of the foreign centers revolves around applied research and diffusion of technology (hard and soft) throughout their manufacturing and service sectors. In addition to technology development, they apply techniques such as demonstration projects. These are live demonstrations of actual productivity improvements attainable from new or existing technology. The objective is to enable the manufacturers to know what they will actually get and how it will perform before they spend any money to acquire it. This procedure underwrites the risks normally associated with acquisition of new technology.

As successful as these foreign centers are in their own environment, their method of operation may not be directly transferrable to the United States. For example, most of the formal centers have been created to fill a void. In contrast to the United States, where we have a wide spectrum of state and private business schools, management associations (e.g., the American Management Association) and world known consulting organizations, these elements are either missing or are too few in number to do the job in foreign countries. Nevertheless, a study of their organization and methodology should be useful in developing productivity improvements within the framework of the American institutional environment.

ELMER B. STAATS
COMPTROLLER GENERAL OF THE UNITED STATES

Needed—A National Productivity Center

On December 17, 1974, the Comptroller General testified before the Senate Committee on Government Operations on bills introduced by Senators Nunn (S.4130) and Percy (S.4212) to strengthen national-level leadership for improving public and private sector productivity. This article is based on the Comptroller General's testimony.

We in GAO have a major interest in Federal productivity both because of our regular audit programs and because of the joint Federal project in which we participate. To a lesser degree, we have contacts with performance improvement programs at State and local levels. We are also brought into contact with many private sector organizations which conduct research and development and furnish goods and services to governmental agencies.

Federal Sector Productivity Programs

Since 1970 we have been a partner with the Office of Management and Budget, the Civil Service Commission, the Bureau of Labor Statistics, and, more recently, the General Services Administration in fostering efforts to measure and enhance productivity of Federal activities.

Today we have an ongoing program in which participating agencies collaborate in an annual review of the

productivity trends of about 200 Federal activities having 850 measurable outputs. These organizations employ 1.7 million people, representing the output of about two-thirds of all Federal employees.

Annually, we examine the trends and report to the President and the Congress on observed causes of productivity gains and losses, and any actions which are recommended to foster improved productivity. In summary, we found last year an overall gain in productivity averaging over 1.5 percent per annum, but about half of the activities reviewed had shown productivity gains, and about half had declined. We have learned that no organization stands still and that progress demands constant attention to such improvements—the keys to which are long-range planning, introduction of better systems, installation of modern equipment, more effective work organization and techniques for improving employee skills, job satisfaction, and incentives.

The Federal Government has much

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to learn from its own experience and by systematic study of the practices of non-Federal organizations. The present National Commission on Productivity and Work Quality has been very supportive, but a still stronger national organization would be of value in advancing these efforts.

Productivity Improvements in State and Local Governments

We have been encouraged to see the rapid growth in interest in productivity improvement among these jurisdictions, and the strong leadership taken by their national associations. We believe the stress given to improved State and local programs by the bills recently introduced in the Senate is very appropriate. This is particularly true of S. 4130 with its concept of productivity centers at the State level.

There are some 39,000 jurisdictions, many of which perform similar if not identical functions. One out of every six American workers is employed by the public sector. Government purchases of goods and services now absorb about 22 percent of the gross national product, and their payrolls are close to \$150 billion. This is the second fastest growing segment of our economy, following services in general.

Many elements of the Federal structure are making some contribution to State and local government improvements although in a very loosely coordinated fashion. This includes, for example:

- Grant programs of the National Science Foundation.
- Grants by the Department of

Housing and Urban Development under the section 701 program.

The excellent work of the Civil Service Commission under the Intergovernmental Personnel Act, and various other technical assistance programs. For example, GAO is working with local jurisdictions to introduce the use of performance auditing techniques and has participated in productivity improvement demonstrations and projects.

The National Commission on Productivity has from the outset of its work given priority attention to public sector productivity problems, and has made a valuable contribution in selected areas. But the efforts I have mentioned are but a small beginning toward exploiting the vast opportunities for improved economy and effectiveness in State and local government operations.

Federal Interest in Manufacturing Technology

The Commission on Government Procurement found expenditures on procurement by the Government agencies to be \$57.5 billion in fiscal year 1972—with the Department of Defense, the Atomic Energy Commission, and the National Aeronautics and Space Administration being the largest purchasers of goods and services from the private sector.

Since manufacturing technology is an important factor in future costs of complex systems, GAO is examining programs in the United States and other countries concerned with advanc-

ing the state of the art, particularly in the manufacture of parts and components produced in medium and small lots—with special attention to the potential for further application of computers to design and manufacturing processes. The increased output may be five times as great under today's methods.

While the United States has long been the pioneer in the development of these advanced tools, and probably enjoys the highest state of technological achievement in the world today, we have not established a focal point to oversee research into advanced manufacturing technology—either for the Government's account or for the private sector. Other nations are beginning to do this—notably West Germany and Japan. We understand that there is a proposed government program in Japan to develop an unmanned manufacturing facility by about the mid-1980s, at a reported cost of \$100 million. It is of interest that this is a joint public and private effort. There is no comparable national program in the United States, although there are 10 or more Federal agencies with an interest in this subject. This is another illustration of the need for a strongly-established productivity leadership at the national level.

Need for a National Productivity Center

I have been interested in the concept of a national productivity center or institute since Dr. C. Jackson Grayson, Jr., Dean of the School of Business Administration at Southern Methodist

University, began advocating this idea some time ago.

In studying the proposals for a national productivity center, the first question which occurs is: "Why is a new organizational approach needed; that is, why does the present National Commission not meet these requirements?"

The history of the National Commission on Productivity since its creation in June 1970 has been one of constant struggle to maintain its identity and even minimal financial support for its efforts. In fiscal year 1973 it had an extremely modest budget of \$2.5 million and a 20-member staff. In 1974 it was terminated and absorbed by the Cost of Living Council. Recently it was reborn with a \$2 million budget, but still with a very small staff. Such a stop-and-go existence, coupled with a low financial base, is not conducive to maintaining a consistent and effective program.

It is thus clear that the time has come for a stronger commitment by the Congress and the executive branch. Key principles which we would stress in establishing a national productivity center are as follows:

- *First*, we believe that the center should be an independent agency replacing the existing Productivity Commission and with direct and authoritative access to the Director, Office of Management and Budget; the Council of Economic Advisers; and the heads of principal departments and agencies concerned. These agencies include: Commerce, Labor, Treasury, HUD, HEW, NSF, DOD,

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NASA, AEC, CSC, GSA, and GAO.

- *Second*, we favor a small, but fully-empowered board of directors, appointed by the President and confirmed by the Senate. Its membership should be representative of private sector management, and labor. I would also urge that a top educator be included so as to form a knowledgeable team of those who will perceive the opportunities for advancing national productivity and will understand how to apply the results of the center's work.
- *Third*, the charter for the mission of the center should be broadly stated. In this connection, we would endorse definitions and mission goals which stress the importance of equal emphasis on programs and projects designed to improve the utilization of technology, on the one hand—and those designed to achieve improvements in the utilization of human resources and work quality, on the other hand. The authorizing statute should be free of regulatory detail—such as a requirement for productivity impact statements. We believe such matters should be left for later determination rather than be part of the statute.
- *Fourth*, the center should have a life expectancy and adequate funding for at least 5 years so that it can be held accountable for bringing to fruition long lead-time efforts which are frequently

the nature of productivity research and application.

- *Finally*, the center's professional staff should be the most capable that can be brought together for this period. Also, maximum use should be made of available funds for grants and contracts.

The statute authorizing the center should spell out its role as (1) a constructive coordinator and expert catalyst to identify and disseminate knowledge, (2) the sponsor of education and training activities, and (3) the sponsor and financier of demonstration projects and research projects of the type which other organizations are unable to support due to the leadtime, financial requirements, etc. The statute should also emphasize proper documentation and measurement of results.

Another principal need is the development of a corps of personnel with leadership and analytical skills, who would be motivated to work on projects to improve performance in productivity—particularly in the public sector. This would include engineers, behavioral scientists, public administrators, management generalists, etc.

At a recent conference of public sector leaders, which canvassed the prime opportunities for productivity improvement in the public sector, the need for "capacity building" as described above was stressed as perhaps the single most important requirement for significant improvements. Thus, it is believed that the charter for a productivity center should acknowledge the importance of determining the need for managerial and analytical skills—working with universities, as

well as public and private organizations—and charge the center with a responsibility for fostering programs to produce such trained personnel.

Another frequently discussed issue is the extent to which, and when, the center should be divorced from Federal management and primary reliance on Federal financing. Dr. Grayson, in a recent lecture to the GAO staff, offered the goal of making such a center self-supporting after 5 years. It is of interest that in Japan, over 90 percent of the support of the Japan Productivity Center is from private sources—and in Germany, Israel, and Norway, private support is reported to be one-third to one-half. This poses a challenge. One alternative would be for the national productivity center to underwrite the establishment of both national- and State-level centers which would become self-supporting. Of course regional and perhaps metropolitan centers should not be precluded in appropriate situations.

Another alternative which has been proposed is to establish the national productivity center, at the outset, as

a Government corporation in order to give it more independence of the Federal structure, while holding it accountable to the Congress and the President. In any event, it would appear wise to authorize and encourage the national productivity center to engage in cost-sharing, to require reimbursement for technical assistance not related to research and demonstration projects, and to encourage private financing.

Further development of productivity measures, and conduct of research into designing better measures, should stress the importance of assessing trends in quality of performance and results of programs, especially in the public sector. Simple productivity indices expressed as "output per unit of input" are essential and must be continued. We must, however, learn how to measure program effectiveness and how to apply appropriate measures of progress against program objectives. We likewise need to continue our search for techniques of measuring employee attitudes and "quality of work" factors.

Senator NUNN. I have several more questions and I may want to submit them to you for the record.¹ We have a real problem this morning, Senator Percy is on the floor and I being the only member of the Budget and Armed Services Committee, would like to be at an 11 o'clock Budget Committee meeting as Secretary Schlesinger is appearing.

We may submit a few more questions to you for the record. I appreciate all of you appearing—Messrs. Morris, Staats, Kull, and Shaffer.

After we get back from our recess, assuming we leave at some point, we would like to try to have a markup of this legislation. If we could have your additional information by that time, it would be very helpful.

Thank you very much.

Our next witness is Mr. Charles E. Brown, vice president of employee relations for Honeywell, Inc.

For the past 3 years Honeywell has been one of the leading corporations in the area of increasing productivity and protecting the quality of working life.

Mr. Brown, we are delighted to have you here this morning.

If you have anyone with you, and you would like for them to come up, we would be glad for them to join you.

TESTIMONY OF CHARLES E. BROWN, VICE PRESIDENT OF EMPLOYEE RELATIONS FOR HONEYWELL, INC.

Mr. BROWN. Mr. Chairman, I am very pleased to be here.

There is one other individual who would have been with me, but he happens to be in Japan today visiting the Japanese Productivity Center.

His primary purpose of going to Japan was not to visit and learn from their productivity center, but to take to our Japanese affiliate company some of the know-how we have developed in this country and, incidentally, to learn what he can from their productivity center.

However, it does seem a bit strange to have Americans going to Japan to try to learn how to become more productive.

I am very happy to be here this morning because of our having worked with this subject for the past 3 years.

We do not profess to know a great amount about it, although we know more now than we did 3 years ago.

We are convinced that the subject is deserving of considerably more attention than it is getting, both in the private and public sectors.

Now, I am going to talk from notes this morning, because of your tight time schedule, and I will condense my remarks which will generally follow the outline of my prepared statement.

Senator NUNN. Your full statement will be submitted in the record.

Mr. BROWN. Thank you. You do have a statement. Your staff has it.

First, we are convinced that productivity improvement in the United States should be a stated national objective, and that it merits considerable additional attention.

Differences of opinion about productivity usually center around its means of accomplishment, and how the rewards of productivity

¹ See p. 174

improvement should be divided—rather than around the basic question as to whether productivity improvement is, in fact, desirable.

Although we recognize that there are some very difficult obstacles to overcome in order to obtain significantly increased productivity, and we are also somewhat skeptical about the creation or expansion of any Federal agency, we support Senate bills S. 765 and S. 937.

Our reason is simple. They appear to offer a better approach than any other means available at this time.

We believe that productivity and quality of working life are so closely related that they should, in fact, be considered as one.

The primary objective of a productivity improvement effort should be to attain an integrated system whereby people, material, machines, and money work together efficiently.

We know from experience that high productivity is a combination of many factors. For example, when additional capital is invested in better tools and equipment, productivity usually goes up. Therefore, encouragement to business investment is an important aspect of productivity improvement.

But, productivity also goes up when money is spent on a good training program, and when successful efforts are made to create employee attitudes favorable to high productivity.

Attitudes are generally favorable when employees involved feel that they are receiving a fair return for their labor, and when jobs are designed with people in mind as well as production rates.

So, we are dealing with a highly complex interacting set of factors, and we believe that a national Center can contribute significantly to the knowhow required to meld these factors together in a generally satisfactory relationship.

In respect to the primary roles of the Center we believe there should be two main areas of activity:

- (1) To advise, educate, sponsor research, and generally promote improved productivity in both the private and the public sectors;
- (2) To monitor Federal rules, regulations, and major programs which have an impact on national productivity, and to call attention to serious productivity inhibitors, so that the agency involved, or the Congress, can deal with them, but not to relieve the agency of primary responsibility for high productivity.

Productivity improvement should be a major responsibility of every manager in the private and public sector.

It is at the heart of good management, and no legislation in any respect should encourage the head of an agency, or the head of a corporation, to look to staff, or to look to anyone other than himself, as being the primary motivator for better productivity.

Although the concept of a productivity impact statement is new to us, we believe that its objective is worthwhile.

If an agency must assess the impact on productivity of its proposed major programs that would seem to direct attention to an area which previously has not gotten enough attention. So, if productivity impact statements can, in fact, be made to do what they are intended to do, their requirement would seem to be appropriate.

We believe that the Center should be funded initially for 3 years, using an incremental budgeting approach such as provided in S. 765

for the first 3 years, and possibly at a somewhat higher level than S. 765 now recommends.

Congress should examine results of the Center in 1978, and based on those results, determine budgeting thereafter.

We believe that the staff should not be limited to an absolute number, that budgeting generally will control staff.

We endorse the encouragement of local productivity centers. We believe it would be premature, however, to set up an extensive network of federally funded centers prior to the national center's having done considerable additional experimentation.

We suggest that the Center could be partially self-supporting by making moderate changes to users of its services.

If it did that, some of its funding could be derived from that source, and also the offering of such services for sale might well provide some indication of the true value of the services.

Whether or not to create an Advisory Council as proposed in S. 765, would seem to hinge on the degree of expertise, and the amount of time and effort, which the members of such a Council would be willing to spend in guiding the Center's efforts.

A carefully selected working Council could be of considerable help. Otherwise its creation would simply represent additional unproductive effort.

In summary, we support Senate bills S. 765 and S. 937. We support these bills even though there are numerous obstacles which must be overcome for the objectives of the bills to be attained.

We feel that the management of the Center will have to be of sufficiently high caliber to meld together the various self-interests which are understandably concerned with efforts to improve productivity and the quality of working life.

We believe however there is so much commonality of purpose involved, and so much benefit to Americans as a whole, that the Center can in fact perform some very useful services and make a significant contribution to much needed productivity improvement in the United States.

I thank you for the opportunity of expressing these views.

Senator NUNN. Thank you very much. I read your statement completely, and I agree with many of the things in it, and appreciate very much your contribution.

The one area that attracts my attention and may be a little more precipitous, is the area of cooperation with the private sector. I particularly like the idea of trying to phase out the Government as Mr. Staats said, and make the Center almost self-supporting, at some time in the future.

You state on page 7, and I quote:

Perhaps the Center should have an objective of obtaining income from its users approximately equal to the amount provided by the Government by some future date, say 1978.

That is a goal I think would greatly strengthen this concern, and would give more direction to it.

How do we go about doing that though? What is the interest of the private community in this kind of thrust?

What would they be willing to contribute, not in terms of dollars, but in terms of what kind of funds would they be willing to contribute?

Mr. BROWN. Mr. Chairman, I really do not know how to answer that.

There is interest in the private sector. I think it is more latent than it should be. What may be needed is some means whereby the pragmatic aspects of working toward productivity improvement can be demonstrated.

It is difficult now for members of the private sector to know where to go in order to find readily usable productivity improvement ideas.

There is not much of a body of knowledge in existence that can be readily picked up and applied.

Also, I think another inhibiting factor may be habit patterns which we have all formed and which simply are not conducive to improving productivity.

I am reminded of the young county agricultural agent who was attempting to tell the farmer how he could farm better, and the farmer indicated he already knew how to farm a lot better than he was actually farming. I think that element is also present in the private industrial sector.

We already know how to do the job better than we are doing it, and we may need some help, some impetus, to further encourage taking a hold of this thing and making it work.

I wish I had a ready answer to your question, but I do not.

Senator NUNN. Do you think, generally speaking business would be interested in this, and businesses, both large and small, would be willing to cooperate in helping move this approach more and more toward the private sector?

Mr. BROWN. Yes, sir, I do.

I think that looking to the private sector as an input agent, very heavily involved in expenditure of its own funds and its own expertise, is crucial.

In my opinion, that much more opposition in the private sector would come if the center is perceived as the building of a large Federal agency. It should not be that, but rather a catalyst, a means for encouraging the private sector and expecting the private sector to participate.

Senator NUNN. Thank you very much, Mr. Brown. I just got a note that we are going to begin a series of rollcall votes at 11 o'clock. It will be very difficult for us to have someone here all the time. We may have to go into recess, but I will make sure I am here or Senator Percy.

I would like to go into more detail, but we do have these conflicts. Thank you very much. We hope you will continue to watch this legislation, and give us the benefit of your thoughts.

[Questions submitted by Senator Percy to Mr. Brown with response and his prepared statement follow:]

QUESTIONS BY SENATOR PERCY TO CHARLES E. BROWN, WITH RESPONSES

Dear Mr. Brown, I want to thank you for your very excellent and specific testimony. You make a very important point, with which I agree, when you suggest that the National Center should be concerned with the relationship between productivity improvement and such factors as the consumption of energy and raw materials and effects on the environment. Efforts by the National Center to identify and help eradicate inefficient uses of resources will be an essential part of its activities as I see them.

Question 1. I note in your prepared testimony that you venture a measure of skepticism (p. 2) as to whether the proposed National Center will achieve its major objectives and you tentatively suggest that the increased funding for the Center, above that now provided for the Commission, may be unwarranted. The Committee will have to weigh this skepticism, which I think is very healthy, against the record of the Productivity Commission. Can you be more specific—do you have any examples to support your skeptical view of enlarging the Commission by creating a Center?

Answer. My concern is based on two premises, neither of which is critical of the current Commission;

(a) our federal bureaucracy is already too big, and the most productive way of enlarging any particular segment of it would be to reduce proportionally some other segment.

(a) Productivity growth is complex and hard to achieve. We cannot assume that enlargement of and additional funding for a Center will assure success. Management of the Center will have to make many difficult choices on such things as work priorities, staffing, and so on.

In spite of some skepticism, we believe that an expanded Center should be created and given a fair opportunity to show what it can do.

Question 2. You endorse the promotion, on a gradual scale, of local productivity centers which would be available to work with organizations on a local basis. This is a suggestion that is not contained in any of the bills before us. At the present time, the National Productivity Commission has a very active Regional Office in Chicago, as well as an office in Dallas. Your corporation has had a close relationship with the Chicago office, I understand. Based on your experience, do you think that establishing additional regional productivity centers would serve the purpose, or do you believe there is justification for a greater number of local centers?

Answer. Yes, I think a National Center and a few regional centers are all that should be established in the foreseeable future. Regional centers could act in an advisory capacity and encourage privately funded local centers.

Question 3. I agree with your proposition that the Center make moderate charges to users of its services. How could this be implemented in practice? For example, would you expect hospitals and other public institutions to compensate the Commission for its assistance?

Answer. Products and services of the Center which have grown out of their experimental stage could be evaluated as potential, salable, items. A balance should be sought between the desire for widespread distribution (free) on the one hand and moderate charges for the products of services on the other. One important benefit of charging for services would be the automatic "testing" of the value. Literature, conferences, demonstrations, etc. of true value should be attractive enough for users to be willing to help offset their costs. We would expect all private institutions to pay a moderate fee for such products and services.

Statement by Charles E. Brown
Vice President, Employee Relations - Honeywell Inc.
before the
Government Operations Committee, United States Senate
in regard to
S. 765 and S.937 - Bills to Establish a National Center
for Productivity and Quality of Working Life
March 21, 1975

My name is Charlie Brown. I am Vice President, Employee Relations for Honeywell Inc. Honeywell is a manufacturer of electronic products employing approximately 92,000 people, 56,000 of whom are in the United States.

I am particularly happy to have the opportunity to make brief remarks here today on the subject of productivity and quality of working life. For the past three years the management of Honeywell has paid increasing attention to this subject. We are convinced that it is deserving of considerably more attention than it is getting - both in the private and public sectors.

In our experiments with productivity improvement we have reached a few conclusions which I believe are related to the proposed legislation. We have concluded, for example, that primary responsibility for productivity improvement should rest with responsible top line executives. Good supportive staff work is necessary, but there should be no confusion as to where the primary responsibility rests.

We have found that there is not a great amount of information available on productivity improvement. There are very few highly

valid measurement methods, and there is a relatively small body of authoritative knowledge available to those who seek to improve productivity.

It is our belief that productivity improvement in the United States should be a stated national objective, that it should have high importance in the scheme of things. Differences of opinion about productivity usually center around its means of accomplishment, and how the rewards of productivity improvement should be divided - rather than around the basic question as to whether productivity improvement is, in fact, a desirable objective. The method of achievement is perhaps the most serious unresolved question in our minds. We are uncertain as to how the task should be approached nationally. More specifically, we have some doubt as to whether the creation of an enlarged federal productivity center can, in fact, significantly influence productivity in the United States. It is at least conceivable that the end result would be counter productive - that an enlarged Center might simply bring additional tax burdens to an already overburdened citizenry. Although the existing Center has done some excellent work, we have no great amount of hard evidence to indicate that a National Productivity Center will achieve its major objectives, laudible though those objectives may be.

In spite of these reservations, we support Senate Bills S.765 and S.937. We feel that these bills offer a better approach than any other means available at this time. We are convinced that the goal

of productivity improvement is of sufficient national importance to make the effort to reach it worthwhile, even in view of the many apparent obstacles to success.

Turning now to some specific comments on the two bills, I should like to comment first on the "dual" objective of the proposed Center. (At first glance it may appear that "productivity" is one thing and "quality of working life" another. However, we believe that the two are so closely interrelated that they should, in fact, be considered as one. The primary objective of a productivity improvement effort should be to attain an integrated system whereby people, material, machines, and money work together efficiently.)

We know from experience that high productivity is a combination of many factors. For example, when additional capital is invested in better tools and equipment, productivity usually goes up. Encouragement to business investment is an important aspect of productivity improvement. But productivity also goes up when money is spent on a good training program, and when successful efforts are made to create employee attitudes favorable to high productivity. (Attitudes are generally favorable when employees involved feel that they are receiving a fair return for their labor, and when jobs are designed with people in mind as well as production rates.) Thus we are dealing with a highly complex interacting set of factors, and the modification of one of those factors may have significantly different effects on one or more of the others. Obviously, some

practical research and experimentation could be done to sort out those combinations of factors which contribute to a broad overall working system. We believe that a national Center for Productivity and Quality of Working Life could produce some very usable data, and that its efforts should be directed toward total system improvements, rather than simply toward the production of more goods and services.

Therefore, we suggest that wording of the bill, if and when one is finally passed, should make it clear that productivity improvement efforts will recognize many internal related factors, such as those mentioned previously, and also numerous external factors. For example, the Center should be concerned with the relationship between productivity improvements and the consumption of energy and raw materials, the effect of productivity improvements on the environment and on our ecological system, and of course the beneficial effects on price reductions which productivity improvements should surely bring. By making it clear that the Center is concerned with comprehensive considerations, and not simply with higher production, we believe that the Center can better attain its goals and that a large percentage of Americans will support such legislation.

In respect to the primary roles of the Center we believe that there are two main areas of activity:

- 1) The Center should advise, educate, sponsor research, and generally promote improved productivity in both the private and public sectors. Both bills establish objectives for the Center to accomplish these goals. Honeywell has used many of these methods in our own productivity efforts and has found them to be valuable and worthwhile. One thing that we would like to stress, however, is that the Center should act as a resource center and catalyst. It should not begin extensive studies of private industry or Government agencies on its own initiative. In the sphere of the Federal Government we would visualize the Center's being utilized not only by the various agencies themselves but also by the Office of Management and Budget and by Congressional Committees.

- 2) The Center should also monitor rules, regulations, and major programs which Federal agencies adopt and which would have a significant impact on private organizations - be they business, labor, or whatever. Government regulations can seriously inhibit productivity in the private sector. Obviously, we do not visualize the Center's reviewing and commenting on every proposed action of Federal agencies. It should be able to choose where it will expend its resources. We see the possibility of a mutually beneficial relationship between the Center and the private sector, with the private sector assisting the Center by identifying actions which would place undue strain on productivity.

Although the concept is new to us, we are interested in the requirement of Productivity Impact Statements by Federal Agencies which propose new national projects and programs. We would favor periodic reviews by Federal Agencies of their existing regulations and careful evaluation of the effect those regulations have on national productivity, plus or minus. Without doubt there are many government regulations in effect today which may well have served a useful purpose when they were issued, but which are no longer valid. New developments, such as the energy shortage, have outdated many of those regulations, and they should be changed.

We believe that the Center should be established for a five year period. Funding should extend initially for three years in order to provide sufficient time for a fair test. We favor the incremental budgeting approach provided in S.765 for the first three years. Unnecessarily hasty growth, we think, would be unproductive. Congress should carefully review in 1978 results of the Center's activity and determine, based on that review, the extent of funding for subsequent years.

We endorse the encouragement of local Productivity Centers which would be available to work with organizations on a local basis. We believe it would be premature, however, to set up an extensive

network of Federally funded Centers. There should be considerable additional experimentation at the national level and limited experimentation in regional areas before concluding that a massive network is appropriate. The Center should feel a heavy responsibility to demonstrate its real value before being funded for significant growth beyond 1978. It would be inappropriate, to say the least, to create a National Center for Productivity and have it demonstrate anything other than a positive productivity impact.

We believe it would be desirable for the Center to become partially self-supporting by making moderate charges to users of its services. For example, fees could be charged for training conferences, literature, research projects, etc. If the quality is high, users should be willing to pay for such services. The offering of marketable services for sale might well provide a good test as to the value of such services. Perhaps the Center should have an objective of obtaining income from its users approximately equal to the amount provided by the Government by some future date, say 1978.

S.765 provides for the creation of an Advisory Council in addition to a Board of Directors. If the Advisory Council would, in fact, be made up of knowledgeable people willing to take the necessary time to provide input and direction to the Center, then we feel that such a council is desirable. On the

other hand if the council were to be made up of individuals already too busy to provide real direction, then its creation would simply represent additional unproductive effort.

In summary, although we believe that the creation or expansion of any Federal Agency should be undertaken only under most pressing circumstances, we have concluded that the combined need and opportunity for productivity improvement in the United States is sufficiently great to warrant popular support of S.765 and S.937. We feel that productivity and quality of working life are interwoven and should be treated as one. We feel that any rewording of the bills should make it clear that they deal with a comprehensive concept - productivity improvement and all its resultant effects. We feel that the Center can provide valuable research and educational services to both public and private sectors. We feel that the Center can and should be a motivating force to challenge outmoded Government regulations which hamper productivity - although the primary responsibility for change should rest with each agency head. Finally, we urge that the Center be assured of adequate funding for three years, with increased funding and further growth dependent on results within those three years.

Thank you for the opportunity of expressing these views.

Senator NUNN. Our next witness is Mr. Jerome M. Rosow, who is manager of the Public Affairs Department of the Exxon Corp., and Chairman of the President's Advisory Committee on Federal Pay.

Formerly Mr. Rosow was Assistant Secretary of Labor, and at one time was Vice Chairman of the National Commission on Productivity.

Mr. Rosow, if you could give us your statement, or perhaps a summary, that would be fine.

TESTIMONY OF JEROME ROSOW, PLANNING MANAGER, PUBLIC AFFAIRS DEPARTMENT, EXXON CORP.

Mr. Rosow. Thank you, Mr. Chairman.

I have furnished a full text of my statement, and in view of your time problem, I would be happy to merely say that I responded to the letter that you and Senator Percy sent, which enumerated the areas of difference, and size of the Center, responsibility of the Federal agencies, relative emphasis on quality of working life, the amount of appropriation, and relative emphasis on State and local activity.

Each of these are discussed in detail in my statement.

In essence, I feel that both bills are laudable, and I see room for blending of ideas between the two pieces of legislation, leaning more heavily on the version of S. 765, but blending in some of the excellent ideas which are contained in the chairman's version of the legislation.

I tend to share the views of Mr. Staats and Mr. Brown expressed earlier this morning, insofar as I heard their statements, and feel very strongly that a strong National Center is very important, but that it should really provide leadership and direction for an opportunity for the private sector itself to function in this area.

If I may just make a few observations, in the press of time, with regard to three points. First, with respect to the role of Government, I think that both bills place undue emphasis on the role of Government as the instrument to advance productivity and the quality of working life.

This assumption is fragile. It is particularly questionable in the post-Watergate environment, when the private parties in our society have some suspicion, if not an open distrust of their Government.

Secretary Dunlop, in his capacity as Chairman of the National Commission on Productivity and Work Quality, of which I am now currently a working member, recently requested me to prepare a memorandum discussing the respective roles of Government and the private sector.

I am taking the liberty of attaching a copy of this memorandum to my testimony, discussing six aspects of this problem. The theme is to increase the use of private resources.¹

In essence, it suggests a role of policy from the Government, but a more active application with the private sector, with one or more private nonprofit institutions, which would work as arms of the Government in this regard, but not under the control of the Government.

Second, there is a heavy emphasis on research and development, which I read in both forms of the legislation, I think it would be desirable to devote more attention to the pragmatic aspects of application of existing knowledge and method.

¹ See p. 209.

Mr. Brown noted that to a great extent the opportunity to improve the productivity of the United States rests upon the increased utilization of human resources, that it does not in fact require new research, or new inventions, or new ideas.

I think much of the knowledge and the experience developed under the human relations school of management is available. The real problem is one of application of this experience and knowledge to the organizations, and major institutions in our society.

It would be a mistake to rush into a series of federally funded research projects, which could well produce many books and project reports with few visible results.

The Government files are already crammed with studies reporting the outcome of federally funded research, but one must seek long and hard to find practical applications.

My third point, Mr. Chairman, is in terms of the point earlier discussed, in your observations of a few moments ago, that is question of responsibility for productivity.

The legislation assumes that the responsibility for achieving productivity improvement and greater utilization rests upon the Government, whereas in fact, the responsibility rests upon the parties themselves in the workplace, in the organizations of our society, both public and private.

Most of the jobs, and most of the production of the United States is in the private sector, and any program designed to advance achievements in this field must depend first and foremost on cooperation and participation of management and labor. Since this is the case, any legislation seeking new breakthroughs in this area depend upon initiatives for action which rest first with management, and then the response to seek initiative rests with the employees, and in many cases with their union leadership.

Senator NUNN. Let me interrupt just a minute. I see we have a vote. Senator Percy is not here yet and we have eight consecutive rollcall votes. I have read all of your statement which is excellent.

I agree with your observations about the emphasis on quality of worklife. I think it is an interesting part of the overall goal and although productivity and quality work life is in some ways separate, I do not think you can separate the two.

I think they have to be handled together, and I do support those provisions in Senator Percy's bill.

The question asked a minute ago is one I would like to ask you before we have to recess. How does Government get involved in productivity without creating a new huge Federal bureaucracy? Also how does Government limits its efforts, and get the private sector involved more and more, rather than just taking over in this field, which I think would be very counterproductive?

Mr. Rosow. I welcome the opportunity to respond to that, because I have given this issue considerable thought, having served as Vice Chairman of the original Commission, and being reappointed to the present Commission as well as working in this area for many years.

The national center of the type you visualize would provide the national policy, and would also provide financial resources, in a sense seed money in order to fund the private sector, whether it is at the State level, or city level, through universities, or through non-

profit, free-standing institutes. I think we should experiment with one of each, in fact. Thus the private parties could turn to such institutes and receive information, advice, and most important of all, technical assistance. As Mr. Brown said in his remarks, there is no place at the present time for the private parties to turn.

Another very important point relates to the question of fees and the self-financing of such an institute in the long run. It would be very difficult for the Government to collect fees from the private sector, for providing services to institutions in the private sector.

As a matter of fact, it could very well be the cost of collecting those fees would exceed the value of the receipts.

On the other hand, if you have an agency in the private sector which is functioning in liaison with and under the broad direction of the National Center, it can well be a fee-collecting organization, and in the long run become self-financing.

Second, and very importantly, I think that whereas your board of directors would be tripartite, and would draw on management and labor, the private nongovernmental—institute would have an even greater opportunity for more active involvement of labor in the policy-fixing aspects.

I think it is extremely important in productivity and quality of life changes in our society, to have the active involvement and cooperation of labor because of its affect on jobs. This job security question keeps cropping up as basic issue. Leadership by the Federal Government and policy direction, of the type you visualize, plus a secondary role in providing leadership in the public sector is greatly needed. Both with respect to the Federal Government itself, and State and local governments, it could be key function of the Center. About 16 million people are now working in the public sector, and many of the fiscal crises in the cities are manpower-related.

Senator NUNN. Thank you very much. I wish we had more time this morning, but I am going to have to recess and leave. Either Senator Percy or I will come back.

If you have any other thoughts and ideas during the next 2 or 3 weeks on how we could accomplish the goals which you have articulated so well this morning, particularly encouraging the cooperation of private enterprise and on getting labor involved, we certainly would welcome them. You can do this either by letter, which we will put in the record, or by communication with the staff.

Mr. Rosow. Thank you very much.

Senator NUNN. I also have some questions that Senator Percy is submitting to you for the record, if you could answer these questions, we would appreciate it.

Mr. Rosow. Thank you very much.

[The questions submitted by Senator Percy to Jerome M. Rosow and prepared statement follow:]

QUESTIONS BY SENATOR PERCY TO JEROME M. ROSOW, WITH RESPONSES

Question 1. As a former Assistant Secretary of Labor and a man with experience in the function and structure of executive agencies, I would appreciate hearing your reactions to the structure of the Center as proposed in S. 765 and S. 937, and to what I believe is the Administration proposal which involves a Council appointed by the President of 30 members, and Executive Committee of five, an Executive Director and a staff of five?

Specifically, then, do you believe that the Center should be organized to play a stronger, rather than a weaker role in coordinating efforts to improve productivity and the quality of working life?

Answer. I believe the Center should be organized to play a stronger rather than a weaker role in coordination. At the same time, this national coordination role should not be overextended to become "operational." Rather, I would see this role as policy direction, broad national coordination, and the direction of grants, and the evaluation of results.

Question 2. I understand that your new Work in America Institute does not concern itself with productivity matters, in the technological and capital formation sense of the word. Why is that?

Answer. The Work in America Institute is concerned with the human resources aspect of productivity rather than the technological and capital aspects. The issues relating to technology, and research and development as well as capital investment policies would involve skills and talents different than those visualized in the Institute. Generally speaking, management devotes considerable energy and attention to these matters. They are also felt quite keenly in terms of day-to-day competition.

By contrast, the utilization and development of human resources to enhance and improve the productivity of organizations is less central to the management of enterprises. In addition, this area is related to human behavior, and social and political problems which are more subtle and different in many respects than the decisions relating to technology and capital.

Question 3. In light of your experience in putting together your Work in America Institute, and, again, your Executive Branch experience, would you comment on the adequacy of funding levels proposed in S. 765 and S. 937 for the Center, and the adequacy of the Administration proposed which I believe anticipates a lower level of funding than either of these bills?

Answer. My prepared testimony discussed the adequacy of the appropriations in general. However, they are concentrated on the problems attendant to Senator Nunn's major grant program. I favor the step-up type of funding under S. 765. It might be desirable to begin the first year at some point midway between the \$5 and \$10 million levels, i.e., about \$7 million. Further, it would be desirable to make a distinction in the appropriation between the funds intended for internal administration in the conduct of the work of the Center as distinguished from the funds intended for grants. I believe that the appropriation would achieve much greater mileage and effect if the grant program was directed toward private, non-profit organizations and public sector institutes which would contribute both economic and personnel resources to the projects.

PREPARED STATEMENT OF JEROME M. ROSOW, PLANNING
MANAGER, PUBLIC AFFAIRS DEPARTMENT, EXXON COR-
PORATION

Mr. Chairman:

I welcome this opportunity to participate in these hearings on national productivity and the quality of working life. In accordance with your request of March 11, 1975 my testimony seeks to compare and evaluate the two bills, S. 765 (Senator Percy) and S. 937 (Senator Nunn), both of which provide for the creation of a National Center for Productivity and The Quality of Working Life.

Your letter enumerated several important areas of difference: functions and size of the Center, the responsibilities of Federal agencies, the emphasis on quality of working life, the amount of the appropriations, and the emphasis on state and local activities. I will comment briefly on each of these major areas of difference. Following that I have some broad general observations regarding certain fundamental issues relating to the activities of a National Center for Productivity and The Quality of Working Life.

1. Functions

S. 973 defines the functions in Sec. 305. These are very specific and provide only for the encouragement of research and development activities and the encouragement of the development of State and local productivity centers. In effect Senator Nunn's bill delimits the role of the Center and visualizes a considerable number of centers springing up at local levels under a broad program of Federal grants. Further, it would appear that the definition of

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productivity under this bill is more technologically oriented and has limited or only indirect reference to manpower and the effective utilization of human resources.

By contrast, S. 765 under Sec. 207 establishes a National Center with broad and varied functions. These include: developing a national policy in consultation with Congress and the Executive Branch; working actively with the public and private sectors to achieve continued productivity growth and improved quality of working life; increased utilization of technological and human resources. In addition the Center would have broad responsibilities to encourage and facilitate both increased economic effectiveness and improved use of human resources. The functions would extend to incentive systems and deal explicitly with new programs and plans relating to manpower adjustment and job security problems which are fundamental to a favorable climate for productivity change.

The contrast between the two bills with regard to functions is a clear delineation of the basic differences between the two bills.

2. Responsibility of Federal Agencies

Senator Nunn's bill, under Title II, requires agencies to prepare detailed productivity statements, to develop alternatives to stimulate productivity, to establish a small staff within each agency and to review its statutes, rules and regulations to insure that they are not adverse to productivity growth. These are excellent provisions and it would seem desirable that in some measure they be incorporated in the final version of the legislation.

Senator Percy's bill, under Sec. 302, requires that each Federal Agency shall appoint a liaison person to work with the Center. It also provides for an inflation impact statement. Further, it establishes Offices in the Department of Labor and the Department of Commerce with specific functions, and provides a role for the Civil Service Commission to work within the Federal sector. I endorse

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this version as fundamental since it provides for effective integration of existing Departments with the new role of the Center and it looks inward at the Federal Government itself at the same time as it looks outward at the nation as a whole. It would appear desirable to modify Sec. 302 to enlarge the concept of the liaison person to provide for a small staff as stated in Title II, Sec. 203 of Senator Nunn's bill.

3. Emphasis on Quality of Working Life

Here we find a fundamental difference between the two bills. Senator Nunn's bill has limited reference to the question of the quality of working life and the broad issue of the utilization of human resources. As I stated earlier, it is primarily oriented toward technological considerations.

S. 765, by contrast, has drawn a careful balance between the technological and capital aspects of productivity and human resources. In fact, under its grant provisions, Sec. 210 (d), it provides for equal emphasis on both aspects. Furthermore, Senator Percy's bill has a more ambitious and far-reaching definition. It extends deeply into the consideration of human resources, both in the public and the private sectors. There may be philosophical differences between the two bills; one leaning heavily on capital, technology, research and development, the other depending equally on the foregoing considerations, and in addition placing equivalent attention and emphasis on human resources and modern personnel methods, incentive systems, and manpower adjustment programs to deal with the human costs of change.

Senator Percy's bill appears more compatible with the name of the Center. Furthermore, to confine the Center to the technological aspects of productivity would clearly alienate labor and create serious doubts in the minds of many employees in the U.S. as to the effect of such a Center upon their jobs and their security.

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Unless the emphasis on the quality of working life and human resources is explicit and co-equal with technology, the Center will fall short of its objectives. It will also incur strong undercurrents of opposition and resistance from the labor force which is crucial to the major changes necessary to advance productivity.

4. Appropriations

Senator Percy's bill would appropriate \$70 million over a five-year period beginning modestly with a \$5 million appropriation and increasing the appropriation by \$5 million in each of the first four years, then leveling out at \$20 million per year. By contrast, Senator Nunn's bill provides \$65 million over a three-year period beginning with an initial appropriation of \$20 million, rising to \$25 million by the third year.

On the face of the comparison Senator Nunn's bill provides a larger appropriation. If the third year appropriation of \$25 million were renewed for the fourth and fifth years, the total appropriation would be \$115 million. However, the difference between these two appropriations relates directly to the difference in functions. Although Senator Nunn's bill seems more generous, in fact it would be underfunded in terms of the goals and objectives which he has defined. The Federal grant program to States, local governments and universities would create a tremendous demand for such funds.

If we were to assume that only half of the States, i.e., 25, requested money to establish a productivity center and within each State one major city and one major university also requested funds, there would be a demand for the funding of 75 centers. If this hypothetical set of grants were distributed equally across the \$20 million appropriation, the Center would be able to fund approximately \$250,000 per center, leaving a small balance of funds for the Center itself.

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These grants would be too small to make much of an impact. The number of grants suggested here may be understated. With the lack of Federal research grants for universities today we can anticipate a great influx of demands from most major engineering schools, graduate schools of business administration, and graduate schools of public administration. In addition, the hundred largest cities in the U.S., each of whom is facing major productivity and fiscal problems attributable to manpower, would seek supporting grants. In other words, a grant program of the character visualized by Senator Nunn would create a demand far in excess of the appropriation. Therefore, although his appropriation seems more generous on the face of the comparison, it would fall substantially below the needs. More importantly it has a high potential for premature dissemination of funds with limited results.

In many ways Senator Nunn's proposal for funding of local grass roots centers is attractive. It is premature, however, because the infrastructure of human talent and know-how does not exist. It would seem logical to incorporate this proposal within the final legislation in the form of a section which provides for six pilot grants to fund States, cities, and universities or non-profit institutes over a three to five-year trial period. }

5. Emphasis on State and Local Government

The differences between the two bills in this respect are implicit in all of the foregoing discussion. Senator Nunn leans heavily on State and local governments, and universities as the chosen instruments to achieve productivity change. Senator Percy's bill provides a role for the States, local governments, and universities, but places the National Center in the pivotal position to produce results and to manage the over-all national program. In fact Senator Nunn sees a minor role for the National Center and would appear to prefer

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instead the concepts of new federalism, revenue sharing, and a county-agent philosophy as the most effective governmental instruments to carry out national policy.

It would be unwise to engage in a debate over differing philosophies of government with regard to the problem of productivity and the quality of working life. At this stage the problem requires a national initiative with some grass roots counterparts. Both bills could be blended together, with the Percy bill providing the central structure.

GENERAL OBSERVATIONS

With your permission, Mr. Chairman, I would welcome the opportunity to make some general observations which have a bearing on this legislation.

1. The Role of Government

Both bills place an undue emphasis on the role of Government as the instrument to advance productivity and the quality of working life. This assumption is fragile. It is particularly questionable in a post-Watergate environment when the private parties in our society have some suspicion, if not open distrust, of their Government. Secretary John Dunlop, in his capacity as Chairman of the National Commission on Productivity and the Quality of Work, requested a memorandum on the relative roles of the government and the private sector. The full text of this memorandum is attached to this testimony. It discusses six aspects of the problem and recommends a balanced use of private resources. In essence it suggests a central policy role for Government and an active application role for private non-profit institutes.

2. Research versus Application

The legislation proposed places a heavy emphasis on research and development. It would be desirable to devote more attention to the pragmatic aspects of

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application of existing knowledge and methods. To a great extent the opportunity to improve productivity in the U.S. through the increased utilization of human resources does not require new research, new inventions or new ideas. Much of the knowledge and experience developed under the human relations school of management is available. The real problem is one of application of this experience and knowledge to organizations and major institutions in our society. I believe that it would be a mistake to rush into a series of federally funded research projects which could well be proliferated to produce many books and project reports, with few visible results. The Government's files are crammed with studies reporting the outcome of Federally funded research, but one must seek long and hard to find practical applications.

3. Responsibility for Productivity

The legislation assumes that the responsibility for achieving productivity improvement and greater utilization of technology and human resources rests upon the Government. In fact, the responsibility rests upon the parties themselves; in the work place, in the organizations in our society, both public and private. Most of the jobs and most of the production in the U.S. is in the private sector. Any program designed to advance achievements in this field must depend first and foremost on the cooperation and participation of management and labor. Since this is the case, any legislation seeking new breakthroughs in this area must be attuned to the fact that the initiative for action rests first with management. Then, the response to such initiative rests with the employees, and in many cases with their union leadership. Therefore, decision-makers are in the front line of responsibility for these actions and their relationship to Government cannot be a dependent one.

One of the great problems today with public funded and public mandated institutions is that they depend too much upon the imagination and vicarious experience of the administrators.

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In the final revision of the proposed legislation, I would hope that some attention is directed to these general considerations: not to lessen the initiative of the federal government but to recognize and retain a clear and central role for the private parties. It is for this reason that I feel strongly that private, non-profit centers can act as effective agencies supported in part by government funding, but without government control.

* * * * *

Attachment - January 30, 1975 letter to Dr. John T. Dunlop

Jerome M. Rosow
Public Affairs Planning Manager
Exxon Corporation

Also: - Member, National Commission on Productivity and Quality of Work

EXXON CORPORATION

1251 AVENUE OF THE AMERICAS, NEW YORK, N.Y. 10020

Public Affairs Department
Public Affairs Planning
JEROME M. ROSOW - Manager

January 30, 1975

Dr. John T. Dunlop, Chairman
National Commission on Productivity
and Work Quality
2000 M Street, N.W.
Washington, D.C. 20508

Dear John:

We have had several brief discussions about the appropriate balance between the public and private roles in fulfilling the objectives of the Commission. My interest in this matter derives from my role as a member of the Commission, my former role as Vice Chairman, and my current interest in developing a non-profit organization, namely, the Work in America Institute.

To achieve a healthy working balance between the relative roles of the federal government and private agencies is critical to meaningful results in advancing productivity and the quality of working life. Some of the better models in the past have been the federal government relationships with private universities in the area of long-term research. However, in this situation those models are of only limited value because productivity studies are intimately involved with the work place and engage the vital interests of the two principal parties, namely, management and labor. In my opinion the Commission will fulfill its objectives better if it had a working relationship with a non-profit institute which is free standing and which has the support of management, labor, government, and the private foundations. There are a number of advantages to be derived from this relationship including access and trust, the impartial environment, flexibility, costs and fees, multiplier effects, and increased opportunities in the public sector.

1. Impartiality and Trust

The work place is not neutral territory where strangers can enter and examine the organization, jobs, pay and benefits, and working conditions. Both management and labor are jealous of their roles. The federal government is in an awkward position to intervene as a third party. This is so because it performs many legal functions which impinge upon corporations, unions, and state and local governments as well as individuals. It administers laws relative to wages, hours, benefits, pensions, and union/management relations. It regulates trade, commerce, and incomes policies. It reviews economic performance and collects taxes. Its roles are so varied, so controlling, and so loaded with implicit powers as to deny its officials ready access or open trust in a new role relating to productivity and the internal workings of private or public organizations.

In the post-Watergate era public confidence has been badly shaken with respect to government in general and the federal government in particular. The Presidential Commission is now investigating the CIA. The Senate and probably the House will establish select committees to investigate the CIA, FBI, and more than a dozen other federal agencies with regard to the discharge of their surveillance functions. The Internal Revenue Service and even the Justice Department itself were shaken by Watergate. Even the most trusting and open organizations would be somewhat fearful to invite federal intervention in this climate.

By contrast a tripartite non-profit institute is not a part of the federal government power structure. It is above suspicion in terms of its motives and in fact would be under the control of trustees who represent management, labor, government, and the foundations. Its staff would also originate from these sectors. Further, the funding of the institute will derive from support from several foundations, major corporations, major labor unions, and hopefully a number of federal departments having an interest, e.g., Labor, Commerce, and HEW.

2. The Environment

As an agency that is outside the government, the institute might well provide a better environment for both government and non-government representatives to meet on an equal footing. Here there can be a free exchange of ideas and experiences and an increase in the cross-fertilization between government and the private sector. There can also be an opportunity for interchange of ideas between the three levels of government: federal, state and local, since the institute would engage the public sector in all of its functions.

3. Flexibility

A non-governmental entity would have greater flexibility in the kinds of projects that it could undertake. This flexibility would be strengthened by virtue of its entree into the operating side of organizational life. In other words, being involved in the real world at close range with ongoing activities. It would also have increased flexibility to subcontract and negotiate the use of outside resources without some of the legal encumbrances that restrict the federal government in its contractor relations. It would be freed from the time-consuming, extensive and often inconclusive contracting route required of government agencies that presumably must solicit bids from all comers on important contracts. At the same time there would be flexibility to monitor the contracts more closely, and to have a strong performance orientation. The institute would be very concerned with the evaluation of results and the achievement of results within its limited financial resources. Thus the flexibility combined with the strong motivation to keep waste to the absolute minimum.

4. Fees

The Work in America Institute would generate revenue through service contracts. Employers in the public, private and non-profit sectors would be fee-paying clients. The Institute would be competitive in the free marketplace. The users themselves are much more responsive to action programs affecting their vital interests when they pay their own way. They are more likely to cooperate, to participate and to apply the results when they invest in the outcome. Subsidized free consulting services are most likely to be suspect. Therefore, a fee-charged mechanism institute would be more a part of the economic system, would be forced to maintain a higher quality of talent, and would develop a valid and long-lasting relationship with clients.

5. Multiplier Effects

The amount of money that the government contributes to Work in America would have a large multiplier compared to funds appropriated for a government agency's use. Private foundations, corporations, and labor unions do not match funds appropriated to a federal agency. In many cases there are legal and other barriers. By contrast, the Institute has secured financial promises of long-range support from all three sectors. Government financial support from the Commission and principal departments at interest would close the circle. Furthermore, to the extent that the Work in America Institute is seen as one chosen instrument to fulfill the goals of the Commission in an efficient and compatible manner, it would encourage continuity and strengthen support in its financing from the private sector in both grants and fees. This in the long run would relieve the Commission of major national financing obligations.

6. Public Sector Studies

The predominant role of the federal government as a revenue source for state and local governments limits its ability to play the role of a neutral. The same is true within the federal government itself. The OMB is closely involved in over-all surveillance of department performance and personnel utilization. Productivity and quality of work studies touch the nerve centers of organizational effectiveness. They open sensitive areas, especially in a labor intensive activity like government where manpower is the major cost. The power of the purse in the federal government is so great that it would be most unwelcome in the ambivalent role of management consultant. By contrast, the Work in America Institute has no power over the public sector and would be considered a genuine neutral with access to both private and public sources and with control by a tripartite Board of Trustees.

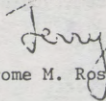
Dr. John T. Dunlop

- 4 -

January 30, 1975

Obviously after spending more than a year trying to organize the Work in America Institute and having won the cooperation and support of key figures in management, labor and the foundations, it would be most unfortunate if the Institute could not dovetail its activities with those of the National Commission and of the federal government itself. I have tried to present these advantages as impartially as possible and, of course, hope that you share these views. I would be available to discuss them with you or your associates if this would be helpful.

Sincerely yours,



Jerome M. Rosow

JMR:GHH

Senator PERCY. Our next witness is Mr. Kuper, the Acting Executive Director of the National Commission on Productivity and Work Quality. In his current position, he is probably one of the most knowledgeable individuals in the area of productivity.

Mr. Kuper also appeared before the Committee during the December 1974 Productivity hearings, and we welcome him back today.

Mr. Kuper, the problem that we face today is the tax bill, and we have eight rollcall votes in a row now.

This will be a 15-minute roll, so there will be no possibility except to shuttle back and forth unless Senator Nunn will try to continue.

I will carry on. We have another 10 or so minutes, so why don't you just go right ahead, and I certainly am very sorry indeed that you have to testify under these circumstances, and your full statement will be made a part of the record.

TESTIMONY OF GEORGE KUPER, ACTING DIRECTOR, NATIONAL COMMISSION ON PRODUCTIVITY AND WORK QUALITY

Mr. KUPER. Senator, I appreciate your perseverance and leadership in the productivity field.

Maybe in the interest of conserving your time, you would like to move into some questions, unless you prefer I read my testimony quickly.

Senator PERCY. Why don't you make a few summary comments, and the entire text will be incorporated in the record, and I do have some questions for you, that might be more useful in the use of our time.

Mr. KUPER. In essence, I am trying to convey the ideas expressed by the Executive Committee of the Commission, composed of Dr. Dunlap, Mr. Abel, Mr. Burnham, Mr. Tabor, Mr. Schubert, and most recently the Vice President, named Chairman of the Commission last Tuesday by the President.

I think that there is strong agreement as to what the basic issues are regarding productivity improvement. They have been extremely well expressed at both these hearings and the hearings previously held by this committee last December, and I feel they provide the framework under which some of the small differences in respective bills regarding the methodology for implementing the National Center could be shown as easily resolved degrees of emphasis. I must also say that the current Productivity Commission has been privileged to work with the staff of both authors, and we greatly appreciate that opportunity.

I think the major points of issue raised by the two bills are those that come from the multiple sources of productivity improvement. What we tried to do in putting together an administration bill is provide a little bit of focus as to which of these sources the Center's activities should be directed toward. I hope that the language of that bill is reflective of those specific differences; again, they are minor, but I hope they will be taken into consideration.

I should also like to say that the administration bill is being advanced to my knowledge by Secretary Simon, in his role as Chairman of the Economic Policy Board, and should be up today.

It is an expression of the administration's desire to move in this area, and it does not necessarily reflect opposition to anything that is contained in the bills before you.

Senator PERCY. I think in the interest of time, we will just put the rest of the statement in the record.

Mr. Kuper, yesterday I told Secretary Dent some of the reasons why we are all somewhat disappointed in the results that have been achieved, and I said I really felt, I spoke on behalf of some of the staff that have expressed a disappointment, part of which we have been responsible for in the Congress.

We have not been as forthcoming on the funding, et cetera, but as the Acting Executive Director of the National Commission, you are one of the most knowledgeable individuals in the area of productivity, so will you tell this committee some of the reasons you feel we have not made enough progress, and about some of the things that you have accomplished that you really feel good about, that you might not have touched on in your testimony, and, particularly, you might comment on the seminar arranged by the regional director in Chicago, which was just carried on, of which I have had extraordinary good reports?

Mr. KUPER. Senator, you flatter me, for I am afraid I am not an expert on productivity. I am more an expert on frustration in trying to get Government response to stimulate productivity effort.

I think if you asked me what the causes of our problems from the Federal Government are, I would say they are twofold; one, which has been touched upon quite readily and acknowledged by yourself, is that of the funding hiatus and leadership interruptions.

But more importantly, I think the cause is in the nature of productivity itself. I mentioned a moment ago that multiple sources of productivity lead one to be directed to many different areas, and I think that if we are in fact going to do something from the Federal Government, we want to do it in a fashion that is genuinely useful to participants in the area we are focusing on.

Let me give you an example, is a part of my response to the second part of your question, namely what is it that we have done that we think is useful.

In our effort to work with the railway industry, we have found ourselves not focusing on broad issues of railway management, but getting the railways themselves to consider the productivity of their capital investment. We have been working with the Association of American Railroads and the ICC, and three major railroads in the County to formulate a way they can more efficiently use the rail cars they have available to them, as a group of three versus a group of one, which is a significant change in the operating style of the American railroad industry.

It is a change that is being looked on with a great deal of interest by the other 67 class A railroad presidents in the country.

Also, we should be more concerned about manufacturing technology.

I think that there are probably two other ways, two other areas of accomplishment, which I would like to bring to your attention. One is in the area that your leadership directed us toward in the last several years, in the stimulation of labor/management committees.

The first of the 5 meetings we have held was keynoted by Secretary Dent, who noted that not only should American management be concerned with the issues of how we produce more for less, but that it should be concerned as well with the atmosphere in which that production takes place.

He was followed by Mr. Abel, who said that American labor has to be concerned about the productivity of our industry. Given that kind of atmosphere, kicking off the conference, combined with a statement from the President indicating his interest in the same phenomena, we have been able to take this broad concern to Buffalo, Decatur and Wisconsin, and have learned a lot while stimulating a great deal of interest in these committees.

The third area where I believe we have been able to make some inroads, is in the issue of how you bring about the efficient allocation and use of resources available to State and local governments. Drawing significantly on the leadership of Mr. Staats, Mr. Ink and Mr. Morris, and on the Federal Government's experience, we are hoping to expose local majors and Governors to the same phenomena.

Senator PERCY. Thank you very much indeed.

From your comments on the work aspects, and of the legislation before this committee, particularly the executive committee's suggestion, for the National Center of Productivity, it is apparent that we ought to re-emphasize why we feel it so important to incorporate quality of working life as nearly as possible co-equal with productivity in the functions of the Center.

First, I think, from your statement, that you would agree with the proposition that efforts to improve the quality of working life will generally serve to increase productivity. But more importantly, efforts to improve productivity in a given plant or industry that proceed without taking account of the impact such changes will have on the quality of working life are frequently going to have a negative effect on the worker's situation.

Deterioration of the quality of working life would be an unintended outcome which we cannot permit. I feel this is so important, for its own sake, that we must raise it up above other inputs to productivity growth and highlight its significance even in the name of the Center.

I very much would appreciate your response to that.

Mr. KUPER. Senator, I think that the points you are raising are probably ones that were not considered in the executive committee's discussion of the issue.

Assistant Secretary Weiss in his testimony yesterday brought up the issue as well. I think that perhaps the way of handling that is for me to report back to the executive committee for comments.

Senator PERCY. Do you think the Center should continue the kind of work you have done, Mr. Kuper, in the railroad and food transportation industries, have you laid a solid enough base for them to build on, do you think that should be carried on directly by the Center if it is created?

Mr. KUPER. Yes, Senator, I do.

The problem one finds in this whole area is when to stop, of course.

I do not think we have yet reached that point in our work with either the railroads or the food distribution business.

Just yesterday after the hearings here, I went off to a meeting of the Committee on Food Distribution of the Commission, where some of the issues discussed were those that were raised 3 years ago in our original look at the food industry, issues which still have not gotten to the point of resolution.

The committee brought up some very interesting points for future Commission activity. One of them calls for us to perhaps intervene, or at least request the opportunity to testify before the Senate Commerce Committee on bills amending the Labeling Act, and their potential negative productivity implications for the retail food industry.

I think that there are many of those opportunities still available to us, and we would like to be able to pursue them.

Senator PERCY. As the Comptroller General pointed out in his testimony, the two bills before this committee present two different views on what the administrative structure of the Center should be.

Which of the two seems most appropriate?

Do you agree, then, that the Center should have a stronger, rather than a weaker, centralizing and coordinating role in relation to the other agencies?

Mr. KUPER. Senator, at the risk of seeming self-serving, and engaging in typical bureaucratic empire building, I would say that there should be a stronger unit, but I would also caution that strength should be in terms of substance rather than authority.

If we are to coordinate the activities of various Federal agencies, I would suggest that coordination be done in some substantive capacity, rather than by a broad approach.

Senator PERCY. Lastly, and it has to be lastly, the Vice President has talked to me about the possibility of his being a successor to Secretary Dunlap.

Is there anything official on that at all?

Mr. KUPER. Yes, sir, that was announced by the President at the time of Mr. Dunlap's swearing in as Secretary of Labor last Tuesday.

The Vice President is now the chairman of the Commission.

Senator PERCY. He has assumed active chairmanship?

Mr. KUPER. Yes.

Senator PERCY. I have worked with the Vice President on the Rockefeller brothers study project which he said would take 6 months, and 3 years later I reminded him of that promise on his part, but he is an inspiring person to work with, and I believe this activity is going to have a strong, strong position with the backing of the Vice President now accepting the responsibility, and believing in it.

Well, the committee does thank you very much.

[The prepared statement of Mr. Kuper follows:]

STATEMENT BY

George H. Kuper, Executive Director (Acting)
National Commission on Productivity and Work Quality
Before the Senate Committee on Government Operations
Friday, March 21, 1975

I would like to express the appreciation of the Executive Committee of the National Commission on Productivity and Work Quality and myself for this opportunity to comment on the excellent bills that are now before you. The Administration is conveying to the Congress a draft bill which is similar in most respects to S-765 and S-937 and indicates the commitment to this mutual effort on the part of the Executive branch. By my remarks I will endeavor to convey both the interests of the Executive Committee of the National Commission on Productivity and Work Quality (Dr. Dunlop, Mr. Abel, Mr. Burnham, Mr. Tabor, Mr. Schubert and most recently the Vice President) and the issues that may be raised by the Administration's proposed legislation.

I

At the outset, I would like to stress a few important aspects of the nature of productivity previously raised before this Committee by Dr. John Dunlop, and others.

First, productivity growth is an essential ingredient to a strong economy. Without continuing improvement in the efficiency and effectiveness with which we consume resources in the production of goods and services, we will not experience real gains in income nor will we be able to provide the quality of life our nation requires and demands.

Sustained improvements in productivity occur only when there has been a long-term effort to achieve them. The significant productivity improvement in the farm sector has come about over the past 40 years with concentrated effort. Productivity growth in other sectors will not be brought about overnight. To achieve the gains we need nationwide, an on-going commitment is required by all.

As our economy has continued its shift in emphasis from goods to services we have entered a relatively new environment. Within these new conditions we presently lack the experience necessary for significant contributions to growth in productivity within the service industries or in government. These sectors consume an increasing level of our resources and more attention must be focused on improving the efficiency and effectiveness of their operations.

It would appear that there is basic agreement with the need for a national productivity effort. Perhaps using these fundamentals as an outline, the small differences

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that may exist in methodology for implementing a National Productivity Center can be shown as degrees of emphasis that can easily be resolved.

II

There is need for a continuing national policy to provide a stimulus and a framework for efforts to advance productivity nationally. This policy should serve as the basis for coordinated action by labor, industry and government to pursue opportunities for productivity growth. All of the pending legislation would provide the necessary mandate to develop such an essential action plan.

It would appear also that the need to keep the public adequately informed on productivity issues has been covered. However, it is important to bear in mind that misconceptions regarding productivity improvement efforts require that special attention be given to manpower adjustment policies and job security -- especially in today's employment market. We have found that labor-management committees are one useful vehicle in addressing these concerns.

III

It is important that the National Productivity Center be authorized for a period sufficient to work within the long lead times associated with improving productivity. This period should not, however, be open ended. Three years would be an adequate term of initial authorization after

which time the success of the effort can be reviewed. Certainly a greater continuity of effort on the part of the Federal government than has been the case over the past 4 years is essential.

The basic structure of the Center as prescribed by both bills appears to be workable. While it may seem self-serving, it is important that nothing in the final legislation precludes utilization of the work and collective experience of the present Commission. This would insure the Center a running start on some of the complicated issues for which much work has already been done -- and for which much remains to be done.

IV

The multiple sources of productivity improvement are recognized by both bills, but there are strong temptations to spread resources and efforts thinly across the spectrum of opportunities for productivity improvement. It is important, therefore, that the Center's authorizing legislation help provide a focus on those areas of high potential for achievement as identified by a national policy. The Administration bill attempts to relate through its language those expectations of activity for the Center that experience has demonstrated to be realistic.

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The three bills all recognize the need for research and development. However, support of R & D by the Center, if not carefully coordinated, could be redundant or insignificant compared to the efforts of other Federal agencies. It may be appropriate that the Center should simply help focus the R & D expenditures of line agencies as a method for achieving the greatest utility from investment required for technological advances. This approach could be effected through an articulated national policy and the interagency coordination already prescribed.

The massive effort required to adequately cover all the issues of productivity improvement through a national clearinghouse could conceivably consume all of the resources envisaged for the entire Center. Our current efforts have been directed at providing a clearinghouse function on an "as needed" basis by users in specific sectors. To continue that type of information service may be more practicable.

University-based extension services have the potential to be helpful in providing some of the necessary ingredients for productivity growth. However, primary reliance on those services is not advised given the Federal government's experience under the State Technical Assistance Act (1965-70) and the variable capabilities that these services represent.

Given the diversity of the sources of productivity growth, it is important to maintain independence from any sole source of support. It therefore would be more appropriate to have the option to contract with Extension Services or other sources to provide specific help in support of national policy on an "as needed" basis.

Experience has shown that proper administration of contracts can accomplish the purposes intended by the legislation authorizing the Center without the high administrative overhead normally experienced with the administration of grants in aid.

An example of the need to maintain an understanding of the nature of productivity improvement is illustrated by the name for the Center itself. Quality of work life is an important matter facing the nation and it would constitute a primary point of focus for the Center from the outset. By incorporating "quality of working life" in the name, however, there may be an unintentional denigration of the value of capital, technology, job security, etc. as inputs to productivity growth. The Executive Committee of the Commission expressed particular interest in this issue and has asked to have conveyed their suggestion that the Center be called "National Center for Productivity".

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V

The three bills provide adequately for the Center to focus attention on the growing service sector. There is much to be gained by pursuing a philosophy of raising the level of performance to the best known rather than attempting to improve the state-of-the-art. This approach facilitates the transfer of experience from one sector to another thereby allowing government and service sectors to benefit from the investments in productivity made by the manufacturing sector. We have had some success in this effort relying heavily on the resources of associations and representative organizations dedicated to improving the system or process they represent.

Additional impetus for this effort would come from the opportunity to stimulate the development of indicators of productivity in addition to those of output per manhour.

VI

There are several additional points which may warrant consideration:

We would suggest the deletion of the requirement for Productivity Impact Statements from the authorizing legislation of the Center. Executive Order 11821 of November 27, 1974

specifically directs (in Sec. 3, sub-section 'b') that "effect on productivity of wage earners, businesses or government at any level" be included in the criteria to be followed in the development of Inflation Impact Statements. It would, perhaps, be redundant to require an additional Impact Statement under the circumstances. Additionally, the administrative burden associated with properly maintaining such a requirement could well consume a significant portion of the resources appropriated to the Center.

It also is important that we move progressively towards broad national programs. By concentrating our educational efforts at this time more narrowly toward specific groups attempting to solve specific issues we can create the type of enthusiasm that will insure success of future efforts on the scale of a National Conference or award system.

We welcome all opportunities to participate in discussions concerning the formation of a National Productivity Center. During the brief history of the National Commission on Productivity and Work Quality (and its predecessor) important momentum has been achieved in raising the consciousness of

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the importance and nature of productivity growth through practical applications in specific sectors of the economy. As the authorization for the present Commission expires June 30, 1975, we naturally would like to maintain that momentum.

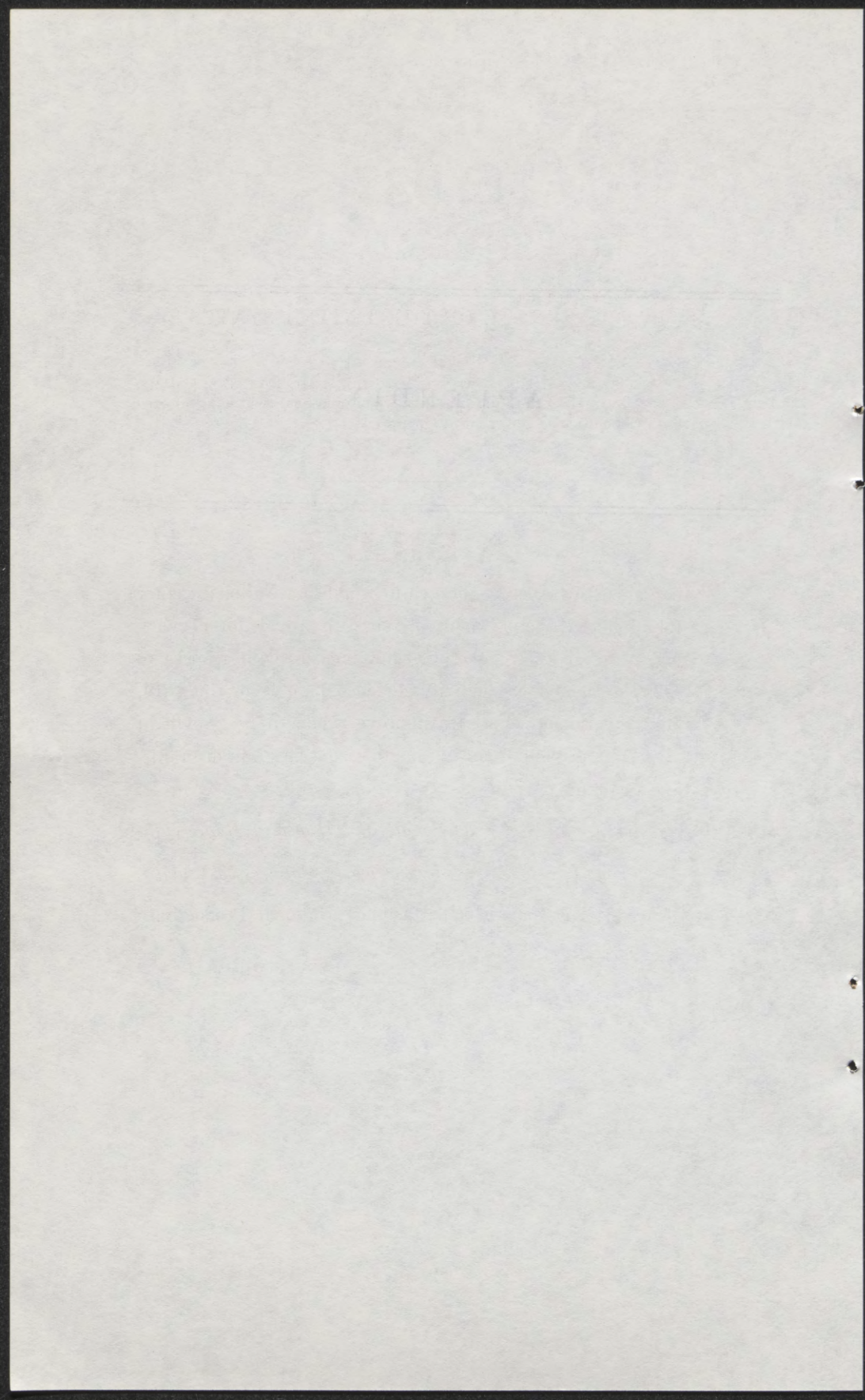
Thank you for your leadership support in that effort.

Senator PERCY. The record of the hearings will remain open for three weeks. This Committee, before adjourning, I do wish to thank everyone who has been present, for I think these are very significant hearings, and we will have a profound affect I hope on future courses we take in this very, very important area, and we do appreciate the attention that everyone has paid to the subject, and the contribution they have individually made.

The committee is adjourned subject to the call of the Chair.

[Whereupon, the committee was adjourned at 11:30 a.m.]

[The following material was subsequently supplied for the record:]



94TH CONGRESS
1ST SESSION

S. 937

IN THE SENATE OF THE UNITED STATES

MARCH 4, 1975

Mr. NUNN (for himself, Mr. BARTLETT, Mr. CHILES, Mr. DOMENICI, and Mr. PERCY) introduced the following bill; which was read twice and referred to the Committee on Government Operations

A BILL

To reorganize the executive branch to establish a National Center for Productivity and Quality of Work, to provide for a review of Federal laws, regulations, and policies with respect to their impact on productivity, to encourage labor, industry, and Government efforts to improve productivity growth in all sectors of the economy; to authorize a program of grants, and for other purposes.

- 1 *Be it enacted by the Senate and House of Representa-*
2 *tives of the United States of America in Congress assembled,*
3 That this Act may be cited as the "National Productivity
4 Act of 1975".

II

1 TITLE I—STATEMENT OF FINDINGS, PURPOSES,
2 AND POLICY

3 FINDINGS

4 SEC. 101. The Congress finds that—

5 (1) the rate of productivity growth in the United
6 States has declined during four of the past six years;

7 (2) the decline in the rate of productivity growth
8 has contributed both to inflation and to economic stag-
9 nation and has adversely affected the competitive posi-
10 tion of the United States in the world markets;

11 (3) laws, regulations, and procedures in many cases
12 have adversely affected productivity growth, and failure
13 to consider the impact of proposed governmental action
14 has been a significant factor in the decline of produc-
15 tivity;

16 (4) industry, services, and Government have all
17 suffered a decline in productivity growth; and

18 (5) the effect of productivity on the economy, in-
19 flation, recession, and the competitive position of the
20 United States in world markets must be better under-
21 stood and information regarding productivity more
22 widely disseminated.

23 PURPOSES

24 SEC. 102. The purposes of this Act are—

25 (1) to establish a national policy which will en-
26 courage productivity growth consistent with the needs

1 of the economy, the environment, and the work force;

2 (2) to stimulate the adoption of new methods and
3 technology by all sectors of the economy;

4 (3) to promote efforts to continuously review and
5 improve efficiency and morale within all sectors of the
6 economy; and

7 (4) to establish as an independent agency a Na-
8 tional Center for Productivity and Quality of Work.

9 POLICY

10 SEC. 103. It shall be the continuing policy of the Federal
11 Government, in cooperation with State and local govern-
12 ments, to use all practicable means and measures, including
13 financial and technical assistance, to stimulate a high rate of
14 productivity growth in all sectors of the economy. The laws,
15 rules, regulations, and policies of the United States shall be
16 so interpreted as to give full force and effect to this policy.

17 TITLE II—AGENCY REQUIREMENTS

18 PRODUCTIVITY STATEMENT

19 SEC. 201. (a) Each agency of the Federal Government
20 shall include in any recommendation or report on proposals
21 for legislation, in any major program recommendation con-
22 tained in the President's budget, and in any other major
23 Federal action significantly affecting productivity, a detailed
24 statement setting forth—

4

1 (1) the impact of the proposal on national pro-
2 ductivity;

3 (2) the economic effects of the proposal;

4 (3) the relationship between the maintenance and
5 enhancement of long-term productivity and the effects
6 on the environment that may be incurred by the pro-
7 posal;

8 (4) efforts made to provide a systematic and com-
9 prehensive approach incorporating all relevant consid-
10 erations, including efficiency, energy, environment,
11 work conditions, and safety considerations; and

12 (5) the benefits to be gained by the proposal versus
13 the cost of implementation, the anticipated short-term
14 capital requirements versus the anticipated life of the
15 proposal, and the expected life of the proposal versus
16 the expected initiation of successor action.

17 (b) Prior to making any such detailed statement, the
18 responsible Federal official or employee shall consult with,
19 and obtain the comments of, any Federal agency which has
20 jurisdiction by law, or which has special expertise, with
21 respect to productivity.

22 (c) Copies of each detailed statement, the comments of
23 other Federal agencies, and any comments and views of
24 appropriate State and local agencies which are authorized
25 to develop and promote productivity growth, shall be sub-

5

1 mitted to the President, the Secretary of Commerce, the
2 Secretary of Labor, and the National Center for Productivity
3 and Quality of Work, and shall be made available to the
4 public in accordance with section 552 of title 5, United
5 States Code. Such detailed statements and agency comments
6 and views shall accompany the proposal throughout the
7 process by which it is reviewed in the executive branch.
8 In the case of proposed legislation, such statements and
9 agency comments and views shall be submitted to the Presi-
10 dent of the Senate and to the Speaker of the House of Rep-
11 resentatives.

12 AGENCY ACTION

13 SEC. 202. Each Federal agency shall—

14 (1) study, develop, and describe appropriate alter-
15 natives to recommended courses of action in any pro-
16 posal which involves unresolved conflicts concerning the
17 impact on productivity;

18 (2) provide appropriate support to initiatives, reso-
19 lutions, and programs designed to maximize regional
20 and international cooperation in anticipating and pre-
21 venting actions adversely affecting productivity;

22 (3) make available to State and local governments,
23 public institutions, industry, and individuals appropri-
24 ate advice and information designed to maintain, en-
25 hance, and promote sustained productivity growth; and

1 (4) upon request, render assistance to the Na-
2 tional Center for Productivity and Quality of Work.

3 INTERNAL PRODUCTIVITY

4 SEC. 203. Each Federal agency shall promote maxi-
5 mum productivity within its own internal operations by
6 establishing a small, directorate level staff to study present
7 organizational structures, to review and reinvigorate in-
8 centive, suggestion, safety, and other programs designed to
9 enhance internal productivity, to provide for improved oper-
10 ations, to maintain a current awareness program on pro-
11 ductivity improvement in general, and to conduct studies to
12 improve governmental efficiency and provide for the adop-
13 tion and implementation of recommendations resulting from
14 such studies which are applicable to the particular agency.

15 AGENCY REVIEW

16 SEC. 204. (a) Each Federal agency shall review its
17 statutory authority, rules, regulations, policies, and proce-
18 dures for the purpose of determining whether there are
19 deficiencies or inconsistencies therein which prohibit full
20 compliance with the purposes and policies of this Act.

21 (b) Each Federal agency shall propose to the Presi-
22 dent not later than January 1, 1976, and at least once every
23 four years thereafter, such measures as may be necessary to
24 bring its authority and policies into conformity with this Act.

PRODUCTIVITY REPORT

1
2 SEC. 205. Not later than October 1 of each year begin-
3 ning with 1976, the President shall transmit to the Congress
4 a productivity report setting forth—

5 (1) the status and condition of the major factors
6 affecting productivity, including but not limited to capi-
7 tal investments, technological advances, structure of pri-
8 vate industry, and labor, management, and Government
9 programs;

10 (2) present and future trends in the quality, quan-
11 tity, management, and use of the major factors affecting
12 productivity and the effects of these trends on the eco-
13 nomic and other requirements of the United States;

14 (3) the adequacy of the productive base of the
15 United States for fulfilling the economic requirements of
16 the Nation;

17 (4) the programs and activities of the Federal Gov-
18 ernment, State and local governments, industry, labor,
19 and other nongovernmental entities or individuals, with
20 particular reference to their effect on productivity; and

21 (5) a program for remedying deficiencies of exist-
22 ing programs and activities, together with recommenda-
23 tions for legislation.

1 EFFECT ON PRIOR PROVISIONS

2 SEC. 206. Nothing in this title affects any specific statu-
3 tory obligation of any Federal agency (1) to comply with
4 productivity policy, (2) to coordinate or consult with any
5 other Federal or State agency, or (3) to act, or to refrain
6 from acting, contingent upon the recommendations or certifi-
7 cation of any other Federal or State agency.

8 TITLE III—NATIONAL CENTER FOR PRODUCTIV-
9 ITY AND QUALITY OF WORK; COUNCIL ON
10 PRODUCTIVITY AND QUALITY OF WORK

11 ESTABLISHMENT OF CENTER AND COUNCIL

12 SEC. 301. (a) There is established as an independent
13 agency of the Federal Government the National Center for
14 Productivity and Quality of Work (hereinafter referred to
15 as the "Center").

16 (b) The Center shall be under the general supervision
17 of a Council on Productivity and Quality of Work (herein-
18 after referred to as the "Council").

19 MEMBERSHIP OF COUNCIL

20 SEC. 302. (a) The Council shall be comprised of eleven
21 members, including—

22 (1) three members who shall be appointed by the
23 President, by and with the advice and consent of the
24 Senate, from distinguished private individuals in labor
25 unions;

1 (2) three members who shall be appointed by the
2 President, by and with the advice and consent of the
3 Senate, from distinguished private individuals in manu-
4 facturing and service industries;

5 (3) one member who shall be appointed by the
6 President, by and with the advice and consent of the
7 Senate, from distinguished private individuals in leading
8 institutions of higher education in the fields of engineer-
9 ing, business, or public administration;

10 (4) one member who shall be appointed by the
11 President, by and with the advice and consent of the
12 Senate, from distinguished private individuals in State
13 and local government;

14 (5) the Secretary of Commerce;

15 (6) the Secretary of Labor; and

16 (7) the Secretary of the Treasury.

17 (b) The members of the Council appointed under clauses
18 (1), (2), (3), and (4) of subsection (a) shall be selected
19 from among the highest leadership in their various com-
20 munities. Not more than eight members of the Council shall
21 be members of the same political party.

22 (c) The members of the Council appointed under
23 clauses (1), (2), (3), and (4) of subsection (a) shall be
24 appointed for two-year terms, and each such member may

1 serve only two such terms. Members other than members
2 appointed under such clauses shall serve as long as such mem-
3 ber is the head of the department represented on the Council.

4 (d) The President shall select a Chairman for one two-
5 year term only.

6 (e) Any member appointed to fill a vacancy occurring
7 before the expiration of the term for which his predecessor
8 was appointed shall be appointed for the remainder of that
9 term.

10 (f) (1) Each member of the Council appointed under
11 clauses (1), (2), (3), and (4) shall be compensated at the
12 daily rate provided for GS-18 of the General Schedule under
13 section 5332 of title 5, United States Code, including travel-
14 time, for each day he is engaged in the performance of his
15 duties as a member of the Council and shall be entitled to
16 reimbursement for travel, subsistence, and other necessary
17 expenses incurred in carrying out the functions of the
18 Council.

19 (2) Other members of the Council shall serve without
20 additional compensation but shall be reimbursed for travel,
21 subsistence, and other necessary expenses incurred by them
22 in carrying out the functions of the Council.

23 DIRECTOR; DEPUTY DIRECTOR

24 SEC. 303. (a) The Center shall be headed by a Director,
25 who shall be appointed from private life by the President, by

1 and with the advice and consent of the Senate. Under the
2 general supervision and direction of the Council, the Director
3 shall be responsible for the exercise of all powers and the dis-
4 charge of all duties of the Center, and shall have authority
5 and control over all personnel and activities thereof.

6 (b) There shall be in the Center a Deputy Director,
7 who shall be appointed from private life by the President, by
8 and with the advice and consent of the Senate, and shall
9 perform such duties and exercise such powers as the Director
10 may prescribe. The Deputy Director shall act for, and exer-
11 cise the powers of, the Director during his absence or
12 disability.

13 (c) In carrying out his functions, the Director shall
14 assist and advise the President and the Congress on policies
15 and programs of the Federal Government affecting produc-
16 tivity by—

17 (1) assisting the Federal agencies and departments
18 in appraising the effectiveness of existing and proposed
19 programs, policies, and activities of the Federal Govern-
20 ment and those specific major projects designated by the
21 President which do not require individual project au-
22 thorization by Congress, which affect productivity;

23 (2) reviewing the adequacy of existing standards
24 and measures for productivity and providing for the mon-
25 itoring of productivity consistent with those standards

1 and measures in order to achieve effective coverage and
2 efficient use of research facilities and other resources;

3 (3) promoting the advancement of scientific knowl-
4 edge of the effects of technology on productivity and
5 encouraging the development of new techniques and
6 technology to improve productivity;

7 (4) assisting in coordinating Federal programs
8 and activities which affect, promote, and improve
9 productivity;

10 (5) collecting, collating, analyzing, interpreting,
11 and disseminating data and information on productivity;

12 (6) administering grants to States and localities
13 in accordance with this title;

14 (7) conducting an annual National Conference on
15 Productivity;

16 (8) preparing the annual report required under
17 section 205 of this title;

18 (9) consulting with the Council on Productivity
19 and Quality of Work; and

20 (10) using, to the fullest extent possible, the serv-
21 ices, facilities, and information (including statistical in-
22 formation) of public and private agencies and organiza-
23 tions, and individuals, in order that duplication of effort
24 and expense may be avoided, and assuring that the Cen-
25 ter's activities will not unnecessarily overlap or conflict

1 with similar activities authorized by law and performed
2 by established agencies.

3 EMPLOYEES

4 SEC. 304. The Director is authorized to employ not more
5 than one hundred persons, including consultants and experts,
6 to carry out the functions of the Center as provided by this
7 Act.

8 FUNCTIONS

9 SEC. 305. The Center shall—

10 (1) provide for and encourage research and devel-
11 opment for the purpose of improving productivity, adop-
12 tion of new technology, and dissemination of informa-
13 tion concerning new developments and technology asso-
14 ciated with productivity improvements; and

15 (2) encourage States, units of general local govern-
16 ment, and institutions of higher education, to develop
17 and implement centers, programs, and projects to im-
18 prove and stimulate productivity growth, disseminate
19 information, and make available technical assistance to
20 Government, industry, labor, and other organizations and
21 individuals to improve and stimulate productivity
22 growth.

23 POWERS

24 SEC. 306. In carrying out its functions, the Center is
25 authorized—

1 (1) to make grants to, or enter into contracts with,
2 public agencies, institutions of higher education, or pri-
3 vate organizations, to conduct research, demonstrations,
4 or special projects pertaining to the purposes described
5 in this title, including the development of new or im-
6 proved methods, techniques, systems, equipment, and
7 devices to improve and stimulate productivity growth;

8 (2) to make grants to States, units of general local
9 government, institutions of higher education, and post-
10 high school technical and vocational schools enjoying
11 accreditation from recognized authorities for the purposes
12 of developing and implementing centers, programs, and
13 projects to improve and stimulate productivity growth,
14 disseminate information, and make available technical
15 assistance to Government, labor, industry, and other orga-
16 nizations and persons to improve and stimulate pro-
17 ductivity growth;

18 (3) to make continuing studies and to establish with
19 the National Science Foundation and other research fund-
20 ing agencies, programs of research to develop new or im-
21 proved methods, techniques, systems, equipment, and
22 devices to improve and stimulate productivity growth, in-
23 cluding, but not limited to, the effectiveness of projects or
24 programs carried out under this title;

25 (4) to make recommendations for action which can

1 be taken by Federal, State, and local governments, indus-
2 try, labor, and other private organizations and persons
3 to improve and stimulate productivity growth;

4 (5) to conduct special workshops, conferences, and
5 other forums for the presentation and dissemination of in-
6 formation resulting from research, demonstrations, and
7 special projects authorized by this title; and

8 (6) to carry out a program of collection and dis-
9 semination of information obtained by the Center or other
10 Federal agencies, public agencies, institutions of higher
11 education, or private organizations engaged in projects
12 under this title, including information related to new or
13 improved methods, techniques, systems, equipment, and
14 devices to improve and stimulate productivity growth.

15 GRANTS AND CONTRACTS

16 SEC. 307. (a) A grant made under section 306 (1) may
17 not exceed 100 per centum of the total cost of each project
18 for which such grant is made. Whenever feasible, the Center
19 shall require, as a condition of approval, that the recipient
20 contribute money, facilities, or services to carry out the pur-
21 poses of the grant.

22 (b) A grant made under section 306 (2) may not ex-
23 ceed 65 per centum of the total cost of the project for which
24 such grant is made.

1 (c) No funds made available under this title shall be
2 used for building construction or land acquisition.

3 (d) The Center shall prescribe by regulation, after con-
4 sultation with appropriate agencies and officials of Federal,
5 State, and local governments, basic criteria for applicants
6 and grantees under this title. In prescribing such criteria, the
7 Center shall give priority to institutions of higher education,
8 especially those which possess or operate engineering schools,
9 engineering experiment stations, business schools, or schools
10 of public administration.

11 (e) The funds available in each fiscal year for grants
12 under section 306 (2) shall be allocated by the Center as
13 follows:

14 (1) 35 per centum of the funds shall be available
15 for grants to institutions of higher education possessing
16 schools, stations, or similar departments as described in
17 subsection (d) of this section, which agree to establish
18 a productivity center to carry out the purposes of this
19 Act; and

20 (2) 65 per centum of the funds may be made avail-
21 able, as the Center may determine, to appropriate State
22 agencies qualifying as State Productivity Centers (as
23 defined in subsection (f)), units of general local govern-
24 ment, institutions of higher education, or combinations
25 of such units, according to the criteria and on the terms

1 and conditions the Center determines consistent with
2 this title.

3 (f) For the purposes of this section, a State Productiv-
4 ity Center is an agency established or designated by a State
5 for the purposes of establishing productivity centers, carry-
6 ing out plans, demonstrations, programs, projects, and tech-
7 nical assistance consistent with the purposes, policies, and
8 goals of this Act.

9 (g) If the Center determines, on the basis of informa-
10 tion available to it during any fiscal year, that a portion
11 of the funds granted to an applicant for that fiscal year
12 will not be required by the applicant or will become avail-
13 able by virtue of the application of regulations established
14 by the Center to govern noncompliance by an applicant or
15 grantee, that portion shall be available for reallocation under
16 this section.

17 (h) The Center shall by regulation prescribe the basic
18 criteria for determination of noncompliance by grantees and
19 applicants including appropriate provisions for notice and
20 hearing with respect to such determination.

21 TIME LIMITATION

22 SEC. 308. Unless otherwise provided in this title, the
23 Center shall carry out the programs provided for in this
24 title during the fiscal year and subsequent transition period

1 ending September 30, 1976, and the three succeeding fiscal
2 years.

3 ANNUAL REPORT

4 SEC. 309. Not later than December 31 of each year, the
5 Center shall report to the President and to the Congress on
6 activities pursuant to the provisions of this title during the
7 preceding fiscal year.

8 REFERRAL OF REPORTS

9 SEC. 310. Each report required to be submitted to the
10 Congress by this Act shall be referred to the standing com-
11 mittee or committees having jurisdiction over any part of
12 the subject matter of the report.

13 TITLE IV—NATIONAL PRODUCTIVITY AWARD

14 SEC. 401. The President may award, and present in the
15 name of Congress, an award of appropriate design, which
16 shall be known as the National Productivity Award, to any
17 public or private organization, governmental unit, or in-
18 dividual, which in its performance, has distinguished itself by
19 exceptional efforts and contributions to the growth of the
20 Nation's productivity.

21 TITLE V—REPEAL AND TRANSFER

22 REPEAL OF PUBLIC LAWS 92-210 AND 93-311

23 SEC. 501. Section 4 of Public Law 92-210, establishing,
24 and Public Law 93-311, continuing the National Commis-
25 sion on Productivity and Work Quality, are repealed.

1 TRANSFER OF FUNCTIONS AND STAFF

2 SEC. 502. The functions and staff of the National Com-
3 mission on Productivity and Work Quality are hereby trans-
4 ferred to the National Center for Productivity and Quality
5 of Work established by section 301 (a) of this Act.

6 TITLE VI—AUTHORIZATION OF
7 APPROPRIATIONS

8 SEC. 601. There are authorized to be appropriated to
9 carry out the purposes of this Act not to exceed \$20,000,000
10 for the fiscal year and subsequent transition period ending
11 September 30, 1976; not to exceed \$20,000,000 for the
12 fiscal year ending September 30, 1977; and not to exceed
13 \$25,000,000 for the fiscal year ending September 30, 1978.
14 Funds appropriated for any fiscal year shall remain available
15 for obligation until expended.

94TH CONGRESS
1ST SESSION

S. 765

IN THE SENATE OF THE UNITED STATES

FEBRUARY 19, 1975

Mr. PERCY (for himself, Mr. RIBICOFF, Mr. NUNN, Mr. JAVITS, Mr. PROXMIRE, Mr. TOWER, Mr. JOHNSTON, Mr. MATHIAS, Mr. DOMENICI, Mr. BEALL, Mr. PHILIP A. HART, and Mr. ROTH) introduced the following bill; which was read twice and referred to the Committee on Government Operations

A BILL

To reorganize the executive branch to establish a National Center for Productivity and Quality of Working Life; to provide for a review of the activities of all Federal agencies including implementation of all Federal laws, regulations, and policies which impede the productive performance and efficiency of the American economy; to encourage joint labor, industry, and Government efforts to improve national productivity and quality of working life; to establish a Federal policy with respect to continued productivity growth and improved utilization of human resources in the United States; and for other purposes.

- 1 *Be it enacted by the Senate and House of Representa-*
- 2 *tives of the United States of America in Congress assembled,*

1 That this Act may be cited as the "National Center for
2 Productivity and Quality of Working Life Act".

3 TITLE I—GENERAL PROVISIONS

4 DECLARATION OF FINDINGS

5 SEC. 101. The Congress finds that—

6 (1) the continued growth in productivity of the
7 economy of the United States is essential to the social
8 and economic welfare, health, and happiness of the
9 American people, and of the world economy;

10 (2) in the face of mounting worldwide material
11 shortages, with their serious inflationary result, increased
12 efficiency in the utilization of the Nation's resources is
13 of paramount importance to fight inflation and reduce
14 costs;

15 (3) since 1965, the rate of productivity growth of
16 the United States has been consistently behind and lower
17 than that of most industrial nations in the world, which
18 have used and are using their increased productivity to
19 compete more effectively with United States labor
20 and industry;

21 (4) continued growth in the productivity of the
22 Nation's economy is essential to American labor in
23 order to maintain and increase jobs and employment,
24 stabilize the cost of living, and provide job security and
25 improved quality of worklife to the American worker;

1 (5) the rate of productivity growth in the United
2 States is currently declining still further in a period
3 of stagnation and is thereby contributing to, instead of
4 counteracting, increasing slowdown and increasing seri-
5 ous unemployment;

6 (6) there is an urgent national need to identify,
7 examine, and revise or eliminate the many serious public
8 and private structural forces which currently impede,
9 inhibit, limit, penalize, or prevent growth of productivity,
10 work quality, and economic effectiveness, in the public
11 and private sectors of the United States;

12 (7) there is a national need to strengthen employ-
13 ment security through such activities as manpower ad-
14 justment, skill-training and retraining of workers, as-
15 sistance to workers facing or experiencing displacement,
16 and all other public and private programs which seek to
17 minimize the human cost of productivity improvement,
18 thereby diminishing worker fear of and resistance to
19 workplace change, and considerably affecting and in-
20 fluencing productivity growth;

21 (8) the quality of working life, or the qualitative,
22 organizational and institutional conditions affecting hu-
23 man beings at work considerably influences the perform-
24 ance of work, and thereby considerably affects and in-
25 fluences productivity;

1 (9) economic incentives for employees, which may
2 consist of a number of systems, methods, and formulas
3 for sharing of profits and the fruits of productivity gains
4 among labor, management, and owners considerably
5 improves the performance of work and thereby consider-
6 ably affect and influence productivity;

7 (10) influential and well-funded centers for pro-
8 ductivity, all involving business, labor, and government
9 have been in existence in West Germany, Japan,
10 Sweden, Norway, France, and Israel for years;

11 (11) private businesses, labor unions, and public
12 agencies actively seeking to identify, define, and initiate
13 internal programs to achieve fuller utilization of their
14 technological or human resources or both should be
15 provided encouragement, counsel, and significant sup-
16 port by the Federal Government;

17 (12) there is a national need to identify, encourage,
18 and support all social, economic, scientific, business,
19 labor, and governmental practices, inventions, systems,
20 and techniques which might or do contribute to new
21 growth of productivity improvement in the quality of
22 working life, and economic effectiveness in the public
23 and private sectors of the United States;

24 (13) the small body of existing experimentation in
25 joint labor-management efforts at work and organiza-

1 tional redesign in pursuit of improved productivity and
2 quality of working life should be significantly expanded,
3 and resulting new experimentation closely monitored
4 and evaluated by qualified organizations, and such effort
5 should be encouraged and supported by the Federal
6 Government;

7 (14) as urged by the President, the utilization of
8 the resources of qualified institutions of higher learning
9 to help identify, define, and inaugurate active programs
10 with respect to productivity and worker-related matters
11 to more fully utilize our national technological and
12 human resources should be encouraged and supported
13 by the Federal Government;

14 (15) precise, standardized, measurement of produc-
15 tivity, and the quality of working life is essential to
16 sound evaluation and understanding of the productive
17 factors which most influence growth of productivity and
18 the quality of working life, and those American institu-
19 tions seeking to improve measurement theories, prac-
20 tices, and techniques should be encouraged and sup-
21 ported by the Federal Government; and

22 (16) there is a need to promote efforts to gather,
23 retain, and widely disseminate useful information about
24 past and current achievements in productivity growth
25 and work quality improvements, technological advance-

1 ends, obstructs, impedes; impairs, inhibits, limits, or
2 penalizes productivity growth, competition, or effective
3 economic performance in the public or private sectors
4 of the United States;

5 (4) the term "strengthening employment security"
6 means: decreasing the likelihood that employed indi-
7 viduals will become displaced; improving public and pri-
8 vate programs of assistance and/or placement for tech-
9 nologically or economically displaced workers; improv-
10 ing skill training and/or retraining for the employed,
11 underemployed and unemployed; implementing advance
12 warning systems of imminent displacement; and all of
13 the above particularly in those sectors of the Nation's
14 economy most affected by problems of economic
15 placement;

16 (5) the term "Center" means the National Center
17 for Productivity and Quality of Working Life; and

18 (6) the term "Board" means the Board of Directors
19 of the Center.

20 STATEMENT OF PURPOSE

21 SEC. 103. The purpose of this Act is to establish a
22 National Center for Productivity and Quality, of Working
23 Life, in order to consolidate in one governmental unit the
24 responsibility—

1 (1) to identify, establish, and promulgate a national
2 policy for short-term and long-range productivity growth
3 and improved quality of working life in the United States
4 which is consistent with the needs, rights, and best inter-
5 ests of labor, industry, and government, with the needs
6 of the society and the economy, with the need to protect
7 the environment, the needs of employees to secure and
8 maintain safety, health, job security, human dignity at
9 work, equitable compensation, and the need of employ-
10 ers to derive an adequate return on investment;

11 (2) to identify, recommend ways to correct, and
12 correct those public and private structural imbalances
13 which impede public and private productivity growth,
14 improved quality of working life, and the effective per-
15 formance of the society and the economy, in a manner
16 consistent with Center policy;

17 (3) to identify ways and means for more effective
18 collaborative joint effort by labor and management to
19 effect growth in productivity and improved quality of
20 working life, in a manner consistent with Center policy;

21 (4) to identify ways to eliminate, mitigate, or
22 minimize the human costs of productivity change, where
23 such costs exists, and to encourage and support innova-

1 tive public and private efforts to this end, and to the
2 enhancement of employment security;

3 (5) to identify, encourage, and support develop-
4 ment and implementation of all useful technologies, sys-
5 tems, incentives, methods, and techniques for enhancing
6 growth of productivity and improving work quality in
7 the public and private sectors of the United States, in
8 a manner consistent with Center policy;

9 (6) to maximize the contributions of the Federal
10 Government to productivity growth and improved qual-
11 ity of working life in both the private and public sector,
12 including the Federal Establishment;

13 (7) to increase public understanding of productiv-
14 ity and quality of working life, the ways in which pro-
15 ductivity and the quality of working life can be improved,
16 and the urgency of such improvement in all sectors of
17 the economy, in a manner consistent with Center policy;
18 and

19 (8) to encourage business firms, labor organizations,
20 universities, foundations and others to provide financial
21 and other support for the programs of the Center and for
22 other efforts to promote productivity and the quality of
23 working life.

1 TITLE II—NATIONAL CENTER AND ADVISORY
2 COUNCIL FOR PRODUCTIVITY AND QUALITY
3 OF WORKING LIFE

4 CENTER ESTABLISHED

5 SEC. 201. There is hereby established as an independent
6 establishment of the executive branch of the Government the
7 National Center for Productivity and Quality of Working
8 Life. The Center shall be under the general supervision of a
9 Board of Directors.

10 BOARD OF DIRECTORS

11 SEC. 202. (a) The Board shall be comprised of—

- 12 (1) the Vice President of the United States;
13 (2) the Secretary of the Treasury;
14 (3) the Secretary of Commerce;
15 (4) the Secretary of Labor;
16 (5) three members who shall be appointed by the
17 President, by and with the consent of the Senate, from
18 among distinguished private individuals in manufactur-
19 ing and service industries;
20 (6) three members who shall be appointed by the
21 President, by and with the consent of the Senate, from
22 among distinguished private individuals in manufacturing
23 and service unions;
24 (7) one member who shall be appointed by the
25 President, by and with the consent of the Senate, from

1 among qualified representatives of State and local
2 governments;

3 (8) the director of the Federal Mediation and Con-
4 ciliation Service by virtue of his responsibility under the
5 Labor Management Relations Act, 1947 to encourage
6 discussion between labor and management on issues
7 external to the collective bargaining process; and

8 (b) The appointed members of the Board should be se-
9 lected from among the highest leadership in the industrial
10 and labor communities. Not more than seven members of the
11 Board shall be members of the same political party.

12 (c) The appointed members of the Board shall be ap-
13 pointed for two-year terms. Each such member may be
14 appointed for one additional term; members other than ap-
15 pointed members shall serve as long as such member is the
16 head of the agency or department represented on the Board.

17 (d) The President shall select a Chairman for a two-year
18 term. No Chairman may succeed himself as Chairman.

19 (e) Any member appointed to fill a vacancy occurring
20 before the expiration of the term for which his predecessor
21 was appointed shall be appointed for the remainder of that
22 term.

23 (f) (1) Each appointed member of the Board shall be
24 compensated at the daily rate provided for GS-18 of the
25 General Schedule under section 5332 of title 5 of the United

1 States Code, including traveltime, for each day they are
2 engaged in the performance of their duties as members of
3 the Board and shall be entitled to reimbursement for travel,
4 subsistence, and other necessary expenses incurred by them
5 in carrying out the duties of the Board.

6 (2) Other members of the Board shall serve without
7 compensation but shall be reimbursed for travel, subsistence,
8 and other necessary expenses incurred by them in carrying
9 out the duties of the Board.

10 (g) Nothing herein shall constrain the Board to or-
11 ganize itself into subcommittees or to create any such other
12 internal suborganization as it deems necessary.

13 EXECUTIVE DIRECTOR

14 SEC. 203. (a) There shall be in the Center an Executive
15 Director, who shall be appointed by the President after con-
16 sultation with the Board, without regard to political affilia-
17 tion and solely on the basis of fitness to perform the duties
18 and functions of the office, from among individuals with ex-
19 perience in such fields as labor-management relations, indus-
20 trial relations, industrial psychology, organizational devel-
21 opment, management analysis or economics.

22 (b) Under the direction of the Board, the Executive
23 Director shall be responsible for the exercise of all powers
24 and the discharge of all duties of the Center as set forth in
25 this Act, and shall have authority over and control of all of

1 the Center staff and their activities. The Executive Director
2 shall maintain budgets and allocate available funds as appropriate in pursuance of the provisions of this Act.

4 (c) The Executive Director shall attend and participate
5 in such determinations of the Board as the Board may direct
6 but shall not be a voting member of the Board.

7 (d) The Executive Director shall be compensated at a
8 rate not to exceed that provided for Executive Level IV
9 under section 5332 of title 5 of the United States Code, and
10 shall have no other employment, public or private, during the
11 tenure of his appointment.

12 STAFF

13 SEC. 204. The Center shall maintain a full-time staff,
14 including a Deputy Director, appointed by the Executive
15 Director, which shall perform such functions of the Center
16 as the Executive Director may prescribe. The Deputy Director shall act for and exercise the powers of the Executive
17 Director during his absence.

19 PARTICIPATION ENCOURAGED

20 SEC. 205. It is the intent of the Congress that the Center
21 so established shall seek to maximize the active participation
22 and expert contribution, in equal measure, of labor, industry,
23 and the Federal, State, and local governments of the United
24 States in all its efforts and functions pursuant to this Act, in
25 order that the Center will provide the national focus and im-

1 petus for a tripartite labor-industry-government effort. The
2 Center shall seek to devise policies, functions, grants, and
3 other ways and means to further provisions of this section
4 and to develop and maintain the Center as an impartial, non-
5 political, social, and economic service organization, which
6 within the limits of feasibility shall encourage and support
7 all who seek to improve the productivity growth and work
8 quality of any workplace, industry, or government entity in
9 the United States.

10 NATIONAL COUNCIL ESTABLISHED

11 SEC. 206. NATIONAL ADVISORY COUNCIL ON PRODUC-
12 TIVITY AND THE QUALITY OF WORKING LIFE.—(1) There
13 shall be a National Advisory Council on Productivity and
14 the Quality of Working Life (hereinafter in this section re-
15 ferred to as the "National Council") consisting of members
16 who shall be appointed by the President without regard to
17 the provisions of other laws governing appointment in the
18 competitive service. The National Council shall meet at the
19 call of the Chairman.

20 (2) The Center may, upon a majority vote of the Board,
21 abolish, revise or reconstitute the National Council;

22 (3) The National Council shall be funded through
23 specific appropriations for the Center, and administrative
24 services required by the National Council shall be provided
25 by the Center;

1 (4) The National Council shall, on a continuing basis,
2 review and evaluate the administration, operation and per-
3 formance of the Center in carrying out the functions and
4 duties established pursuant to this title, including its effective-
5 ness in improving the growth of productivity and the quality
6 of working life. The National Council shall make recom-
7 mendations for the improvement of this title and its adminis-
8 tration and operation. These recommendations shall take into
9 consideration experience gained under this title and, to the
10 extent feasible and appropriate, experience gained under
11 other public and private programs with similar aims and
12 objectives.

13 (5) The National Council shall make such reports of
14 its activities, findings and recommendations (including rec-
15 ommendations for changes in the provisions of this title,) as
16 it may deem appropriate and shall make an annual report to
17 the President and the Congress not later than March 31
18 of each calendar year. Such annual report shall include a
19 report specifically on which of the various programs funded
20 in whole or in part under the provisions of this title, and of
21 other public and private programs, hold the highest promise
22 for achieving the purposes and objectives of this Act. The
23 President is requested to transmit to the Congress such
24 comments and recommendations as he may have with respect
25 to such report.

1 FUNCTIONS OF THE CENTER

2 SEC. 207. It shall be the function of the Center, in a man-
3 ner determined by the Board and the Executive Director—

4 (1) to develop and establish, in consultation with
5 the Committees of jurisdiction in the Congress and with
6 the appropriate Departments of the Executive Branch,
7 a national policy for the growth of productivity and the
8 improvement of the quality of working life in the public
9 and private sectors of the United States pursuant to
10 the purposes of this Act;

11 (2) to assist actively in the establishment of efforts
12 in the public or private sector, specifically designed to
13 improve cooperation between labor and management in
14 the achievement of continued productivity growth and
15 improved quality of working life in American work-
16 places, including national, regional, local, industry, or
17 other labor-management productivity and work quality
18 committees, conferences, councils, and other joint labor/
19 management efforts pursuant to the purposes of this
20 Act;

21 (3) to identify, encourage, and support to the full-
22 est extent feasible, all efforts by organizations and
23 enterprises in the public and private sectors seeking to
24 improve utilization of the technological and human re-
25 sources of such organizations and enterprises, through

1 counsel, information, and supporting grants and con-
2 tracts for development and implementation of such ef-
3 forts pursuant to the purposes of this Act;

4 (4) to study, examine, and identify—

5 (A) existing Federal, State, and local statutory
6 and regulatory impediments, inhibitions, and impair-
7 ments to the growth of productivity and improved
8 quality of working life and the effective economic
9 performance of the public and private sectors of the
10 United States, and to propose to the President, to
11 Congress, and to the appropriate departments and
12 agencies of the Federal Government any legislation
13 or revision of regulations the Center determines will
14 contribute to carrying out the purposes of this Act;

15 (B) Federal, State, and local fiscal policies,
16 statutes, and regulations which could be revised or
17 improved to encourage and facilitate increased eco-
18 nomic effectiveness and encourage or reward indus-
19 try and labor initiative, or both, to develop methods,
20 techniques, and systems for the improved utilization
21 of technological and human resources in the private
22 sector, and to recommend to the President and to the
23 Congress such legislation as the Center determines
24 will contribute to carrying out the purposes of this
25 Act;

1 (C) existing or new plans, systems, formulae,
2 and other methods, including profit-sharing pro-
3 grams for employees, incentive systems, to share
4 fully and equitably with labor the benefits of produc-
5 tivity gains and to recommend to the President and
6 to the Congress legislation necessary to encourage
7 the development of such plans, systems, formulae,
8 and other compensation methods;

9 (D) existing and new programs, plans, and
10 other methods, including advanced warning systems,
11 retraining programs, severance pay, and retirement
12 and separation programs to counteract threats to job
13 security as a result of productivity improvement
14 efforts, and to recommend to the President and to
15 the Congress legislation necessary to encourage the
16 development of such plans, systems, and other ad-
17 justment methods; and

18 (E) jointly, with the U.S. Civil Service Com-
19 mission the impact of public personnel policies, stat-
20 utes and regulations affecting the productivity of
21 public agencies and the quality of working life of
22 public employees; and to recommend improvements
23 in civil service systems, including any legislation
24 and/or revisions of regulations required to carry
25 out the purposes of this Act.

1 (5) to encourage and coordinate all activities in the
2 various departments and agencies of the Federal Govern-
3 ment, including the Department of Labor, the Depart-
4 ment of Commerce, the Department of Health, Educa-
5 tion, and Welfare, the National Science Foundation, the
6 Federal Mediation and Conciliation Service, and all
7 other departments and agencies which are now or may
8 appropriately be supporting programs of productivity
9 growth or improved quality of working life in the public
10 or private sectors, in order to eliminate interagency
11 duplication of effort and cost, and to maximize the effec-
12 tiveness of all Federal programs and activities;

13 (6) to identify, develop, and support activities in
14 the various departments and agencies within the Federal
15 Establishment, appropriate programs, systems, and tech-
16 niques for continuing improvement of productivity and
17 of the quality of working life within such departments
18 and agencies, including—

19 (A) initiating with the collaboration of each
20 department or agency and qualified consultants
21 under grant or contract, the design, development,
22 and implementation of specific programs for such
23 internal improvements in each such department or
24 agency, and providing support for their implementa-
25 tion; and

1 (B) designing, with the aid of qualified con-
2 sultants under grant or contract, measurement tech-
3 niques or systems, and the application of such new
4 measurement techniques or systems or of extant
5 measurement techniques or systems, to the evalua-
6 tion of the impact and achievement of the programs
7 within the Federal Establishment described in sub-
8 paragraph 5 (a) of this section;

9 (7) to identify, select, and support research or
10 demonstration programs, or both, initiated and imple-
11 mented by qualified educational institutions, State or lo-
12 cal governments, and other qualified public or private
13 organizations designed to—

14 (A) increase the productivity growth of the
15 public or private sector of the American economy
16 through improved and innovative utilization of tech-
17 nological resources;

18 (B) increase the productivity growth of the
19 public or private sectors of the American economy
20 through improved or innovative utilization of human
21 resources;

22 (C) expand or refine, or both, existing knowl-
23 edge of the measurement of productivity and of the
24 quality of working life in the public or private sec-

21

1 tors and develop new systems and techniques for
2 such measurement; or

3 (D) utilize existing or develop and utilize new
4 measurement techniques and systems to assess and
5 evaluate ongoing or new research and demonstra-
6 tion programs seeking to improve productivity and
7 the quality of working life, including but not limited
8 to application to programs developed pursuant to
9 this Act;

10 (8) to determine, in cooperation with the univer-
11 sities and other qualified public or private organizations,
12 the need for productivity-related management and ana-
13 lytical skills and to arrange for or encourage training
14 programs in such skills;

15 (9) to establish within the Center a national clear-
16 inghouse for all data and information relating to pro-
17 ductivity and quality of working life activities in the
18 public and private sectors here and abroad, in order that
19 such information shall be immediately retrievable by
20 the Center upon request of any organization or indi-
21 vidual;

22 (10) to initiate, develop, and implement a signifi-
23 cant and visible public information program;

24 (11) to initiate, develop, and implement a national,

1 regional, and local technical assistance, referral and ex-
2 tension service available to business, labor organizations,
3 and State and local governments or units thereof across
4 the Nation, seeking specific assistance or referral to ex-
5 pert guidance in the formulation and establishment of
6 internal programs to achieve productivity growth or im-
7 proved quality of working life, or both; and

8 (12) to maintain liaison with all organizations here
9 and abroad, and particularly with productivity centers,
10 involved in efforts to increase productivity and improve
11 the quality of working life, in order to exchange infor-
12 mation about techniques, systems, social and technologi-
13 cal innovations in productivity and quality of working
14 life.

15 RELATED OFFICES

16 SEC. 208. (a) There shall be established in the Depart-
17 ment of Labor and in the Department of Commerce, an
18 Office of Productivity and Quality of Working Life, using
19 such funds as can be provided by those departments, to
20 further and extend the objectives and policies of this Act.
21 Each such Office shall be responsible for:

22 (1) integrating, coordinating and centralizing all
23 research and activities in its respective Department
24 which pertain to matters of productivity, organizational
25 effectiveness, and the quality of working life;

(2) providing liaison with the Center in the formulation of new policies and programs pursuant to this Act, and consistent with the policy of the Center, so that programs developed by the Departments and the Center shall be mutually facilitating.

(b) The Office of Productivity and Quality of Working Life in the Department of Labor shall develop and apply a set of indicators of quality of working life in order to collect such data as may be required by the Secretary of Labor to analyze and evaluate the health, safety and general well-being of American workers and the quality of working life in America.

(c) The Office of Productivity and Quality of Working Life in the Department of Commerce shall be chiefly responsible for developing indicators of economic and organizational effectiveness and productivity in order to collect such data as may be required by the Secretary of Commerce and the Center to identify economic blocks to American productivity and to analyze and evaluate proposals for improving productivity.

GRANTS AND CONTRACTS

22 SEC. 209. In order to carry out the provisions of this
23 Act, the Executive Director subject to the supervision and
24 direction of the Board, is authorized to—

25 (1) enter into contracts with, make joint funding

1 arrangements with, and make grants to academic insti-
2 tutions, State and local governments, and other public
3 and private entities qualified as expert in productivity
4 growth, improved quality of working life, or the measure-
5 ment of effort and impact in those areas, for—

6 (A) the development and implementation of
7 applied technological research or demonstration pro-
8 grams or projects to create or develop new or im-
9 proved methods, systems, machines, equipment, or
10 other technology for increased productivity, which
11 can be measured and their impact assessed, and
12 which can be applied elsewhere to achieve increased
13 productivity in other workplaces, organizations, in-
14 dustries, or sectors;

15 (B) the development and implementation of
16 applied research or demonstration programs or proj-
17 ects to create or develop systems, methods, models,
18 or methods for increased utilization and development
19 of human resources and improved quality of working
20 life which can be measured and their impact assessed,
21 and which can be applied elsewhere to achieve im-
22 proved utilization of human resources or improved
23 quality of working life, or both, in other workplaces,
24 organizations, industries, or sectors;

1 (C) the development and implementation of
2 research programs to produce systems, techniques,
3 and technology for improved measurement and defi-
4 nition of productivity and the quality of working
5 life; or

6 (D) the development and implementation of
7 research programs to produce systems, techniques,
8 instruments, and technology for the measurement
9 and evaluation of programs described in this para-
10 graph;

11 (2) and regulations, enter into contracts with, and
12 make grants to, proprietorships, partnerships, corpora-
13 tions, labor unions, government agencies, for—

14 (A) the development and implementation of
15 demonstration projects or other programs in plants,
16 offices, and other workplaces which seek to achieve
17 productivity growth through improved technology
18 or improved utilization of technological resources
19 and which can be measured and applied elsewhere
20 in the public or private sector;

21 (B) the development, and implementation of
22 demonstration projects or other programs in plants,
23 offices, or other workplaces which seek to improve
24 utilization and development of human resources,

1 particularly through efforts to improve the qual-
2 ity of working life, and which can be measured and
3 applied elsewhere in the public or private sector

4 (3) provide for exclusive licensing of jointly funded
5 technology when such arrangements will clearly expedite
6 nationwide distribution and application of such tech-
7 nology.

8 LIMITATION ON GRANTS AND CONTRACTS

9 SEC. 210. (a) No contracts will be entered into and no
10 grants may be made under this Act unless—

11 (1) the Board or the Executive Director when the
12 Board so directs, determines that the activities, projects,
13 or programs to be assisted will be likely to produce tech-
14 nological or sociological methods, instruments, systems,
15 or techniques useful to and of potential benefit to other
16 users in the public or private sectors, and

17 (2) contractual provisions are made to measure the
18 demonstration program and maintain improvement data,
19 either to be implemented by the contractor or grantee in
20 accordance with specifications established by the Center,
21 or to be implemented by or on behalf of the Center, and

22 (3) the contractor or grantee agrees that all infor-
23 mation relating to any innovation, achievement, break-
24 through, or success or failure generated in the course of
25 any Center-funded demonstration program shall be pub-

1 lic information, available to all, except when exclusive
2 licensing arrangements have been concluded.

3 (b) No payment shall be made pursuant to the provi-
4 sions of this Act for any of the functions pursuant to this Act
5 for a period of over five years, except that with the concu-
6 rence of at least two-thirds of the members of the Board of
7 the Center, certain contracts or grants may be extended be-
8 yond such period.

9 (c) All grants or contracts in excess of \$250,000 shall
10 require the approval of the Board.

11 (d) To the extent practicable, equal emphasis shall be
12 given to grants made for programs or projects designed to
13 improve utilization of technology to achieve productivity
14 growth and grants made for programs or projects designed
15 to achieve improvements in utilization of human resources
16 and the quality of working life.

17 (e) A grant under this Act may, in exceptional in-
18 stances, be made for not to exceed 100 per centum of the
19 total cost of each project upon the vote of a majority of the
20 Board. All other grants under this Act may be made only if
21 the recipient agrees to contribute at least one-quarter of the
22 total cost of each project assisted by that grant in money,
23 facilities, or services to carry out the purposes for which the
24 grant is made.

25 (f) No financial assistance shall be made under this Act

1 to cover the cost of land or building acquisition, procurement
2 of machinery, construction, acquisition of major equipment,
3 except when at least two-thirds of the members of the Board
4 of the Center approve such acquisition, procurement, or con-
5 struction as necessary and related to the purposes of this Act.

6 ADMINISTRATIVE PROVISIONS

7 SEC. 211. (a) In addition to any authority vested in it
8 by other provisions of this Act, the Executive Director, under
9 the supervision and direction of the Board in carrying out the
10 functions of the Center, is authorized to—

11 (1) prescribe such regulations as it deems neces-
12 sary;

13 (2) receive money and other property donated, be-
14 queathed, or devised, without condition or restriction
15 other than that it be for the purposes of the Center and to
16 use, sell, or otherwise dispose of such property for the
17 purpose of carrying out its functions without reference
18 to Federal property disposal statutes;

19 (3) receive (and use, sell, or otherwise dispose of,
20 in accordance with clause (2)) money or other prop-
21 erty donated, bequeathed, or devised to the Center, ex-
22 cept for such money and other property which includes
23 a condition that the Center use other funds of the Center
24 for the purpose of the gift, in which case two-thirds of

1 the members of the Board of the Center must approve
2 such donations;

3 (4) appoint and fix the compensation of such per-
4 sonnel as may be necessary to carry out the provisions
5 of the Act in accordance with the provisions of title 5,
6 United States Code, governing appointments in the
7 competitive service, and the provisions of chapter 51
8 and subchapter III of chapter 53 of such title relating
9 to classification and General Schedule pay rates, except
10 that the Executive Director may appoint and fix the
11 compensation of a reasonable number of personnel with-
12 out regard to the provisions of title 5, United States
13 Code, governing appointments in the competitive serv-
14 ice, and without regard to the provisions of chapter 51
15 and subchapter III of chapter 53 of such title relating
16 to classification and General Schedule pay rates, but no
17 individual so appointed shall receive compensation in ex-
18 cess of the rate received by the Deputy Director of the
19 Center;

20 (5) obtain the services of experts and consultants
21 in accordance with the provisions of section 3109 of
22 title 5, United States Code, at rates for individuals not
23 to exceed the maximum daily rate prescribed for GS-18
24 under section 5332 of title 5, United States Code;

1 (6) accept and utilize the services of voluntary and
2 noncompensated personnel and reimburse them for travel
3 expenses, including per diem, as authorized by section
4 5703 of title 5, United States Code;

5 (7) utilize, on a reimbursable or non-reimbursable
6 basis the services, equipment, personnel, and facilities of
7 any other department or agency of the United States;

8 (8) establish one or more task forces to assist and
9 advise the Center, composed of individuals who, by
10 reason of experience, are qualified for such service. Each
11 member of any such task force who is not an officer or
12 employee of the Federal Government may receive an
13 amount not to exceed the maximum daily rate prescribed
14 for GS-18 under section 5332 of title 5, United States
15 Code, for each day such individual is engaged in the
16 actual performance of duties (including travel time) as a
17 member of such a task force. Members may be reim-
18 bursed for travel, subsistence and necessary expenses
19 incurred in the performance of their duties;

20 (9) enter into contracts, grants, or other arrange-
21 ments, or modifications thereof, to carry out the provi-
22 sions of this Act, and such contracts or modifications
23 thereof may with the concurrence of two-thirds of the
24 members of the Board of the Center be entered into
25 without performance or other bonds and without regard

1 to section 3709 of the Revised Statutes, as amended
2 (41 U.S.C. 5) ; and

3 (10) make advances, progress, and other payments
4 which the Board deems necessary under this Act with-
5 out regard to the provisions of section 3648 of the Re-
6 vised Statutes, as amended (31 U.S.C. 529).

7 (b) The Center shall submit to the President and Con-
8 gress an annual report of its operations under this Act,
9 which shall include a detailed statement of all private and
10 public funds received and expended by it, together with
11 such recommendations as the Center deems appropriate.

12 TITLE III—MISCELLANEOUS PROVISIONS

13 TRANSFER OF FUNCTIONS

14 SEC. 301. (a) The functions of the National Commis-
15 sion on Productivity and Work Quality established pursuant
16 to the Economic Stabilization Act of 1970, are transferred to
17 the Center and the Commission is abolished.

18 (b) All property, records, and contracts as are deter-
19 mined by the Director of the Office of Management and
20 Budget to be employed, held, or used primarily in connection
21 with any function transferred by subsection (a) are trans-
22 ferred to the Center.

23 FEDERAL AGENCY ASSISTANCE

24 SEC. 302. Each department, agency, and independent
25 instrumentality of the Federal Government shall appoint a

PRODUCTIVITY IMPACT

25 (6) the benefits to be gained by the proposed action

1 versus the cost of implementation, and the costs of
2 adverse economic side effects.

3 ADMINISTRATIVE COST CEILING

4 SEC. 304. In each fiscal year, the Center shall make
5 every effort to hold the amount of funds appropriated to and
6 expended by the Center for the payment of staff and other
7 personnel, including members of the Board, at a minimum to
8 ensure that a maximum of appropriated funds is expended by
9 the Center to accomplish the purposes set forth in this Act.

10 AUTHORIZATION

11 SEC. 305. There are authorized to be appropriated to the
12 Center such sums as may be necessary to carry out the pur-
13 pose of this Act, but not to exceed \$5,000,000 for the fiscal
14 year 1976; \$10,000,000 for the fiscal year 1977; \$15,000,-
15 000 for the fiscal year 1978; \$20,000,000 for the fiscal year
16 1979; and \$20,000,000 for the fiscal year 1980. Funds ap-
17 propriated for any fiscal year shall remain available for obli-
18 gation until expended.

PURDUE UNIVERSITY

DEAN OF ENGINEERING
WEST LAFAYETTE, INDIANA 47907

March 21, 1975

Honorable Abraham Ribicoff
Chairman, Committee on Government
Operations
U. S. Senate
Washington, D.C.

Dear Senator Ribicoff:

The following statement is presented for the consideration of the Committee on Government Operations in connection with the hearings on S-765 and S-937, bills to establish a National Center for Productivity and Quality of Working Life. The statement reflects my personal views resulting from a number of years of experience in productivity related areas in industry and education, in the U. S. and abroad. Most specifically, I wish to address the joint benefits obtainable by involving institutions of higher education such as Purdue University, in meaningful education, research, and service functions directed toward improved national productivity and quality of working life.

In 1972, the Ball Brothers Foundation of Muncie, Indiana, endowed a Professorial Chair in the Schools of Engineering at Purdue University to serve as an "ombudsman for industry" and to act as a communication link between Indiana industry and the Schools of Engineering. It has been my privilege and frustration to fill that Chair since July, 1972. Shortly after assuming the Chair, I was also asked to serve as technical liaison between the Indiana State House, particularly the Indiana Department of Commerce and Purdue University. The experiences associated with these assignments indicate a strong need, not only for assistance to industry but improved effectiveness in support of resolution of state and regional productivity problems.

Both industry and government agencies have short and long range problems to which the resources of the University could be directed. However, two serious constraints arise. First is the question of financing the costs associated with resolution. Many of the problems of small and medium industry are short term and appear to be unique to the firm. However, closer analysis reveal commonality of many of these problems such as production methods, effective cost and production control, equipment upgrading, employee training, and particularly transfer of advanced technology. Single firms of

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this size cannot finance the cost of the research necessary to find a resolution, even using graduate or undergraduate students. Neither can the University during a time of inflation and restrictive budgets assume the financial responsibility. State agency problems have similar constraints in that neither the agency or university budgets provide for support of needed research.

Primarily through the dedication of certain faculty members, some assistance is provided by class projects, individual student projects, personal visitations and advice at no charge to the firm and in some cases individual consulting assignments. These means are usually "quick fixes" and not as effective as needed to have a major impact on other firms. If a problem appears sufficiently common, a faculty member alone, or with industry's advice, may develop and conduct continuing education programs. Since these must be self supporting, they are often directed at a more advanced level than can be assimilated by the small or medium sized firm.

On the other hand, the University has become increasingly dependent upon outside funding, particularly for research at the graduate level. This is coupled with the need for the faculty member seeking promotion and salary increases to conduct research leading to new knowledge and to publish results in learned or referred journals, leaving little time for concern with the need to transfer available technology and knowledge to the small and medium sized firms. The research funds available to him (and the University) are derived to a large extent, from federal or foundation sources. These funds have been primarily directed toward discovering new knowledge with little attention directed to adaptation of research results and transfer to practice. As a result, a serious gap often exists between laboratory results and application. Any transfer which takes place is largely restricted to larger firms with their own financial and staff capabilities. In the areas of truly advanced technology, such as CAD/CAM, adaptation and transfer has actually required financing by the federal government, particularly through such agencies as DOD, NASA, or AEC. Relatively little of the benefits have filtered to small and medium sized industry.

It is important to recognize there is no hesitancy on the part of industry, local, or state government to cooperation with the colleges and universities in providing data, personnel time, or often facilities. Rather, the constraint

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is most often educational institution finances to support the study. Furthermore, although the comments above are technically oriented, Purdue University, as well as others has effectively used interdisciplinary teams, including personnel from industrial psychology, economics, management, agriculture, political science, sociology, and other fields when needed to improve study or educational program results.

I recommend very strongly that any national program on Productivity and the Quality of Working Life draw heavily upon the resources of higher education. This must not only be on advanced research topics but on applied research, transfer of study and research results to the working environment, and most importantly permit incorporation into the educational programs through involvement of professors and students, in order that upon leaving the campus graduates recognize and direct their energies to resolving productivity and quality of working life problems rather than criticism, or even sabotage of business, government, and labor's efforts.

Purdue University has taken steps to address the Productivity and Quality of Working Life problems through advanced technological research in such areas as automation, computer aided manufacturing, robotics, and computer aided design, as well as more applied areas of worker training, facility design, and human factors engineering. At the present, a proposal is before the Indiana Budget Agency to conduct training programs for county and local government employees through the Cooperative Extension Service, as well as a budget item before the legislature for a small industry related manufacturing R&D project.

Purdue University stands ready to develop such services as:

- 1) An Extension Service to serve industry, local and state government by means similar to those of the Agricultural Cooperative Extension Service.
- 2) Applied research to extend advanced technology results to the working environment through demonstration projects, laboratory training of industrial personnel, comprehensive and varied continuing education programs or other appropriate means.
- 3) Research to develop meaningful and maintainable measurement of productivity and quality of working life improvements, in the industrial, service, or public sectors in participation with cooperating organizations.

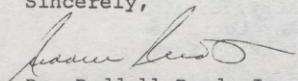
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- 4) Research to provide economical means of retrofitting equipment presently available in small and medium sized industry to economically achieve major portions of the benefits of advanced technology.
- 5) Development of interdisciplinary courses and programs at both the graduate and undergraduate levels to prepare students to work in areas related to productivity improvement and quality of working life.
- 6) Continued advanced research to develop new technology which will contribute to basic knowledge related to solution of productivity and quality of working life problems.

The constraint on initiating such programs is largely the lack of funds, and a lack of knowledge by the entrepreneurial faculty of funding agency commitment on a long term basis.

Although perhaps not unique in objectives, Purdue University has the nation's largest School of Engineering with a tradition of social and technical concern for America's problems, a Mid-America work ethic, and a strong sense of national pride. I recommend very strongly that a National Productivity Improvement and Quality of Working Life program draw strongly upon these and similar higher education resources, not only to aid in resolving short run problems but to lay the foundation for a continuing awareness and resolution of related problems, including transfer of results to a broad band of the American economy.

Sincerely,



Dr. Ruddell Reed, Jr., P.E.
Ball Brothers
Professor of Engineering
Room 244
Grissom Hall

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TESTIMONY BY BRUCE THRASHER, ASSISTANT TO THE PRESIDENT, UNITED STEELWORKERS OF AMERICA, AND CO-CHAIRMAN OF THE BASIC STEEL INDUSTRY-UNION EMPLOYMENT SECURITY AND PLANT PRODUCTIVITY COMMITTEE

The development and implementation of an effective and constructive Federal productivity policy is one of the most important and difficult challenges facing our Nation and the Congress today. I am grateful to this Committee for the opportunity to share with you our joint concern on this important subject on behalf of the United Steelworkers of America, AFL-CIO. While we fully support the Committee's effort to establish a Federal productivity policy, we do have serious concerns as to what agency or department of Government will be responsible for implementing such policy.

Undoubtedly, this Nation's lack of a Federal productivity policy has placed the American worker, the American consumer, American business - in fact the whole American industrial society - in deep economic trouble.

Our Number One economic problem today - standing alone at the top of the list and underlying most of our economic ills - is our declining rate of productivity growth.

For example, in the first quarter of 1974, productivity in the Nation declined 7.1 percent (annual rate) - the largest drop in our Country's history. An analysis of the Nation's productivity performance indicates that our productivity rate since 1965 had an annual average of only

2.5 percent. This is a decline from an average of 3.2% between 1950 and 1965.

Against this growing background of potential economic disaster for the Nation, the United Steelworkers of America doesn't feel that we are being an alarmist when we say:

The Congress must move quickly and decisively to establish and implement a Federal productivity policy designed to cure this growing economic ailment.

To fail in this recommended action will, in our opinion, assure the decline of the standard of living which has made America the world's foremost industrial and economic power and reduce this Nation to a fourth-rate industrial power. Due to the extreme urgency of this problem, coupled with the rising cost of Government operations, it is our considered opinion that a Federal policy on productivity should be implemented through the now-existing National Commission on Productivity and Work Quality.

At present, the National Commission on Productivity and Work Quality has the following significant responsibilities with respect to productivity growth:

Objectives:

- Increase the productivity of the American economy.
- Help improve the morale and quality of work of the American worker.

Functions:

- Encourage and assist the organization and work of labor-management committees on a plant, community, regional and industry basis.

- 3 -

- Publicize, disseminate ideas related to its objectives.
- Advise the President and Congress with respect to Government policy affecting productivity and the quality of work.
- Coordinate, promote and provide research and technical assistance regarding productivity.

Having worked with the Commission, we support its objectives and functions, particularly with respect to its encouraging and assisting in the organization and work of labor-management committees on a plant, community, regional and industry basis. We believe that this function is a fundamental principle that should be incorporated in any national effort to improve productivity, since the direct responsibility for improving productivity in the private or public sectors rests with those sectors and is not, and should not be, the direct responsibility of the Federal Government. Unless responsibility is assumed by the private or public sectors in this effort to improve productivity, no amount of Government legislation can do that job for them.

Therefore, what our Nation needs and needs urgently is not the establishment of yet another new Government agency to deal with the Nation's problems of productivity, but instead a pledge of full support for the National Commission on Productivity and Work Quality from the Executive Branch and the Congress in the form of a long-term authorization with adequate funding and staffing that will enable the Commission to handle the important job for which it was initially mandated.

The National Commission on Productivity was created by the President in June, 1970, to insure a new national concern with the importance of

continued productivity improvement to our economic strength. At the time he announced formation of the Commission, the President outlined its challenge as follows: "In order to achieve price stability, healthy growth and a rising standard of living, we must find ways of restoring growth to productivity. The task of this Commission is to point the way toward this growth in 1970 and in the years ahead."

In face of this initially stated Governmental concern with the problem of improving our Nation's productivity, we now find today that the National Commission on Productivity was allowed to wither on the vine due to lack of support from the Executive Branch and the Congress. As a result, our Country, the largest industrial power on Earth, now has only the under-financed, under-staffed National Commission on Productivity and Work Quality concerning itself with the problems of improving our Nation's productivity. Therefore, it is our view, if the problem of improving our Nation's productivity is to be resolved, it must now be resolved by the Congress breathing new life into the National Commission on Productivity and Work Quality and let it get on with the important task for which it was established.

We of the United Steelworkers of America make this critical observation because we are not strangers to the world of lagging productivity. Our members have had first-hand experience, disastrous experience in too many cases, with the effects of declining productivity.

It should be alarming to every American - and particularly to those who are experts in productivity matters - that this Nation's

productivity improvement since 1965 has been the lowest of any free-world nation. America's once clear lead in technology and productivity has rapidly declined. When you go looking for reasons, it is incredible to discover that it's only during the past few years that some limited attention has been devoted, in this Country, to this most crucial problem.

The United Steelworkers of America has sought to point out for some time what has been happening, but we found few listeners. Repeatedly, in the early days of our Union, our first President - Philip Murray - urged establishment of what he called industry councils. Through these industry councils, the workers and their union, along with representatives of the public, would give constructive suggestions and advice to management on production problems, economic problems of the industry, and other related matters.

We not only had a few listeners at that time, but those who did listen told us we were wrong, that the productivity problems we were talking about didn't exist, and if they did exist they weren't doing any real damage.

Let me cite an example that shows we were not wrong. In 1971, the once-mighty Steel Industry which supplies much of the base for America's climb to a one-trillion-dollar economy had all the earmarks of a sick industry: sluggish growth, stagnating profits, chronic overcapacity and labor costs that the Industry insisted were at least twice as high as its chief foreign competition.

Thus, Steel's waning vitality led some economists to ask in 1971 whether the United States, with its high cost structure, could afford to

have a domestic steel industry at all - and steel men themselves were frankly saying they were unable to compete under the present system at that time.

In the 1971 Basic Steel Negotiations, the Steel Industry brought to the attention of President I. W. Abel and the United Steelworkers of America their concern with the problem of improving productivity. Because of the joint obvious conviction that productivity must be improved, the Union joined with the Industry and negotiated the first contract provision between a major industry and a major union which established joint advisory committees on productivity at each plant of the Industry.

Three years have passed since the establishment of these joint plant productivity committees. Present economic reports now indicate that the Basic Steel Industry is more stable, more secure and its future economic outlook is healthy and is likely to remain so for an indefinite period of time.

While this economic progress report is encouraging, if the American steel industry is to continue as the No. 1 steel industry in the world, the Union and the Industry must continue to strengthen and improve its competitive position in the world market.

We don't take any gratification in the fact that there is now wide recognition that the worsening productivity problem we sought to alert the Nation to does indeed exist.

Even though the Basic Steel Industry and the United Steelworkers of America, by choice, established and have conducted their joint productivity

improvement program without Government participation, we in the Steelworkers are nevertheless concerned about the future of the National Commission on Productivity and Work Quality.

It is our position that a proposal to establish a new Government agency with all the recycled phrases, concepts and cliches does nothing more than delay our Nation's efforts to come to grips with this vexing problem. In our judgment it is time to stop debate and go to work.

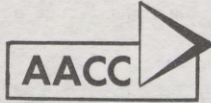
For the Congress to talk and act as though the establishment of yet another Agency will somehow solve our productivity problem is to ignore the painful lessons of this world of the Seventies. It just isn't so.

Our Government has marched down similar routes before, only to find other nations are using a different roadmap. And it is time we learned something from those nations which have managed to come to grips with their own productivity improvement problems. The best lesson to be learned is from the old saying, "Don't change horses in the middle of the stream."

In closing, we believe that instead of a new agency, a well-financed, well-staffed National Commission on Productivity and Work Quality can be an important asset to the American worker, the American consumer and American business in meeting this national challenge which in turn will benefit our economy and society. We believe that if this task is given to the National Commission on Productivity and Work Quality it will be a giant step toward restoring America's economic health.

AMERICAN AUTOMATIC CONTROL COUNCIL

AFFILIATED WITH: INTERNATIONAL FEDERATION OF AUTOMATIC CONTROL

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Dr. Theodore J. Williams
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March 31, 1975

The Honorable Sam Nunn
 United State Senate
 3327 New Senate Office Bldg.
 Washington, D.C. 20515

Dear Senator Nunn:

We of the Automation Research Council have had some recent discussions with Mr. W.P. Goodwin, Jr., Chief Counsel and Staff Director of your Subcommittee on Oversight Procedures. He suggested that the Council should consider preparing some written material on our proposals concerning productivity improvements in the United States for your Hearings on United States Senate Bill S937 and S765 on the National Center for Productivity and Quality of Work.

In response to his suggestion we have prepared the attached material which I hope will be satisfactory for inclusion in the record of your Hearings. Thank you very much. Please let us know if you would like any additional information.

Best wishes.

Sincerely,

Theodore J. Williams
 Chairman / Automation Research Council

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51-930 360

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TESTIMONY FROM THE
AUTOMATION RESEARCH COUNCIL

PRESENTED IN CONJUNCTION WITH THE HEARINGS ON
UNITED STATES SENATE BILLS S. 937 AND S. 765

The Automation Research Council appreciates this opportunity of presenting its views regarding productivity improvements in the United States to the United States Senate on the occasion of the Senate Hearings on United States Senate Bills S. 937 entitled, National Productivity Act of 1975, and S. 765 entitled, National Center for Productivity and Quality of Working Life Act.

The Automation Research Council is a group of 69 scientists and engineers representing every major American industry, the academic community, and several government organizations. Funds for the administration of the work of the Council and some travel funds have been supplied by a National Science Foundation grant. However, most of its work has been supplied through the voluntary efforts of its members and of their employers. The Automation Research Council is a standing Committee of the American Automatic Control Council, which latter is the overall American coordinating body for the engineering field of automatic control.

The Automation Research Council hopes that the technical background of its members and their wide experience in nearly every facet of American industry (both manufacturing and service) will make its proposals, detailed herein, of value to the United States Senate and to the American people in general.

THE AUTOMATION RESEARCH COUNCIL PROGRAM

The Automation Research Council has, with the financial help of the National Science Foundation, developed its proposal for a National Research Plan for Automation for the nation which is designed to help American Industry to meet the challenge of its foreign competition, to help increase its productivity to the benefit of its consumers, its workers, and its stockholders, and to help improve safety and working conditions in its plants, processes and service organizations. As the name of our organization implies, these proposals relate to the further development and beneficial application of automation techniques to our industry. At the same time, every effort has been made to assure that the interests of labor and of the small business,

as well as that of the economic benefits of the resulting installations, are satisfied regardless of the industry involved.

It is the belief of the Automation Research Council that only an increased level of research in the automation technologies and their concerted application to all types of industry will permit this nation to maintain its technological and industrial leadership of the world while at the same time maintaining a very high standard of living for its people, and preserving its environment and an adequate energy supply for the generations to come. It is our belief that the institution of a program similar to that outlined herein in the near future is vitally necessary to allow this leadership to be preserved. In addition, the present economic and manpower situation in many industries is such that they cannot undertake the large scale research and development programs necessary to achieve these technologies within a single company or even within a whole industry.

During the past two years the Automation Research Council has held a series of Workshops from which a plan with the following highlights was developed.

1. A Group of 29 Specific Topics in Automation Technology were identified which are vital to a technically and economically sound application of automation. All of these require significant additional research and development effort to be properly utilized. They are described in detail in Chapter III of Report Number 1, A National Research Plan for Automation, pp. 21-27, of the Council, and in Table I, Attachment II, of this Report.
2. The 29 Specific Topics are addressed in four separate Demonstration Projects whose successful completion will demonstrate the technical and economic viability of the techniques incorporated and will achieve the needed research and development of the named topics as part of the work involved. These Demonstration Projects, which are described in Attachment I and in Chapter IV of the above listed Report, include the automation of:
 - a. Batch, or Small Lot Manufacturing,
 - b. Sheet Metal Assembly,
 - c. High Volume Mechanical Assembly, and
 - d. Health Services.
3. A set of needed studies and a course of action is outlined to assure the acceptance by labor and the solution

of any social issues involved including the application of the developed techniques to small business type companies. These are described in Chapter V of the same Report.

4. The envisioned program is expected to cost in the neighborhood of 300 million dollars over the next seven years including the contributions of both government and industry. Individual projects under the plan would range in cost from one to ten million dollars.
5. Table II, Attachment II, presents a tabular description of the overall coordination of the 29 Research Topics with the proposed four Demonstration Projects.

THE NEEDS OF AMERICAN INDUSTRY FOR RESEARCH IN AUTOMATION TECHNOLOGY

The basis of our country's high standard of living and its past ability to compete strongly in world markets has been its dynamic and progressive manufacturing system. Today we are in danger of losing our competitive edge since other industrial nations, notably Japan and Germany, have been improving their productivity at a faster rate than our own, thereby threatening our ability to compete in world markets, and hence undermining our high standard of living.

There are other economic factors as well. Product life has become shorter as competition has grown and customers are becoming more demanding of their unique requirements. Equipment costs are higher and labor rates also higher - all things leading toward narrower margins.

Social changes too are playing a more important part with individuals seeking more freedom and individuality in their lives. For example, there is a declining interest in the factory as a place to work, which is a factor in reduced individual productivity, higher employee turnover and absentee rates, a shortage of skilled workers, and finally, a shortage of trained managers. Another example is increased interest in improved health care delivery, including preventative medicine, while controlling the rising costs of services.

The basic needs of American industry may be summarized as follows:

1. Increased Productivity - The normal economic pressures which create this need are intensified by the trend to proliferate both the number and types of parts and services needed.

2. Greater Versatility - The world-wide trend toward a greater variety of products is leaning toward smaller lot sizes, more personalized services and to a greater complexity of products.
3. Greater Precision and Reliability - Growing emphasis on product and service performance and reliability requires closer control of tolerances and reproducibility of manufactured parts and delivered services.
4. Reduced Job Monotony - The declining interest in dull, hazardous, demeaning, and repetitive operations can be reversed by automating parts of these jobs, thereby creating a more interesting and challenging atmosphere in which to work.

Automation is one method of satisfying the above needs provided the proper considerations are given at the same time to social and economic factors in its application in order to avoid the difficulties which the introduction of such new technologies has had in the past. One type of such an automation development lies in the newly evolving CAD/CAM (computer aided design/computer aided manufacturing) type of techniques, to culminate in the development of a computer integrated manufacturing system. Major advances have been made in the production control area, and some advances have been made using DNC (direct numerical control), multimachine manufacturing systems, and adaptive control. Graphics has been used in isolated companies to automate and coordinate the planning activities of detail drawing, NC (numerical control) programming, and editing functions. Automatic Machining/Assembly/Testing operations are emanating from the Military (most advanced), Automotive, and Aerospace Industries. In medicine, computer aided systems have been developed for a variety of applications, including hospital patient care. While much progress is being made, details of application are not being divulged, leading to the reinvention of "the wheel" many times.

Indeed, although there are several individual systems of automation in the service industries and in computer controlled manufacturing in new plant situations, there are no known implementations, as yet, of a complete integrated system incorporating retrofits of existing plant, and indeed, it is beyond the capabilities of any one company, or even a single industry. For this reason, it appears that the only viable solution for the United States which is available in a time frame which is competitive with other industrial countries lies in a joint government, industry, university effort of the type proposed by the Council.

ATTACHMENT IA

PROPOSED DEMONSTRATION PROJECT NUMBER ONE
DISCRETE PARTS BATCH MANUFACTURING

The objective of this project is to demonstrate the means of improving the efficiency of job lot manufacturing in the U.S.A. via the exploitation of automation technologies. The solution proposed is the development of a Computer Integrated Manufacturing System (CIMS) where the entire manufacturing process, from detail part drawing through final assembly and inspection is under computer management. A demonstration facility will be established to review the current state-of-the-art, retrofit possibilities, and the evolution of change expected to achieve general use of CIMS. The demonstrations shall feature high machine utilization, short through-put time, and high labor productivity. Of particular importance will be the establishment of educational media slanted toward the small business man enabling him to implement various sub-systems of the total in an evolutionary manner.

The project shall include research design, development and demonstrations in the following systems, each designed as a stand-alone system capable of integration into the total.

1. System Concept and Design - to establish system interface relationships, both software and hardware, between the various system modules, i.e., the Process Planning System, Material Processing Equipment, Material Handling Systems, etc. Included is development of the computer hierarchy of control, and the mechanical interfaces of the hardware equipment involved.
2. Process Planning System - to develop an automatic manufacturing process planning system, including the production of detail drawings, process and time study data, numerical control programming and editing, as well as in-process inspection information, utilizing a common source of data such as a computer stored detail part mathematical model produced via the vehicle of an interactive graphics system.
3. Material Processing System - to review the State of the Art of the application and organization of today's material processing equipment, the retrofit possibilities available, and the evolution of change expected to achieve the computer managed evaluation and system of tomorrow.

4. Material Handling System - to develop systems for transporting material, tools, fixtures, etc., throughout the manufacturing process in an automated manner, including such subsystems as automatic warehousing, automatic transport between workstations, and automatic tool management systems.
5. Inspection, Diagnostics, Quality Assurance, and Maintenance Systems - to develop techniques and methods, sensors, etc., to automatically monitor and inspect the operating system in process and provide appropriate corrective action through feedback.
6. Assembly System - to design and build a versatile computer automated assembly system suited to low volumes and high product mix manufacturing.
7. Production Scheduling, Control, and Information Systems - to develop dynamic, optimized planning and information systems required to operate in a Computer Integrated Manufacturing System, including requirement generation, inventory control, material scheduling, machine monitoring, direct numerical control, maintenance monitoring, real time shop floor control, etc.

(NOTE)

Purchasing and distribution related systems are intentionally not covered. The demonstration project is limited to in-plant related considerations. Interfaces must be established between this and externally related systems.

ATTACHEMENT IB

PROPOSED DEMONSTRATION PROJECT NUMBER TWO
SHEET METAL ASSEMBLY PROCESSES

It is proposed that a Demonstration Project be conducted to evaluate the potential for the application of computer-based automation technologies to the improvement of the productivity, quality and environmental aspects of the assembly of sheet metal products. This is deemed desirable and necessary in view of intensive international competition in the marketing of products which contain significant amounts of sheet metal fabrication and assembly. Such competition is recognized particularly in such markets as automotive vehicles, home appliances, and office furniture and equipment.

OBJECTIVES OF THE RESEARCH PROJECT

The purpose of the proposed project is to demonstrate the feasibility of improving productivity in automotive body fabrication and assembly through the exploitation of automation technologies employing a hierarchical structure of computer process controls. Computer management would encompass process actuation, facilities diagnostics, and quality monitoring.

The Factory System proposed represents an optimum marriage of automation and human resources. With the assumption that there would be no radical change in product design, the optimum system, which would be economically feasible, necessarily includes manual assembly processes in which accessibility, complexity, or human judgment mitigate against the use of automation. It is apparent that increasing opportunity for economical application of automation will stimulate inventiveness in product design with practical tradeoffs between material cost increases and assembly cost reductions.

1. Control System - The proposed control system consists of two basic elements: Management controls and Process controls. A central computer system would provide for both. It would contain two essentially independent computer networks with an interface for exchange of necessary data between the two.

One computer system would combine batch and real-time processing to provide for Planning, Engineering, Scheduling, Accounting, etc.

The second system, which would be on-line continuously, would control automated processes as well as plant facilities, such as heat, air supply, ovens, etc. It would also monitor processes facilities, and product quality.

Access to the Management System would be direct, by remote terminal in most cases. The Process Computer System would function through intermediate processors in most cases. Subordinate to the Process Computer System would be a network of satellite computers which would feed program instruction to buffers or programmable controllers at machine stations. They would also process machine diagnostics and product quality data from the various stations.

In certain applications mini-computers will be employed at work or inspection stations for direct control. In other applications programmable controllers or conventional, hard-wired, controls would be used.

2. Process - The process area would include automation equipment, conventional machines and manual operators. Each would be involved in an exchange of information with the satellite and central process computer systems.

Obviously the most intimate relationship would be between automation equipment and computers. Conventional machines would be tied in to the computer network primarily for diagnostics. The human interface would consist of special instructions or display of exceptional conditions as well as feed-back to the computer of process status or malfunctions.

In some cases humans will function independent of the automation; in others they may perform correlary operations, or they may monitor process or product conditions.

PROJECTS ELEMENTS

The proposed Research Project in Sheet Metal Fabrication will consist of several individual demonstration topics, preceded by several sub-system "proof-of-concept" laboratory developments. The laboratory studies are intended to support the other Research Plan elements being proposed by the Automation Research Council. Conversely, laboratory research to be done under the auspices of other Plans will contribute to the implementation of these tests. The overall research effort has, in this way, been divided to avoid costly duplication.

The following laboratory research studies are included in the Sheet Metal Assembly Project:

1. Control system-software and hardware interfaces.
2. Versatile reprogrammable assembly devices.
3. Moving assembly line inspection techniques.
4. Computer controlled flexible assembly lines.

The following demonstration topics are proposed to address the problems inherent in Sheet Metal Assembly:

1. Sub-Assembly spotwelding.
2. Sub-Assembly general assembly.
3. Moving line spotwelding.
4. Moving line general assembly.
5. Moving line arc welding.
6. Moving line inspection.

ATTACHMENT IC

PROPOSED DEMONSTRATION PROJECT NUMBER THREE

HIGH-VOLUME MECHANICAL ASSEMBLY

The purpose of this proposal is to improve the productivity of an appliance manufacturing plant with the help of a computer automated production system. The feasibility of such an approach will be demonstrated with a pilot manufacturing facility which will incorporate the most advanced mass production methods presently available. This demonstration facility will be a modular manufacturing plant responsive to dynamic changes of the marketing environment.

The main emphasis of this project will be on programmable automatic assembly of mass produced subassemblies. Since assembly is only part of an integrated manufacturing system design for automation, fabrication, finishing, warehousing and material handling have to be given equal consideration. To limit the initial study to a workable size project, the work will focus primarily on assembly aspects.

The project addresses questions related to the following operations:

1. Design for Automation - Evaluation of computer aided design concepts and better bill of material processor, automatic evaluation of process capabilities, time studies, assembly line layout and assembly line finishing.
2. Parts Production - Manufacturing of sheet metal versus plastic parts, use of prefinished materials, introduction of new parts feeding concepts, computer aided scheduling and monitoring of production equipment, use of adaptive control mechanisms for mass production machines.
3. Finishing - Application of new finishing concepts such as the application of low energy consuming paints, development of control strategies for metal finishing operations to improve the quality of paint surfaces and to better utilize paint resources, search for better methods to allow faster switch-over for different color requirements.
4. Inventory and Material Handling Control - Improvement of the flexibility of the manufacturing facility by using material handling systems such as power and free conveyors and robotic transfer devices, incorporation

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of computer control to route and track components and assemblies, automated warehousing.

5. Assembly and Inspection - Development of new assembly concepts such as pulsed assembly lines, assembly on conveyor systems or assembly on air pallets, extensive use of robotic assembly devices, computer aided inspection methods.
6. Manufacturing System - Design of computer integrated manufacturing system, simulation of manufacturing facility and components.
7. Computer Installation - Layout of hierarchical computer network, design of data base and hierarchical data files, interface with process.

ATTACHMENT ID

PROPOSED DEMONSTRATION PROJECT NUMBER FOUR
HEALTH SERVICES INDUSTRY

The needs of the Health Services Industry for automation developments can be classified as follows:

AUTOMATED HEALTH DATA MANAGEMENT

Data Base Development and Management

Computer Aided Diagnosis

Analytical (Diagnostic) Sensors

Pattern Recognition Technology

Languages for Feature Extraction and Classification

Computer Architecture

AUTOMATED HEALTH CARE MANAGEMENT

Standardization of Container Sizes (including universal numbering and identification systems)

Application of Automation in Control and Scheduling

Application of Automatic Facility Diagnosis (including fault tolerant systems design and usage)

Application of Wireless Signal Transmission

Development and Application of a Common Control Language

The above project areas overlap with similar project areas which are defined in the Discrete Parts Manufacturing Demonstration Project. Therefore, by proper coordination, the execution of these R&D projects should benefit from these parallel efforts. Careful coordination will be in order to prevent redundancy.

SUB-PROJECT DESCRIPTIONSSUB-PROJECT 1 - AUTOMATION RELEVANT TO MEDICAL HISTORIES

An individual Whole Life Personal Medical History packaged in a form to be carried by the person, as a passport is carried, appears to offer an unique opportunity for a cost-effective application of automation technology in the Health Sciences field and can be brought into being promptly and at low cost as a demonstration study.

Ideally the physician should be able to have displayed to him immediately upon demand, without redundant testing or interrogation of the patient, any desired abstract of the patient's medical record, new or old, that has ever been recorded. This should be automatically assembled to emphasize any desired medical profile for comparison with normal and abnormal standards, and should even prompt the physician to look for non-obvious clues submerged in the record and should have fail-safe features to make it operate only slightly less well when items of data are missing or conflicting evidence is included. We would like the results to be the automated equivalent of the very wise and widely informed alert physician who has known the subject, his relatives and his environment every day of his life and is dedicated to utilizing this composite knowledge for the benefit of the patient.

This demonstration topic offers a working plan for developing and getting accepted, a Personalized Portable Whole Life Medical History "Cassette" or "Passport" which would put into the possession of the individual citizen a small, inexpensive and highly portable record of his whole life medical history which could be updated whenever there occurred a medically pertinent event such as an examination, an accident, an inoculation or a bout of disease.

SUB-PROJECT 2 - NATIONAL MEDICAL DATA BASE DEVELOPMENT AND
MANAGEMENT

The application of automation technology to health care delivery in the United States is contingent on the development of a workable medical data base and data base management language acceptable to the medical practitioner and available to the large majority of clinicians and researchers. Until this development occurs, the utilization of automation must at best be a localized and individual operation. As an example, it is conceivable that the clue to the cause and, thus, the possibility to the cure of many diseases, already exists in the millions of case histories now on record but cannot be separated for lack of ability to apply modern data analysis techniques due to the lack of a single data base and data base management language.

The project must necessarily encompass a large cross section of the U.S., including inputs from all aspects and geographical areas. In itself, the project must be centered such as to give it breadth both to encompass the university medical school and the general practitioner. Possibly, a large research institute, with existing ties to medical, social, and political facilities, would be most likely to successfully carry this project forward.

SUB-PROJECT 3 - COMPUTER-AIDED MEDICAL DIAGNOSIS

It appears that a major change in the health-care delivery system of the United States will be the utilization of computer automation in conjunction with a national medical data base to provide the general practitioner with clinical diagnosis support.

Such procedures are presently under development and being utilized to a limited extent. In the clinical area there is the interpretation of ECG's, patient history taking, surgical and intensive care monitoring, multiphasic screening, and radiology analysis. Techniques are available for analysis of EEG with computer printout of asymmetry, focal spiking and dominance of basic rhythms. In cardiology, routine processing of segments of the conventional 12-lead ECG provides display of parameters such as basic rhythms, arrhythmia and ectopic beats. Admission screening is performed by automated patient interview procedures, using structured question sequences and leading to verification of admitting diagnosis, as well as secondary disorders.

While automation may optimally replace certain specific functions of present clinicians, and make possible a limited extension of self-medicine beyond the present aspirin and temperature taking level, the major thrust of the concept being proposed is to provide material support to the clinician in both his memory and decision processes. As such, the concept has a reasonable chance of acceptance by the medical profession.

SUB-PROJECT 4 - AUTOMATION OF VISUAL PATTERN RECOGNITION IN MEDICINE

It is not widely recognized that the level of effort associated with visual pattern recognition of medical imagery in the Health Services Industry is estimated as at least five billion dollars per year. Furthermore this estimate refers only to the daily examination by technicians, paramedics, hematologists, pathologists, and radiologists, of both microscope slides (for the purpose of blood and tissue analysis) and of radiograms (for the purpose of radiological analysis), especially as regards the chest X-ray). As of 1970 about 650 million X-rays and about 300 million microscope

slides were read annually.

Not only is the cash flow large and the throughput great, but human factors contribute significantly to diagnostic error. Further human visual pattern recognition in medicine provides only qualitative, subjective and often equivocal output. Automation would provide standardization and quantification leading to objective diagnosis and reliable prognosis.

At the present time, some degree of automation has been introduced in the reading (visual examination) of microscope slides carrying blood smears. This development has been privately financed by several industrial concerns. Government support is being provided for research directed toward automatic detection and classification of cancer cells, using both image processing and fluid flow cell handling systems. However, commercial equipment for performing the easier of these visual inspection techniques, i.e., blood analysis, is highly complex, expensive (\$100,000 per unit), and tentative or experimental in nature. Furthermore, careful laboratory tests, clinical evaluation of the equipment, and training courses in its proper use will be necessary before such equipment will be accepted for routine use. Automation and objectivity in cytology and histology in general are also highly desirable, but are still in research phases and far from commercial feasibility.

The slow progress in automated pattern recognition in medicine is due in part to the unavailability of a common data base for use in comparing and medically validating approaches and results. The availability of such a data base would reduce the initial research and feasibility study costs by eliminating time-consuming, expensive, and redundant data acquisition.

Not only is the application of automatic pattern recognition ineffective due to a lack of a common data base for use in comparing approaches, results and robustness of pattern recognition algorithms, but also a multitude of pattern recognition languages have been developed for storage and retrieval, manipulation and transformation of data, and for reporting of intermediate and end results. Each language is used by a relatively small working group, and its syntax is heavily influenced by machine dependency and implementation. Thus little or no cross comparison of results occurs or can occur.

Finally, in addition to the need for a common data base and language(s) it is essential to demonstrate and test computer algorithms and software for extracting the most significant pattern measurements and features.

Although visual pattern recognition is emphasized, the results obtained and techniques developed should be applicable to automation relating to voice sonograms, thermograms, and nuclide scans as well as medical waveform patterns such as electrocardiograms, cardiac phonograms, and electroencephalograms.

SUB-PROJECT 5 - COMPUTER SYSTEMS DESIGNED FOR HEALTH SERVICES

Most computer systems being applied to health services needs have been developed to satisfy financial, record keeping or scheduling demands. These systems have been made available, on the whole by large computer manufacturers and accordingly have utilized existing centralized computer systems with mass storage, capable of handling fixed data formats and standardized inputs. The patient care and medical practitioner demands for the computer have had, at best, second priority especially as regards to systems architecture and ease of access. The reliability of the central computer concept has been suspect in its application to life saving and critical patient monitoring functions, except in a limited sense in intensive care unit or critical care unit areas where dedicated systems are available.

The computer systems must handle the variety of data inputs associated with patient care and the attendant problems related to aided diagnostic support. In order to process large volumes of stimuli, at speeds consistent with real time data gathering and diagnostic interpretation, it is usually necessary to architect special purpose computer systems. These computer systems must be ultra-reliable, and easily accessed by non-computer oriented personnel. They must accommodate both fixed program and adaptive programming protocols. Since it is expected that the computational processes will involve parallel operations on multi-channel data, large data quantities associated with picture processing, interactive processes suited to statistical analysis as well as a conventional numeric data processing, special purpose and hybrid systems may be required. Computer systems architecture should be designed with this variety of operations in mind, taking advantage of the recent advances in the minicomputer technology, micro-programming techniques and parallel processor development.

SUB-PROJECT 6 - DIAGNOSTIC TRANSDUCERS IN MEDICINE

Transducer measurements of body functions are pervasive in the health industry. Applications range from continuous patient monitoring to the yearly medical examination.

The use of automatic processing of the transducer outputs is increasing. In intensive care units, for example, on-line computers perform alarm level comparison and trend analysis of body vital functions. A medical examination can involve sophisticated automatic analysis of an electrocardiogram. With the trend towards less costly and smaller electronics, more of the diagnostic processing could be done on-line and at the site of the transducer. This combination of transducer and diagnostic processing is here-with called a diagnostic transducer.

The advantage of including the diagnostics with the transducer are in cost and performance. The cost is tied to the capability for extracting the relevant data locally. Savings occur from elimination of storage, transmission, display and file management. Increased performance could be obtained through monitoring the transducer performance, data quality assessment and the ease of communicating with medical personnel and external data bases.

SUB-PROJECT 7 - REAL-TIME AUTOMATION IN HEALTH CARE MANAGEMENT

The patient defrayed cost of supplies and equipment is second only to the direct cost of labor in the distribution of hospital expenses. The direct and indirect support of patient care in such areas as: (1) Central Sterile Supplies, (2) General Stores, (3) Pharmacy, (4) Dietary, and (5) Linen are a significant Logistical Management Activity. As such the efficient management of such logistics can have a significant impact on the total cost of hospital care. It is recommended, therefore, that an effort be mounted to apply appropriate management and control technology to Logistics in the Health Services Industry. Such an activity would, of necessity, be a real-time application of automation, since the day-to-day patient experience will determine the required level, flow, and distribution of such services.

The fact that multiple hospital shared-services activities exist and are expanding is encouraging. These activities typically involve a group of hospitals bound together in a loose federation for the purpose of bulk purchasing and internal redistribution of assorted disposable supplies. Typical savings returned to the members are in the order of 5-10%, higher in some special cases. Such operations rarely involve sophisticated computer purchasing typical of the food and clothing industries. Even more rare is volume forecasting by computer.

The intrusion of such shared activities into the confines of each member institution, particularly when that management activity is external to the institution has yet to be demonstrated in any significant way. It is at this level that the traditional desire of each hospital to remain autonomous comes into conflict with the logical benefits of shared interaction.

ATTACHMENT II

TABLE I

IDENTIFIED AUTOMATION RESEARCH TOPICS

Items With a Defined Application in One or the Other of the Demonstration Projects. Note that Most of These Have Wide Applicability in All Areas of Automation Applications (Numbers correspond with those of Table II).

A. Universal Manufacturing Data Base

1. Determination of best structuring of data base (by department, by manufacturing function, or as total system).
2. Universal Data Base for CAD/CAM and MIS with a common or standardized definition. Also for computer-automated material processing manufacturing. Should take account of various channel reliabilities, and sizes of files at the systems nodes. Should be a cooperative effort between industry, university, and government. Should permit access from various terminals and nodes, but should have controlled access. Should provide "bad data" and incomplete data remedying system.
3. A standard part numbering system with assignment by a central agency as is done by the Library of Congress for books. The part number system need not be descriptive in nature since the main thrust of this recommendation is to eliminate duplication in assignment of numbers by vendors and users. An example of this problem is that which exists in the semiconductor industry with regard to integrated circuits and other electronic modules: each vendor of a device with identical specifications has separate part numbers as does each user of these parts. The assignment of part numbers and maintenance of part number documentation requires a minimum of 8 hours per part per user/vendor. The envisioned system would largely eliminate this expenditure as the standard part number would be universally assigned once.

TABLE I (Cont.)

4. National standard on part classification systems for part description. (e.g. Opitz, W. Germany; TELKA Code - Norway; MICLASS -Holland; Brisch - England; Mitrafanow - Russia). A part classification is the basis of group technology which offers major potentials in all areas of manufacturing and engineering.
- B. Widely Applicable, Overall Plant Control Systems
(Hierarchical Control)
5. Automated production control and scheduling systems which are dynamic in nature, i.e., responsive to shop conditions. Develop software needed for such. Should include the following:
 - a. Automatic process planning including drawing, process planning and NC tape generation using the disciplines of graphics and automatic process planning system (e.g. McDonnell-Douglas, Lockheed, System Science and Software, AUTOPROS - Norway, TNO-Nederland).
 - b. Production control and scheduling including dynamic scheduling and total computer management of all shop activities.
 6. The development of a common computer control language which could be used by all manufacturing industries to program their plant computer systems. This language might possibly be a compiler or interpretive level language based upon one of the presently popular data processing languages. The use of such a language would permit the interchange of developed programs between processes and companies within the same industry and even within related processes in different industries.
- Basic goals of such a language development would be to include:
- a. The capability for "automatic" documentation through decompilation of object code (as in interpretive languages).

TABLE I (Cont.)

- b. Be procedure oriented to allow preparation of and cataloguing of sequential control operations (procedures) out of fundamental operating functions (steps).
 - 7. Low cost portable storage medium which can store analog, digital, or pictorial data. Include low cost terminals for reading and writing on storage medium. Incorporate procedures for assuring privacy of data involved. Such a device would be applicable to patient histories in the medical field as well as many applications in industrial areas.
 - 8. Signal transmission system for plant data handling designed to reduce plant and hospital data handling cost, such as wireless and other serial systems.
 - 9. Develop practical methods of software and hardware interfaces between basic manufacturing functions in computer automated systems.
 - 10. Develop methods to automate the design of:
 - a. Information and control systems, and
 - b. The physical layout of plants, hospitals, etc.
 - 11. Define economically viable steps for making transition from today's installed capital equipment and methods to tomorrow's computer automated equipment and methods.
- C. Discrete Item Identification and Material Handling
- 12. Universal parts and container identification and/or location scheme. Multiplicity of detection techniques should be incorporated with common input format, such as:
 - a. Bar code readers.
 - b. Active and passive part number sensors.
 - c. Visual recognizers, etc.

TABLE I (Cont.)

13. Low cost yet flexible machine readers for identification scheme generated earlier.
 14. Equipment to generate man and machine readable identification.
 15. System for more reliable location control of parts-in-process and for locating and identifying misplaced material. Note: Projects 12, 13, 14 and 15 should be considered as distinct parts of an overall general identification scheme. It should be recognized that this is a presently active research field.
 16. Modelling and simulation language for aiding design of material handling equipment.
 17. Standardization of container sizes and characteristics.
 18. Faster and more efficient means of loading and unloading goods on transportation vehicles including sorting, identification and in-plant transport functions.
- D. Highly Flexible, Automated, Assembly and Manufacturing Techniques
19. Versatile reprogrammable assembly devices for high product mix manufacturing applied to both fixed and moving assembly lines. Should have three-dimensional adaptive control capabilities. Should make use of CAD/CAM data base in their programming.
 20. Computer controlled flexible transfer mechanism particularly at interface of factory and warehouse material transfer equipment and material processing equipment.
- E. Nondestructive, Noninferential Quality Monitoring
21. Sensors for material processing:
 - a. Tool wear.
 - b. Tool breakage.

TABLE I (Cont.)

- c. Surface finish.
- d. Part tolerance.
- e. Surface integrity.
- 22. Development of diagnostic or "smart sensors" for inspection.
- 23. High level inspection language for physical inspection and analysis for discrete, hard goods manufacturing. Should be a subset of CAD/CAM language. Would include:
 - a. Statistical analysis.
 - b. Trend analysis.
 - c. Coordinate transformations.
 - d. Multi-sensory/multi-model analysis.
 - e. Geometrical analysis ("roundness", "flatness", etc.).
 - f. Comparison with preset limits.
 - g. Interactive programming.
 - h. Host compilation and testing on larger machines.
 - i. Data base access and manipulation.
- 24. Inspection techniques for moving assembly lines:
 - a. Fits and sizes (windshields, doors, panels, etc.).
 - b. Torque and closure (car windows, mechanical).
 - c. Paint thickness (cars, appliances, etc.).
 - d. Appearance (sags, dings, color variations).
 - e. Torque testing (bolts, nuts, screws, etc.).
 - f. Nondestructive testing of welds and bonds.
 - g. Sound (vibration) analysis.

TABLE I (Cont.)

F. Highly Reliable, Self Diagnostic, Fail Safe Systems

25. Fault tolerant and fail-safe techniques for computer-automated material processing manufacturing systems.
26. Methods of diagnosis of electrical, hydraulic, and mechanical failures. Based on both continuous remote sensing and sampled data techniques. Should pinpoint weak links in the system and accumulate meaningful data to suggest possible remedial actions. Should be incorporated in automatic batch factory demonstration project. Should recognize incipient failures from abnormalities in equipment functions. Should recognize trends in product quality indicating potential loss of control condition.
27. Automated diagnostic system for total facility as well as of individual machines along with fault tolerant design of systems involved.

G. Pattern Manipulation Languages

28. Pattern manipulation languages for visual pattern recognition applicable to discrete manufacturing and health care areas.
29. Data base for testing pattern recognition techniques (common or test problems).

TABLE II
RELATIONSHIP OF THE NEEDED AUTOMATION RESEARCH TOPICS
WITH THE PROPOSED DEMONSTRATION PROJECTS

AUTOMATION RESEARCH TOPIC	BATCH TYPE (SMALL-LOT SIZE) DISCRETE PART MANUFACTURING	SHEET METAL ASSEMBLY	HIGH VOLUME MECHANICAL ASSEMBLY	HEALTH SERVICES INDUSTRY
UNIVERSAL MANUFACTURING DATA BASE				
1. Data Base Structuring	XX		X	X
2. Universal Data Base	XX		X	X
3. Centralized Standard Part Numbering System	X		XX	X
4. Part Classification Standard	XX		X	X
HIERARCHIAL CONTROL SYSTEMS				
5. Dynamic Production Control and Scheduling Systems	XX		X	X
6. Common Manufacturing Computer Control Language	X	XX	X	X
7. Low Cost Portable Storage Medium				XX
8. Signal Transmission Systems	X		X	XX

XX - indicates principal assignment of this research topic to project in question

TABLE II (Cont.)

AUTOMATION RESEARCH TOPIC	BATCH TYPE (SMALL-LOT SIZE) DISCRETE PART MANUFACTURING	SHEET METAL ASSEMBLY	HIGH VOLUME MECHANICAL ASSEMBLY	HEALTH SERVICES INDUSTRY
9. Software and Hardware Interfaces	XX	X	X	X
10. Automated Design Techniques	XX			
11. Economical Transition Steps				
PART IDENTIFICATION AND MATERIAL HANDLING				
12. Universal Parts and Container Identification	X		XX	X
13. Flexible Machine Readers	XX		X	X
14. Man/Machine Readable Identification Generation	XX		X	X
15. Reliable Location Control of Parts-in-Process	XX		X	X
16. Material Handling Modelling and Simulation Languages	X	X	XX	
17. Container Standards	X	XX	X	X
18. Loading and Unloading Techniques	X	X	XX	

TABLE II (Cont.)

AUTOMATION RESEARCH TOPIC	BATCH TYPE (SMALL-LOT SIZE) DISCRETE PART MANUFACTURING	SHEET METAL ASSEMBLY	HIGH VOLUME MECHANICAL ASSEMBLY	HEALTH SERVICES INDUSTRY
AUTOMATED ASSEMBLY TECHNIQUES				
19. Versatile Reprogrammable Assembly Devices	X	X	XX	
20. Computer Controlled Flexible Assembly Lines	X	XX	X	
NONDESTRUCTIVE QUALITY MONITORING TECHNIQUES				
21. Sensors for Material Processing	XX	X		
22. "Smart" Sensors for Quality Inspection	X	X	X	XX
23. High Level Inspection Languages	XX	X	X	
24. Inspection Techniques for Moving Assembly Lines		XX	X	
SELF DIAGNOSTIC, FAIL SAFE SYSTEMS				
25. Fault Tolerant and Fail-Safe Techniques	X	X	X	XX

TABLE II (Cont.)

AUTOMATION RESEARCH TOPIC	BATCH TYPE (SMALL-LOT SIZE) DISCRETE PART MANUFACTURING	SHEET METAL ASSEMBLY	HIGH VOLUME MECHANICAL ASSEMBLY	HEALTH SERVICES INDUSTRY
26. Diagnostic Methods	X	X	X	XX
27. Automated Facilities Diagnosis	XX	X	X	X
PATTERN RECOGNITION LANGUAGES				
28. Feature Extraction/Classification Recognition Techniques Testing		X	X	XX
29. Data Base for Pattern Recognition Techniques Testing			X	XX

THE FUTURE OF COMPUTER-AIDED MANUFACTURING (CAM) SYSTEMS

by

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ABSTRACT

A recent Delphi-type forecast of the future of manufacturing, carried out by the International Institution for Production Engineering Research (CIRP), strongly indicates that the computer-integrated automatic factory will be a full-blown reality well before the end of this century. There are important technological factors and very significant economic and social incentives at work today to provide the motivation for such to happen. As a result, many of the industrialized nations of the world are working toward realization of this objective. Several have coordinated national programs targeted on this. The strategy being followed in these is to develop and implement a sequence of viable, economic steps in the form of shorter range programs which will lead to eventual realization of the overall objective. These include development and implementation of such new optimization technology as integrated

manufacturing software systems, group technology, cellular manufacturing, computer control and multi-station manufacturing systems. Good progress is being made, world-wide, in developing and implementing each of these.

THE FUTURE OF COMPUTER-AIDED MANUFACTURING (CAM) SYSTEMS

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INTRODUCTION

A recent Delphi-type forecast⁽¹⁾ of the future of manufacturing carried out by the International Institution for Production Engineering Research (CIRP) resulted in 94 forecast events on which good consensus was obtained. Of these, 24, or over one fourth, strongly indicated that the computer-integrated automatic factory would be a full-blown reality well before the end of this century. The three key events which summarize this aspect of that forecast are as follows:

1. By 1980 (median), a computer software system for full automation and optimization of all steps in the manufacturing of a part will be developed and in wide use.
2. By 1985 (median), full on-line automation and optimization of complete manufacturing plants, controlled by a central computer, will be a reality.
3. By 1990 (median), more than 50% of the machine tools produced will not have a "stand-alone" use, but will be part of a versatile manufacturing system, featuring

automatic part handling between stations, and being controlled from a central process computer. Thus it is evident that the major event expected to occur in the future of computer-aided manufacturing (CAM) systems is the eventual implementation of such factories.

What are the factors and incentives at work today that provide the motive power for such a major change in manufacturing? One is, of course, the fact that the technology needed for that change now seems feasible because of the rapid growth of the capabilities of the digital computer. However, equally important are the economic and social incentives. Both of these latter factors are contributing strongly to the prospects for early realization of the computer-integrated automatic factory.

ECONOMIC INCENTIVES

Manufacturing normally contributes approximately 30% of the gross national product of modern industrialized countries. Yet, in spite of that, manufacturing, although normally thought of as a highly productive and efficient activity, is not generally so. For example,

this is clearly true of batch-type metalworking manufacturing, which normally accounts for about 40% of total manufacturing employment. The mass production type manufacturing systems (e.g., automotive transfer lines, etc.) account for less than 25% of metalworking parts manufacture. In fact, 75% of such parts are manufactured in lots consisting of less than 50 pieces. Carter⁽²⁾ has revealed that, when the life of the average workpiece in batch-type metal cutting production shops is analyzed, only about 5% of its time is actually spent on machine tools and, of that 5% only about 30% (or 1.5% of the overall time) is actually spent as productive time in removing metal. This result is illustrated graphically in Figure 1. This situation can hardly be called economic or productive. Further, it truly pinpoints the two main areas where by far the greatest improvement in the economy and productivity of metalworking manufacturing can be made today. The first of these is reduction of time of parts in process in the shop, and thus of the resulting extremely high inventory of unfinished parts on the shop floor, and of finished parts waiting for others in process so that assembly of

the product can proceed. It is evident from Figure 1 that this inventory could potentially be reduced by up to 90%. Resulting reduction of indirect capital and labor costs and improvement of productivity could be enormous. Here indeed is a major incentive to implementation of CAM systems and the automatic factory.

The second area of potentially great improvement is that of percent machine utilization. The 30% machine utilization indicated by Figure 1 must be combined with the fact that the average machine spends approximately 50% of its time waiting for parts to work on (because of the 95% time in transit shown in Figure 1). As a result, the average machine tool in a batch-type shop is being utilized productively (i.e., is actually cutting metal) only about 15% of the time. Thus it is evident that this utilization could potentially be increased by 600% or more. Resulting reduction of direct labor and overhead costs and increase of productivity could be enormous. Obviously this provides another major incentive to implementation of CAM systems and the automatic factory.

Another major economic consideration today is the rapidly rising cost of manufacturing labor relative to manufacturing productivity. This is illustrated by the data in Table I, for the major industrialized nations of the world, for the period 1965-1970. In the past four years the situation has become even more uneconomic than that shown in the table, due to the even more rapid rise in wages in the current inflationary world economy, and the notable failure of manufacturing productivity to increase at a comparable rate. Quite evidently, this situation can only be reversed by improving the rate of increase of manufacturing productivity, decreasing the degree of labor intensiveness of manufacturing, or both. Both of these can be accomplished by increased implementation of CAM systems and therefore offer an additional major incentive to advancement of such technology.

SOCIAL INCENTIVES

Today, major social factors are also emerging which provide strong incentives for early implementation of CAN systems and the computer-integrated automatic factory. Among these trends, three sets of changing attitudes

toward manufacturing are particularly significant, namely those of workers, those of employers, and those of government.

Concerning the first of these trends, there is a steadily increasing reluctance of workers to continue to expose themselves to the manufacturing environment. Thus today, in all the major industrialized countries of the world, there is an increasing shortage of manufacturing workers. This is heightened by the growing opportunities for and rewards in employment in the service industries. This trend is dealt with by Bell⁽³⁾ in discussing the coming of the post-industrial society. For example, this type of trend occurred first in the field of agriculture. In the United States, as the manufacturing industry developed, the percentage of the work force employed in agriculture declined from 90% in 1790 to 4% today. Meanwhile, the percentage of the work force employed in manufacturing rose correspondingly during the 19th century. However, in recent years it has begun to decline - from 30% of the work force in 1947 to 24.9% in 1968. The U.S. Bureau of Labor Statistics projects that by 1980 the percentage will decline further to 22.4, and a Rand Corporation

forecast projects that by the year 2000 only 2% of the labor force will be employed in manufacturing. Quite evidently, this trend represents a major incentive to implementation of CAM systems for purposes of increasing the automation of manufacturing.

Concerning the second of these trends in attitudes toward manufacturing, namely those of the employers, they are now clearly recognizing the human need for the nature of work to be such as to assure the worker of deep satisfaction from performing it (as well as freedom from unpleasant or harmful conditions). Thus much attention is being directed to methods of accomplishing this. Here the pioneering work of such investigators as Herzburg⁽⁴⁾ on job enrichment is proving most useful. Herzburg's significant finding, illustrated in Figure 2, is that, while the so-called hygiene factors of a job (i.e., company policy and administration, supervision, work conditions, salary, etc.) can cause dissatisfaction if they are not satisfactory, they can do little to provide on-going job satisfaction. Instead, such satisfaction derives from the adequacy of the so-called motivator

factors of a job (i.e., opportunity for achievement, recognition, responsibility, advancement, growth, etc.). The major feature of jobs which provide such opportunities is participation in decision-making. Thus this trend provides a major incentive to implementation of CAM systems for purposes of accomplishing computer-based automation of manufacturing, in view of the endless opportunities it offers for participation in decision-making through interactive type software programs and similar features. In addition, of course, the opportunity it offers for freeing workers from unpleasant, harmful, potentially dangerous or exhausting conditions on the job is tremendous.

The third significant trend in attitudes toward manufacturing is the changed attitude which governments throughout the world are taking toward freeing workers from unpleasant, harmful, potentially dangerous or strenuous conditions. In most of the industrialized countries of the world, government is no longer playing the essentially passive role of requiring that, as technology to accomplish improved working conditions is developed, it be put to use. Instead it is now playing

the very active role of requiring that such technology be developed. For example, in the United States, the relatively new Occupational Safety and Health Act in effect requires such things as:

1. technology be developed to eliminate the necessity for a worker to ever insert his hand, arm, or any part of his body into a potentially dangerous area of a machine (such as a press)
2. technology be developed to keep the noise level in a factory below 90 dBA (Bollinger⁽⁵⁾ has excellently summarized the current status of the international attack on this and other aspects of the problems of noise in manufacturing).

Here again, requirements such as these provide strong incentives to implement CAM systems for automation of manufacturing.

PROGRAMS AND STRATEGY

Most of the industrialized nations of the world today are aware of the foregoing powerful incentives to change the character of manufacturing through implementation of the automatic factory. Likewise, many of them are equally aware of the potential of the digital computer to

accomplish this, and to thereby realize tremendous economic and social national benefits. That potentiality lies in the capability of the digital computer. That capability has powerful potential to provide both the hardware and software components of manufacturing with two essential, powerful faculties, namely:

- (1) on-line variable program (versatile) automation
- (2) on-line moment-by-moment optimization

As a result, many countries have organized CAM research and development (R&D) programs of considerable scope to try to realize that potential in their own manufacturing industry. The main, long-range objective of these programs is, of course, eventual realization, in that industry, of the computer-integrated automatic factory.

Although realization of the fully computer-integrated automatic factory, through implementation of the concept of the computer-integrated manufacturing system, is the long-range goal of the national programs, it is well realized that to get from today's industrial methods, know-how and installed equipment to that goal requires an evolutionary, rather than a revolutionary, process.

The strategy being followed, therefore, is to develop and implement a series of viable, economic steps, in the form of shorter-range programs of R&D on CAM, each having two essential characteristics, namely:

1. Potential for sufficient economic return to justify it by itself and to generate the capital to support development and implementation of the next.
2. Compatibility with eventual attainment of the goal of implementation of the computer-integrated automatic factory.

Out of the variety of such programs being pursued, the following seem to be receiving a major part of the attention and effort, world-wide:

1. Integrated manufacturing software systems
2. Group technology and cellular manufacturing
3. Computer control
4. Multi-station manufacturing systems
5. The computer-integrated automatic factory itself.

Integrated manufacturing software systems

This program of CAM R&D is directed toward development of modular, interfaced, compatible, CAM software systems for on-line computer-based optimization and eventual on-

line versatile computer-based automation of complete manufacturing plants. The early economic payoff comes through application of the individual modules, as developed, to increasing on-line optimization of conventional manufacturing plants.

Both Europe and Japan are hard at work developing such software systems for their own use. For example, in Europe, West Germany and Norway are both developing national integrated software systems for metal cutting manufacturing. The "blueprint" for such is the diagram of Figure 3^(6,7): The Japanese have indicated that they are basing their work in this field on pattern processing⁽⁸⁾.

Group technology and cellular manufacturing

This supplement to CAM consists of the layout and organization of a factory and its manpower and equipment on a part-family and product-line basis (rather than a functional basis), using group technology information concerning geometrical and processing similarities between parts to establish the families. This has the eventual CAD/CAM benefit of providing a compatible, economic base for

evolution of such factories through increasing use of hierarchical computer control and multi-station manufacturing systems. However, implementation of this technique provides immediate economic benefits from decreased manufacturing lead time, decreased inventory of parts in process, and increased job satisfaction of workers.

This type of program is being actively pursued in both Japan and Europe. Japan is developing its own national part classification system for use in establishing group technology families and is testing it in industry. In the Netherlands, the Metals Institute of TNO⁽⁹⁾ is developing, and is testing in industry, a computer-based software system for automatic classification of parts into group-technology families and automatic layout of factories into group-technology cells based on those families. The system will also then carry out automatic production planning for manufacture of those parts and will eventually also provide automatic programming for numerically controlled machining of them. In Britain much R&D and implementation of cellular manufacturing is going on, both in universities and in industry. For

example, Ferranti Ltd. ⁽¹⁰⁾ in Edinburgh has been busily engaged in implementing such in their manufacture of avionics equipment. Figure 4 illustrates one of their cells utilizing numerical control (NC) for producing a family of box-like parts of the general character of that shown at the bottom right of the figure. By going to cellular manufacturing, Ferranti has reduced the throughput time of parts in process by a factor of approximately 5.

Computer control

Much of the R&D on this aspect of CAM carried on in Europe and Japan is being given a particular emphasis. This emphasis is directed at evolution of computer numerical control (CNC) and direct numerical control (DNC) in such a manner that, as these bring computer power to the group technology cells on the shop floor (for purposes, initially, of serving only a limited number of NC machines), the computer power is also used to accomplish dynamic scheduling, production control, machine and operator two-way communication with the computer, etc. This encompasses all the machines in the cell and not just the NC machines. Thus,

significant economic benefits should become possible very early in the evolution.

This type of program is being carried on very actively in both Europe and Japan. Figure 5 represents the Norwegian⁽¹¹⁾ concept of the computer hierarchy appropriate to such. As CNC type minicomputer control of the individual machines in a cell is brought to bear at level 3, this in due time provides an economic basis for overall DNC of the cell at level 2 with a larger minicomputer. Eventually it becomes profitable to link all the cells in the factory with a large computer at level 1, providing an initial basis for overall on-line optimization and optimization and automation of the factory. Japan is reported to have the largest number of CNC/DNC systems already operating in factories of any country in the world. The number is reported to be on the order of 60.

Multi-station manufacturing systems

This program of CAM R&D involves evolution of the group technology cells in such a manner that, as the percentage of NC workstations operating under CNC/DNC in a cell increases, complete automation and the integration of tool

and work handling and transfer within the cell as a whole becomes economically feasible. Such handling and transfer may be done by use of pallets, manipulators, or other means. For example, a metal cutting multi-station manufacturing system or cell, suitable for operation under CNC/DNC, as conceived by Perry⁽¹²⁾, is shown in Figure 6. Thus, in time, each group technology cell is conceived of as evolving into a multi-station manufacturing system operating under CNC/DNC.

Both the European nations and Japan have a number of different types of multi-station manufacturing systems under development. For example, a basic pallet-type system having four different variations for different types of part families has been developed in prototype form in East Germany⁽¹³⁾. However, Japan is reported as having developed the largest number of such systems; the number is said to be approximately 10.

The computer-integrated automatic factory

This program of CAM R&D is of course the final step in the evolution, whereby, through gradual full implementation of a computer hierarchy and an integrated software system,

operations in all cells and at other work centers within a plant are dynamically programmed and coordinated for overall on-line optimization and automation of the plant's operations. This includes interfacing the system with computer-aided design in such a manner that initial programming of the automated optimum manufacture of a product is generated in the design stage, with the design optimized for minimum cost of manufacture.

The only nation to date having an announced national plan for accomplishing this by a given date is Japan⁽¹⁴⁾. Their plan, which goes by the name "Methodology for Unmanned Manufacturing", calls for the development, construction and operation of a prototype "unmanned" machine-building plant by about 1980. The plant would be a 200,000 to 300,000 square foot factory staffed by a control crew of only about 10 persons, as compared to the normal complement of 700 to 800 workers. The cost of the project will be approximately \$100 million.

Conclusion

It seems evident that the combination of the powerful technological, economic and social factors and incentives

and the concerted national R&D programs active today will indeed make the computer-integrated automatic factory a reality well before the end of this century. Thus all of us who are engaged in advancing the state of the art of CAM systems have exciting and challenging opportunities ahead. Further, in view of the very substantial economic and social benefits which can come from implementation of CAM systems and the resulting eventual realization of the computer-integrated automatic factory, as described above, we have a major responsibility to direct our efforts toward cooperation on a national scale to attain that goal as rapidly as possible. -

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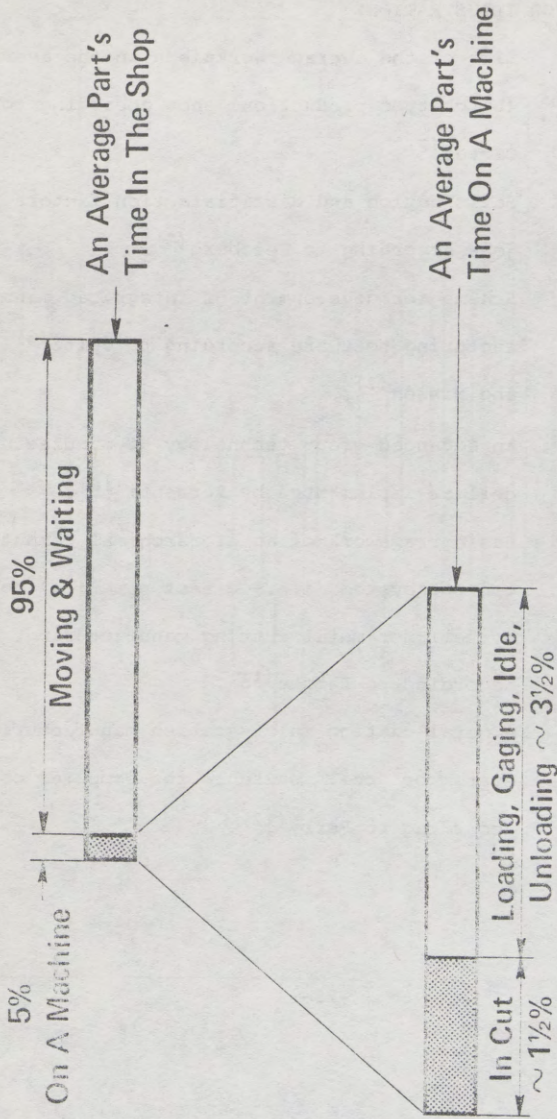
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CAPTIONS FOR ILLUSTRATIONS

- Figure 1 Life of the average workpiece in the average (batch-type production) shop according to Carter⁽²⁾.
- Figure 2 Satisfaction and dissatisfaction factors in jobs according to Herzburg⁽⁴⁾.
- Figure 3 Scheme for development of integrated manufacturing software according to Opitz⁽⁶⁾ and Nissen⁽⁷⁾.
- Figure 4 An advanced group technology NC manufacturing cell as implemented by Ferranti⁽¹⁰⁾.
- Figure 5 Basic framework of an hierarchical computer control system (i.e., direct numerical control system) for metal cutting manufacturing, according to Bjørke⁽¹¹⁾.
- Figure 6 A metal cutting multi-station manufacturing system or "cell" suitable for computer control, according to Perry⁽¹²⁾.

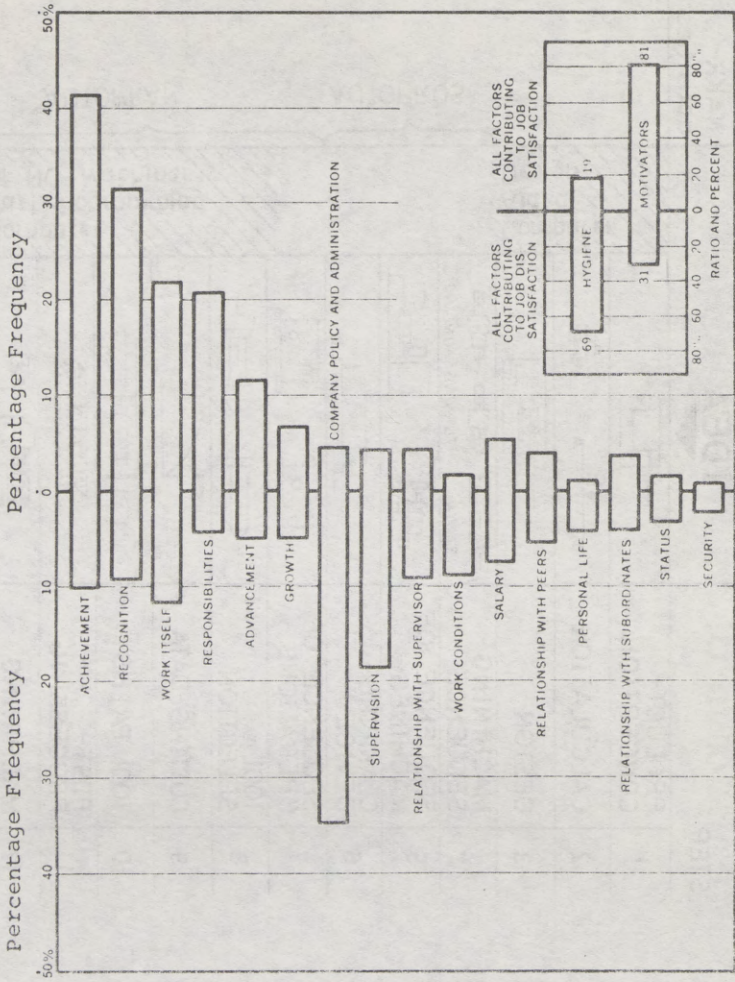
Breakdown of an Average Parts Time in the Shop

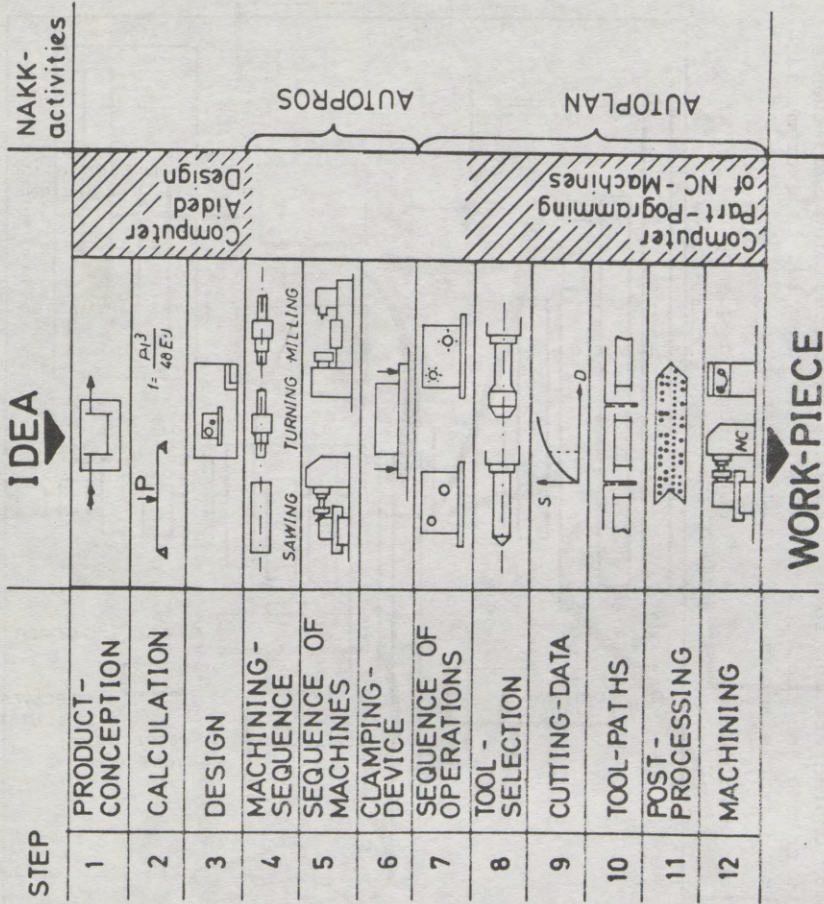


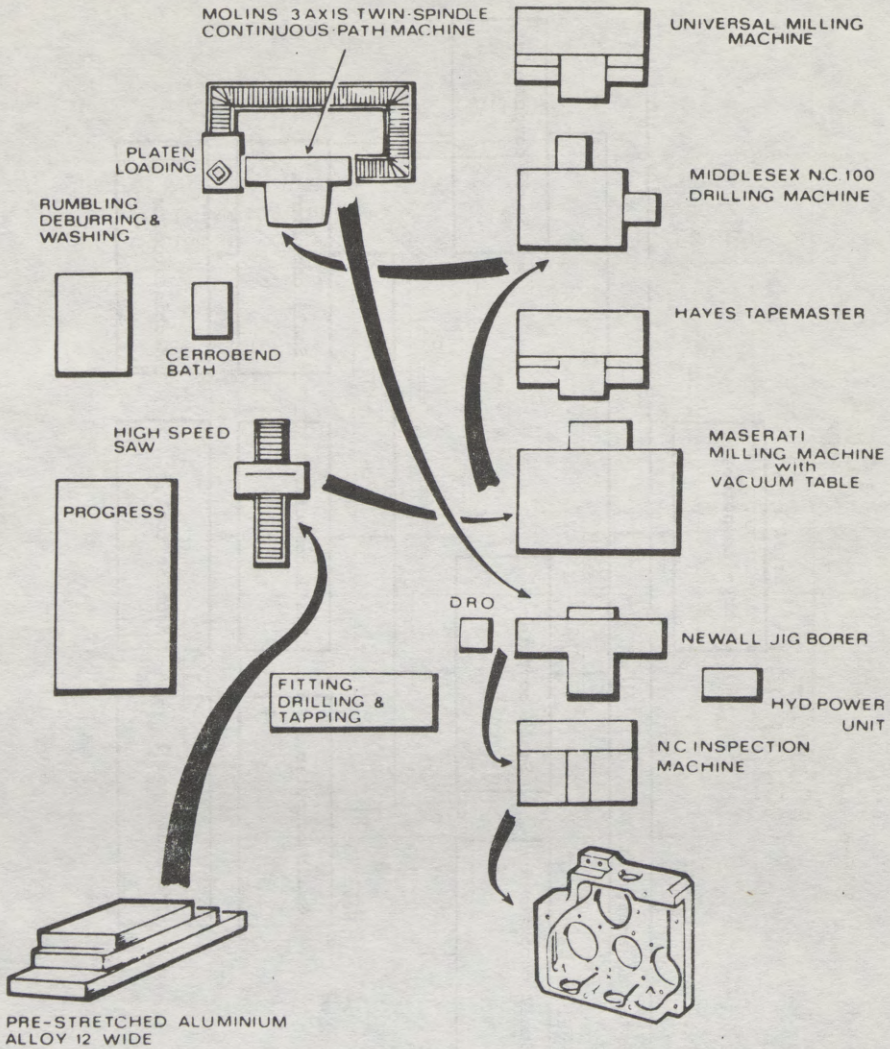
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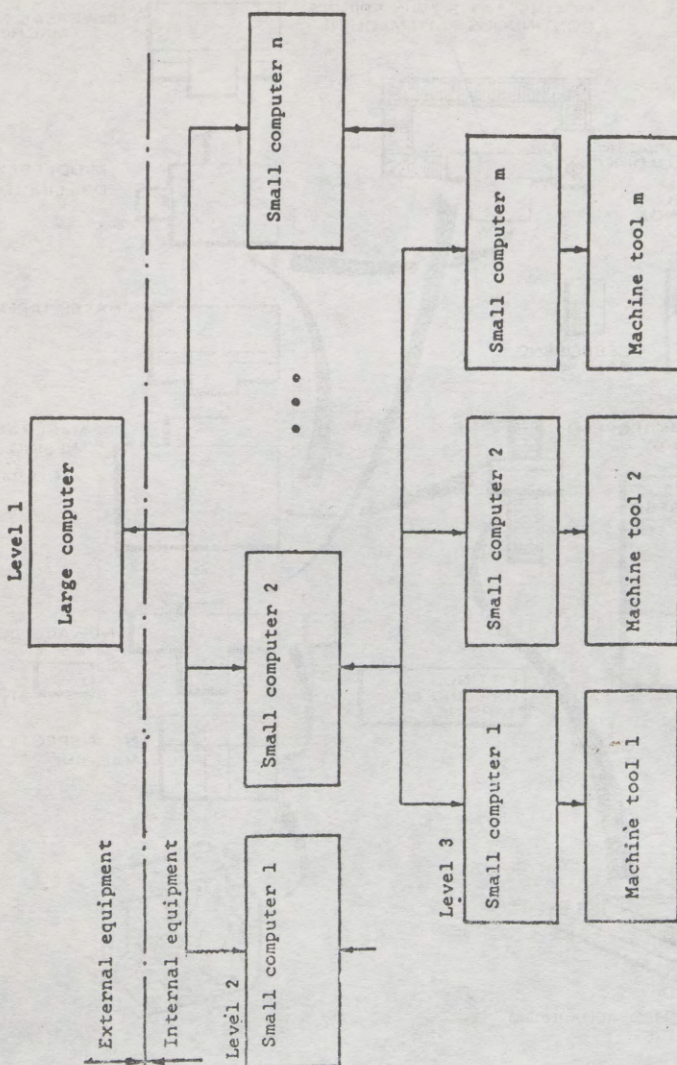
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Factors characterizing 1844 events on the job that led to extreme dissatisfaction
 Factors characterizing 1753 events on the job that led to extreme satisfaction

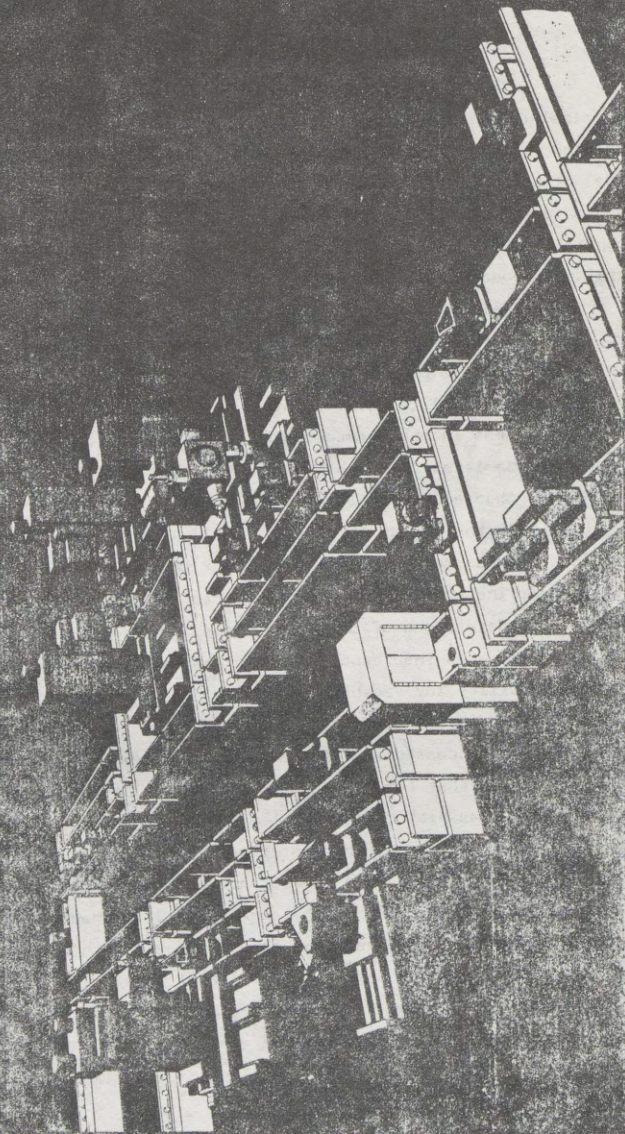








MULTI-STATION MANUFACTURING SYSTEM



HISTORY OF THE JAMESTOWN AREA LABOR-MANAGEMENT
COMMITTEEJames B. Schmatz
Coordinator

1975

The Labor-Management Committee of Jamestown has been the principal force for dramatic change from serious economic decline to exciting potential for opportunity and growth. We believe it is a model of an effective community instrument to deal with economic problems and to improve job opportunity. Our experience has demonstrated that cooperation between management and unions, and participation of all parties involved in manufacturing, can contribute significantly to the achievement of economic gains.

The Quality of Work approach to increasing productivity and job satisfaction is proving to be of enormous importance in the local economy, and the skills development program created an exciting opportunity for many persons in the Chautauqua County area work force. The Labor-Management Committee approach has proven to be very effective for influencing the type of change which will occur in a community's economy.

At the end of 1971, Jamestown's industrial economy was in deep trouble. Unemployment was reaching 10% of the work force. There had been a steady decline in the number of manufacturing jobs over an eighteen year period. Art Metal, one of the area's largest manufacturers, had recently been closed due to insolvency and its new one million square foot manufacturing facility lay vacant.

Industrial developments in Jamestown and Chautauqua County had been largely unsuccessful. Efforts to attract new business had been rejected with the comment that the area had a bad labor climate. There had been some long and sometimes bitter strikes at Art Metal and Blackstone Corporation, and serious work stoppages in other plants in the area. The wood furniture industry, which had once been the bulwark of the economy in Jamestown, was slowly moving south. Early in the summer of 1971, Chautauqua Hardware had been insolvent and the workers had gone two weeks without receiving a paycheck. Several others were on the brink of collapse.

Mayor Stanley N. Lundine became convinced that the restoration of the existing manufacturing economy was the key to any economic progress.

Mayor Lundine convened meetings with key labor and industrial leaders in the area. As a result of these preliminary meetings in early 1972, the Jamestown Area Labor-Management Committee was formed. With the assistance of the Federal Mediation & Conciliation Service; Ray Anderson, a local labor lawyer; Sam Nalbene, and several others, first meetings were convened for the purpose of affecting fundamental change in Jamestown's economy.

The first joint meeting of the Labor-Management Committee of Jamestown was held in February 1972. Never before had these people, who represented the workers in the organized plants in the area and the managers of these enterprises sat together in one room. There was a spirited dialogue and government advisors, serving as third party moderators, felt that real progress was beginning to be made when one union representative stood up and said, "The trouble with this town is that you manufacturers have been keeping business out of here for years." The result of that sometimes stormy meeting was a resolve to work together toward common goals.

The companies affiliated with the Labor-Management Committee range from huge manufacturers owned by international conglomerates such as Marlin-Rockwell, Division of TRW; large locally based companies such as Blackstone Corporation, the largest non-captive radiator manufacturer; to very small but significant local industries. There are generally four different types of manufacturing endeavors:

1. fabricated steel
2. engineering products
3. glass and ceramics
4. wood furniture

The unions representing these workers range from the International Association of Machinists and Aerospace Workers, which has locals in most of the manufacturing companies, to the United Auto Workers, which has one large local, and the International Association of Bridge, Structural and Ornamental Iron Workers, which is with a relatively small Jamestown plant.

Following the dialogue of the first meeting of the Labor-Management Committee in the early spring of 1972, and the intensive investigation of common purpose which resulted, four principal goals were originally established for this newly formed organizations:

1. improved labor relations
2. manpower development
3. assistance to industrial development programs
4. productivity gains in existing industries

Productivity was singled out as the most important objective of the committee. It was clearly stated that the productivity goal must be broadly defined and that there should be no job loss in any plant as a result of achieving productivity gains.

The breadth of the definition was the only factor which allowed labor leaders to accept this primary objective. For example, reduction in absenteeism or the elimination of the waste of materials during the manufacturing of products were primary productivity objectives. Unions had come to regard the word productivity as equated with speed-up, time and motion approaches which were so distasteful to their members. The automation phobia with its attendant loss of jobs - and union members - had not been a major factor in Jamestown because of the job-shop nature of the industries. But, the attitudes found elsewhere were certainly prevalent with the labor in southwestern New York State.

Upon analysis, the labor leaders came to the difficult conclusion that in the long term, productivity was and must be the primary goal. The only way to improve the business conditions existing from manufacturers about the high New York State taxes and other costs of doing business in this area had to be offset by higher levels of productivity. Furthermore, the best way to attract new industry and to deal with the new threats of increasing foreign competition, was to prove that Jamestown was a productive place to do business because of a good labor relations atmosphere.

Armed with an array of projects and concepts, representatives from

the Jamestown Area Labor-Management Committee went to Washington to see if some assistance could be obtained for the Jamestown project. Joe Mason, labor co-chairman and business agent for the machinists union, and Wally Dixon, vice president of the AVM Corporation, made several attempts to gain outside financial assistance for the Jamestown project. During the period, interest in the Jamestown Committee was expressed by a great number of federal officials and agencies including the National Commission on Productivity, the Department of Labor, the Economic Development Administration, and the Bureau of Labor Statistics. The prospects for federal assistance were continually pursued without success. The one source of real inspiration and assistance to the Labor-Management Committee was Senator Jacob Javits. The Senator was a speaker at a dinner sponsored by the committee in November 1972 which was attended by more than 300 union workers and management employees at all levels.

Javits praised the program of the Labor-Management Committee and called it the type of innovative approach, "which is essential if our country is to survive as a great economic power". He pointed to Japan and Germany, which had significant gains in productivity in recent years; he pointed out that U.S. absenteeism in the automobile industry is up 100 % in the past ten years; fixed hours and relentless assembly-line methods prevail in most U.S. industries; wage and salary incentives are the exception; worker participation in work situation decisions is discouraged; and, not surprisingly, a recent survey showed that 25 % of workers under 30 are dissatisfied with their jobs.

At the end of the first year, the Jamestown Area Labor-Management Committee could look to some definite achievement. There had not been a single strike in the manufacturing community during the last year. Chautauqua Hardware had been reorganized and negotiated a new labor contract with wages directly tied to productivity increases. The Labor-Management Committee had been influential in dealing with the emerging energy crisis by negotiating additional allocations of gas for a couple of Jamestown plants which wanted to expand but were subject to certain restriction. Attention was being given

to these efforts by national publications such as Newsweek, in an article outlines "Closing the Productivity Gap" and the Wall Street Journal. The committee has served to give the manufacturing community a common purpose, and new levels of trust and understanding were beginning to be built.

Finally, the efforts of Mayor Lundine and leaders of the committee were successful, and a small federal grant became a reality. The Economic Development Administration allocated \$22,500 which was matched by \$7,500 in local funds to implement the policies and programs of the Labor-Management Committee. In June of 1973, Dr. James McDonnell was recruited to implement the policies and programs of the Labor-Management Committee. Almost simultaneously, the National Commission of Productivity agreed to fund a demonstration program whereby Dr. Eric L. Trist of the Management and Behavioral Science Center, Wharton School, University of Pennsylvania, could assist the Jamestown project in achieving its productivity objective.

1974 was a year of dramatic change in the Jamestown area. This was the first year that the Labor-Management Committee was actually fully in operation throughout the year. A program was developed to facilitate progressive change. One of the keys to this program for 1974 has been the in-plant committees. These labor-management committees were organized within individual plants and workers, as well as managers, were represented on these committees. The in-plant committees were designed to discuss any particular problem, outside of the direct collective bargaining issues, which were of interest to the Labor-Management Committee. Several of the programs of the Jamestown Area Labor-Management Committee have begun as a result of needs that were identified in the in-plant committees. These programs have included skills training programs, Quality of Work programs, middle management training programs, leadership training programs, annual meetings and conferences, as well as monthly meetings of the Labor-Management Committee with speakers to discuss topics of mutual interest. The most dramatic impact of the Labor-Management program, however, came from outside people. For the first time in at least fifty years, Jamestown attracted a major new industry to join it's

existing manufacturing companies. Cummins Engine, among the most progressive manufacturers in the world, decided to move into the one million square foot plant formerly the defunct Art Metal Corporation. This operation has a potential for 1500 employees. One of the major reasons for Cummins Engine locating in the Jamestown area was the community attitude toward progressive work systems and Quality of Work.

At the same time, less dramatic and equally important changes were taking place in many of the member companies. For instance, Blackstone Corporation announced a major multi-million dollar expansion program. Crawford Furniture enlarged it's operation. Many other companies were expanding employment opportunities. The twenty year slide in the number of jobs in the Jamestown industrial scene was finally reversed. There was an absolute increase in the number of persons employed in manufacturing. The unemployment rate had been reduced from 10% of the work force in March of 1972 to 4.2 % in September of 1974.

The program which was designed to achieve the broad productivity goal was a changing and flexible series of approaches based on input from in-plant committees, as well as the overall committee. Several components emerged that were of overriding importance. The most important of which are:

1. Quality of Work
2. Skill development
3. Leadership training
4. Improved labor relations

These elements of the Labor-Management Committee program were not the soul, but the most important aspects of the dramatic change which was occurring. They comprised the heart of the Jamestown experience. A total of ten plants have had in-plant activities. Individual projects have been started in the Quality of Work program, in labor relations, and productivity incentives are being worked out in two of the plants where these programs are taking place. Jamestown Quality of Work endeavors are designed to bring about higher levels of productivity and also increase satisfaction of the workers; both by redesigning the in-plant system and by improving the community system in which this work

takes place. The most advanced experiment in plant level change in the Jamestown area has taken place in Falconer Plate Glass Company with Bob Keidel, an associate of Dr. Trist, acting as advisor. This glass processing company has 250 employees and is in a highly competitive market. The program will result in reduced scrap, increased safety and a share of increased profits. Jim Schmatz, the Labor-Management Coordinator, is also working with several other companies including Jamestown Manufacturing Corporation to establish advanced Quality of Work projects.

Another of the programs which developed out of the in-plant labor-management committees is the skill development program of the Jamestown Area Labor-Management Committee. Rather than concentrating on the orientation of the unemployed, the program tended to focus on the upgrading of the skill base of those already employed. The first successful skill development program was conducted in 1974 for the wood industry. Six of the twelve furniture industries engaged in the manufacture of high quality wood furniture identified two key skills as sticker-molder and double enteronener. The in-plant committees recognized that the loss of these skills meant the loss of industry. On the basis of this need, a group of companies and union leaders formed as a task force, establishing a skill development program. Some of these dealt with the issue of seniority and aptitude. Others involved contractual barriers to effective training programs. Each problem has been solved by the task force that designed the program, working in cooperation with the in-plant labor-management committees.

The other skill development programs which are under way are in response to the changing technology impacting on the local industry. The next major program will be conducted in the fabricated metal industry, which is the largest single employer in the Jamestown area.

The educational requirements of a successful economic program have not been confined to the skill development area. The Jamestown Area Labor-Management Committee, through in-plant committees, has also identified the need to have management courses for first line supervision, communication courses for union stewards, and joint labor-management training opportunities

for contract administration and grievance processes. The New York State School of Industrial & Labor Relations has assisted the committee in meeting this need. Jamestown Community College is also involved, along with Federal Mediation & Conciliation Service. Specific courses are designed to either help the situation within the particular company, or and entire industry, or all of the different industries in the community.

In addition to the need to improve the Quality of Work and the training availability in the Jamestown Area, the Labor-Management Committee concluded that information on specific subjects would be conducive to establishing improved labor relations. Accordingly, the Labor-Management Committee holds dinner meetings, often with a specific speaker on a particular topic of interest. For example, William Kilberg, solicitor for the United States Department of Labor recently explained the safety requirements of OSHA. Dr. Phillip Ross of the University of Buffalo lectured on new developments in labor relations. Paul Yeager, regional director of the F.M.C.S. spoke to the groups on the new era of collective bargaining. These meetings give the committee members and their guests an opportunity to develop improved social relations, as well as to acquaint them with the specific trends in the labor relations field.

Several problems have been encountered from the beginning of the Jamestown Labor-Management project. One has been the repeated attempt of some interested residents to expand the activity of the committee beyond the industrial focus. One of the essential reasons for success in the program has been the rejection of the idea that it should broaden itself to solve labor relations and economic problems in unrelated areas. The in-plant committees, which are the core of the program, are also very fragile and are affected by numerous factors outside the scope of the program itself. Several times, the break up or elimination of a particular committee has been threatened by failure to communicate the real objective and the impact of the Labor-Management Committee. The understanding of the rank and file as to the need for collaboration is part of the process. To the extent that any labor leader that is involved in such a committee has difficulty with

rank and file resistance, the entire program is jeopardized.

Unique problems confronted by the committee involved the potential loss on important industries of the Jamestown area. The methods that have been used to approach and solve these problems are confidential; however, the technique has been to use the base of labor-management cooperation that is already present in the form of the Labor-Management Committee.

The Jamestown Area Labor-Management Committee represents companies totaling a work force of more than 11,000 men and women. The membership in the program has included 30 companies and 60 plants. Not only has the unemployment rate been reduced from an average of around 10 % at the commencement about three years ago to an average unemployment rate of about 5 % in recent months; but the absolute number of manufacturing jobs in the Jamestown area has increased significantly.

Productivity has increased in virtually every plant that has aggressively undertaken a new program. In Chautauqua Hardware Corporation, for example, the productivity per employee has increased by more than 80 % in the last two and a half years. The skills upgrading program just concluded with 162 graduates from 15 companies and has involved numerous others in planning, instruction and implementation. The wood furniture products skill development project graduated 22 representatives from six different plants in the fall of 1974.

During the last three years, every labor contract in the manufacturing companies in the Jamestown area has been negotiated. There have been only five minor strikes in this period with a total time loss of 41 days. In the three years prior to the establishment of the committee, there were eight strikes with a total time loss of 302 days.

Cummins Engine Company expansion in the Jamestown area is providing an excellent new opportunity in the largest manufacturing concern built in New York State since World War II. Blackstone Corporation has undertaken a major expansion program, and many other local manufacturers have expanded production capabilities.

The attitudes of labor and management is demonstrated by their

direct support and direct participation in the committee and are extremely positive. Over 1000 representatives have been, and continue to work in the program of the Labor-Management Committee. Every major unionized company and every union is represented and participating. Every possible community resource has been mobilized as never before and labor and management are cooperating to use these resources to their mutual benefit.

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April 9, 1975

Honorable Sam Nunn
and
Honorable Charles H. Percy
United States Senate
Washington, D. C. 20510

Dear Senators Nunn and Percy:

We understand that the Senate Government Operations Committee has been conducting hearings on Senate Bills S.765, the "National Center for Productivity and Work Quality," and S.937, the "National Productivity Act of 1975." In addition, we believe the Administration is submitting an additional bill on this same subject. We would like to submit these comments and recommendations on this legislation for the record.

Although, we have not had an opportunity to thoroughly analyze the contents and relative merits of each Bill, we are in favor of legislation continuing the activities of the present National Commission of Productivity and Work Quality as an independent agency, preferably referred to as a Center. We feel that legislation combining most of the basic purposes and functions defined in both bills, including the policies and programs of the present Commission and utilizing its present staff, at least, initially would be the most effective approach. It would permit building on the present experience and capabilities of the present Commission but provide for a fresh, new thrust.

There can be no question that a continuing national productivity policy and improvement effort is needed and that a continuity of the efforts of the present Commission is needed to fulfill the mission as articulated by the pending legislation. This policy and the work of the Commission should serve as a stimulus for concerted action by labor, management and government to develop and implement programs of productivity improvement.

Realizing the misunderstanding that many people have - labor and management - of the concept of productivity, it is understandable that an effort be made to emphasize the "quality of work life" by appending it to the name of the Commission. However, productivity concerns itself with all of our resources and many factors - capital, materials, technology, human resources, etc., emphasizing "quality of work life" at the expense of emphasizing the role that other factors play in productivity improvement will not solve the problem of clearing up misconceptions of both labor and management. It is important that a major emphasis be placed in the programs of the Center on the human factor and concerns of employees such as job satisfaction and job security. But encumbering the Commission with a very long name will not necessarily "sell" the importance of developing solutions to these problems as effectively as the overt actions of the Center will. We therefore recommend that the Commission be referred to, as simply, "National Center for Productivity."

This continuing effort, however, requires a longer authorization than one year. The present Commission has been working under an unnecessary handicap of one year or less since its establishment in 1970. Under these conditions it is difficult to attract and retain adequate staff and develop long lead time activities that productivity improvement requires. The Center should be granted a minimum authorization of three years, preferably five, to allow it a sufficient period of time to develop programs that will "stay in place."

In a Bill of this type, we realize it is difficult to more clearly define programs the Center should develop and implement. However, we would strongly recommend that certain programs of activity be called for in the resulting legislation and that it be emphasized that the Center, conduct itself more as a catalyst for action and as such encourage others in the public and private sectors - federal, state and local - to undertake as much of the necessary effort as possible to increase productivity and the quality of work life. The Center should be a national focal point to emphasize the importance of productivity improvement to our economy as a whole and to each of us as individuals.

The resulting Bill should strongly emphasize the need for and development of programs by the Center and others to increase public awareness to the importance of productivity to business, labor, the public - the national economy. It should call for programs of technical assistance to business, labor and government units on a national, regional and local level with the emphasis, however, on working with large segments of the economy such as industry groups, associations, international unions, etc., that afford "leverage" into the economy with a resulting multiplying effect.

In extending technical assistance, effort should be made to identify existing productivity improvement practices in the public and private sectors that can be documented and employed to reinforce the work of others. We would recommend a current policy that has as a goal, raising the level of performance of the public and private sectors to the existing "state-of-the-art" represented by these existing practices as opposed to extensive programs of research and development, at this time. However, some effort should be made towards developing a system of productivity measurement that goes beyond "output per manhour" which is at times both misleading and insufficient.

The Center should be responsible for conducting studies itself and by contracting with business and labor groups and institutions of higher education on specific problems, such as appropriate measurement systems. Contracted work should be done through contracts with very specific "end-points" as opposed to grant-in-aids which will require a relatively great amount of administrative effort for the Center of the size and resources being considered.

The Commission needs a strong well-organized, well staffed organization in Washington (a three to five year authorization and increased funding should help make this possible) to act as a national focal point for productivity improvement - the most effective use of our national resources of capital, technology, materials and manpower. As was stated above, the Center should be responsible for developing and implementing programs to achieve the objectives of increased productivity either through the use of their own staff members or through contracts with other organizations for specific "well-defined" tasks. However, the emphasis in working with contractors should be to identify, develop and replicate the existing "state-of-the-art" as opposed to "research and development."

In addition to the Washington staff activity, however, we would recommend that the legislation include an objective of establishing representative regional offices or centers in New York, Atlanta, Chicago, Dallas and San Francisco - the heavily populated centers of commerce and industry.

These regional offices, available to work with labor, business and government organizations on a local basis and structured somewhat similar to the present Commission's regional office in Chicago with a maximum staff of two or three, covering the Midwest, could continue to be housed in the Department of Labor for support and assistance. These offices, sensitive to the needs of the regions, can assist in implementing the programs of the national staff and would be in a position to recommend, based on their contacts with regional leadership and their sensitivity to the region, specific programs of regional, state and local activity.

Regional offices would be particularly valuable in working with state governments, state and local business and labor leadership, the universities and the media. In addition, they would be in a position and should be encouraged to work with the regional Federal Executive Boards, the Federal Regional Councils, regional agencies of the Department of Labor, the field offices of the Department of Commerce and the Federal Mediation and Conciliation Service.

The Center in Washington should develop and maintain an information center of modest proportion relative to its overall budget, with each regional office also acting as an information center. There is nothing more frustrating and more wasteful than to generate an interest in the "market place" and not be able to supply some information in response to specific inquiries. The regional offices would have a major role to play in this activity facilitating the accumulation and dissemination of information on a local basis.

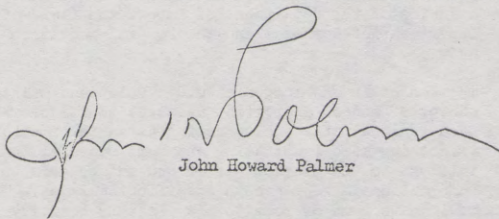
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We recommend that a program of regional offices begin slowly by drawing on the two and one-half years of experience of the Chicago office in developing a format and a role that a regional office can play in support of the national effort. This regional program should have as its objective the establishment of five offices over the period of authorization of the Center, with a possible goal of two regional offices in addition to Chicago by the end of the first year and the fourth and fifth offices by the end of the second year of authorization. In addition, appropriate coordination and support should be assured through adequate staffing and support in the Washington office.

Senators Nunn and Percy thank you for this opportunity to submit these views for the record. We have discussed this matter with many industrial people. We believe this reflects the opinions of 1500 companies we represent - among these, 65% fall within the top 500 corporations in the United States.

My best wishes,

PALMER/PAULSON ASSOCIATES, INC.

A handwritten signature in dark ink, appearing to read "John Howard Palmer". The signature is fluid and cursive, with a large, stylized initial "J" and "P".

John Howard Palmer

JHP:MCJ



U.S. DEPARTMENT OF COMMERCE
National Bureau of Standards
Washington, D.C. 20234

OFFICE OF THE DIRECTOR

MAY 0 2 1975

Honorable Abraham Ribicoff
Chairman, Senate Committee on
Government Operations
United States Senate
Washington, D. C. 20510

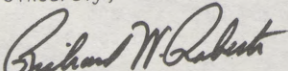
Dear Mr. Chairman:

The Department of Commerce has expressed its strong support for efforts to improve national productivity. The National Bureau of Standards has many technical programs directed toward productivity improvement. The entire concept of NBS is based on standards and measurement science as a means to improve the efficiency of Government and industry. Standards, information services, measurement techniques and standard reference materials for instrument calibration all result in increased output for a given level of labor, energy, and materials inputs.

As an example of the effectiveness of our efforts in this area, the program of our Institute for Computer Sciences and Technology, under the direction of Dr. Ruth M. Davis, is particularly relevant to the goals of the Productivity Bills under consideration by your Committee. Accordingly, I am enclosing a statement which we would like to insert in the Record of your March 1975 Hearings on National Productivity. The statement gives some specific past accomplishments of this program and illustrates well NBS' current efforts to improve productivity and the quality of the working environment in both public services and manufacturing industries.

Thank you for your consideration.

Sincerely,


Richard W. Roberts
Director

Enclosure

NBS CONTRIBUTIONS TO IMPROVEMENT OF NATIONAL PRODUCTIVITY
--WITH SPECIFIC EXAMPLES ON USE OF COMPUTER TECHNOLOGY

INTRODUCTORY COMMENTS

The National Bureau of Standards has been active in improving productivity and the quality of products and services through a number of its programs. In U. S. industry, mass production has been facilitated by NBS services--standards, calibrations and improvements to measurement methodology. In public service sectors, the Law Enforcement Standards Laboratory and the Center for Fire Research at NBS have made numerous contributions. Other programs could be cited; but in this statement, attention is focused on recent accomplishments in computer science and technology programs.

There is a consensus that computer technology has been a major technological contributor to improved productivity in government, public and private services. This improved productivity has been accomplished with minimal displacement of service labor forces: since productivity improvements via computers and automation have generally been coupled to the equally important objective of improved service quality, the principal impact of this technology on service labor forces has been replacement into more satisfying or rewarding jobs.

The negativism surrounding automation, a proven technological means for improving productivity and quality, can be and should be dispersed through documented findings, experiences and surveys. NBS along with other organizations in the private and public sector have been actively attempting to gain the potential of automation by dispelling the needless fears of labor and society concerning its deleterious impacts on their lives and jobs.

NBS ACCOMPLISHMENTS

Productivity and high quality products and services have always been two principal objectives of computer technology and the technologies of automation. In the last five years these two objectives have also come close to being national goals. Low productivity and poor quality in products and services are certainly national concerns today.

The NBS computer and automation technology programs within their areas of responsibility have been aimed at the high impact points for increasing productivity and improving the quality of products and services. Some examples of these high impact thrusts are:

1. Large-scale Automated Record Keeping Systems

Expediting the use of computers and automated systems to perform jobs that people find tedious, boring or repetitive and thus do poorly with resultant low quality and productivity. Examples

of such jobs are large record-keeping systems such as payroll, Social Security and MEDICARE. The development of software validation routines, standard character codes and performance measurement tools by NBS has made possible increased efficiency in Federal applications of automated record-keeping systems.

2. Automation in the Retail Merchandise Area

NBS in 1971 responded to a request made to the Secretary of Commerce by the National Retail Merchants Association (NRMA) for cooperative assistance in introducing automation into the point-of-sale activities in retail merchandising, merchandise labelling and inventory control. The NRMA's objective in this instance was to increase productivity, improve quality of service and return to consumers some of the resultant decrease in costs. NBS' actions from 1971-1974 have had significant impacts in a) the introduction of advanced automated reading equipment into point-of-sales activities, b) the development of labelling standards which do not discriminate against any segment of business or advances in R&D, and c) reducing non-productive costly marketing by equipment suppliers via better definition of requirements by the merchandise retailers. NBS' actions have, in both its and NRMA's views, been essential to the resultant or potential improvements in productivity and service quality.

3. Conference on Automation Technology Applied to Public Service

The Institute for Computer Sciences and Technology hosted a conference at NBS in May 1974 on Automation Technology Applied to Public Service. Co-sponsored by NBS, the National Science Foundation, The Urban Institute, and the General Accounting Office, the conference highlighted specific applications of automation to Urban Public Service Operations; Occupational Welfare; Aids for the Handicapped; Recovery of Ocean Resources for Public Benefit; Recovery of Underground Resources for Public Benefit; and Transportation. Speakers agreed that automation could raise our standard of living and improve public service, and Labor representatives argued that possible negative impacts could be lessened or avoided by managing the rate of application of automation and using collective bargaining, which is an institutional mechanism for resolving conflict. The keynote speaker, Mr. Thomas Morris, Assistant Comptroller General, GAO, highlighted the use of automation to enhance productivity in government and the importance of improving the efficiency of Federal, State and local government operations in an environment of increasing demands for public services and increasing resistance to further taxes.

4. Productivity Conferences

NBS initiated a continuing series of conferences on productivity in the service sector in August 1973 with the Conference on Making Service Industries more Productive through Computers and Automation.

This Conference was held at New England College, Henniker, New Hampshire and was co-sponsored with NBS by the Engineering Foundation. The second conference, on Productivity Improvement in the Service Sector through Information Transaction Technology, was held at Franklin Pierce College at Rindge, New Hampshire on July 28-August 2, 1974. The second conference was co-sponsored with NBS by the Engineering Foundation, the National Commission on Productivity, the National Science Foundation, and the Office of Telecommunications of the Department of Commerce. The conferences drew 142 representatives of private and public service organizations, the computer and communication industries, academia and the Federal government. In multiple workshops, participants discussed technical, economic, and institutional factors that influence the diffusion and transfer of innovative applications of computers, automation, and networks for increasing productivity and improving the quality of public services. These conferences will continue in an effort to provide a National forum for consideration of policy issues in increasing service sector productivity.

5. Robot Systems for Performing Dangerous Jobs

NBS has assisted other government agencies with specific applications of automation technology to improve productivity and remove man from hazardous public service tasks. For example, NBS developed for the Navy a remote control robot system to be used in place of men in handling explosive ordnance. NBS built a low cost mobile robot system from commercially available components that is an order of magnitude less expensive than comparable manipulator systems that have been developed for other application. The design and performance specifications developed by NBS will save the Navy over \$3 million in proposed competitive procurements. More importantly, it allows dangerous jobs to be performed with no danger to people.

6. Information Services to Promote Diffusion of Automation

In FY 1974, NBS assisted the Numerical Control Society (NCS) in establishing an experiment to promote the diffusion of automation technology by improving the market for this technology through a regional information service on available manufacturing capacity. The Numerical Control Society received a grant from the Economic Development Administration, Department of Commerce, with matching funds from the First National Bank of Boston, to establish this information service on an experimental basis in the New England Region. The experiment is continuing with a grant from the New England Regional Commission directly to Bolt, Beranek and Newman. By improving communication between the product industries and the supplier industries, the utilization of existing productive capacity should be improved, and these industries should be better able to justify and afford new automation equipment, such as numerical-controlled machine tools. This will provide an

improved market for the machine tool and other primary process machinery industries, and will "pull" new process technology into application. NBS helped develop the concept, assisted NCS in advising the project personnel at Bolt, Beranek and Newman, and is monitoring results to assess transferability of the technique to other regions of the country and to other fragmented industries asking for such assistance.

7. Automation for Hazardous Environments

There are many public service tasks that are hazardous for men to perform directly and hence are performed poorly, slowly, and expensively because of the requirements for protection of the men involved. For example, handling radioactive material requires remote control manipulators that are up to 100 times slower at manipulative tasks than a man working directly with his hands. NBS is advising the Oak Ridge National Laboratory on the addition of sensors and computer controls to these remote control manipulators to increase productivity in reprocessing nuclear reactor fuel while still protecting men from exposure to the radioactive environment. Other hazardous tasks are undersea and underground energy and material resource development. NBS personnel have participated in rapid tunneling and mining demonstrations and have completed initial studies on applying automation in the deep ocean.



NUMERICAL CONTROL SOCIETY

524 ST. CLAIR AVENUE • P.O. BOX 138 • SPRING LAKE, NEW JERSEY 07762

April 9, 1975

The Honorable Senator Charles Percy
219 S. Dearborn
Chicago, Illinois 60604

My Dear Senator:

For the past several months the Numerical Control Society (NCS) has been following the developments related to the productivity bills which you and Senator Nunn have been sponsoring.

The Numerical Control Society is a professional technical organization which is devoted exclusively to numerical control and computer aided manufacturing. These technologies incorporate opportunities for quantum increases in productivity in manufacturing - especially those industries utilizing metalworking machine tools to produce discrete metal parts on a "job-shop" basis. The computer capability to improve our manufacturing productivity currently exists. It remains for us to properly develop and apply what exists to achieve these productivity improvements.

The enclosed literature describes NCS in greater detail and outlines the program for our Annual Meeting and Technical Conference which will be held in Washington, D. C., May 18 - 21. You and/or members of your staff are cordially invited to attend as guests of NCS.

On March 21st, I attended the Committee on Government Operations Productivity Hearings which you and Senator Nunn conducted. Unfortunately, you had to leave rather hurriedly to answer a series of roll call votes in the Senate on urgent tax legislation. Had this not happened, I would have introduced myself and made arrangements to provide you with NCS's comments on the productivity bills.

In view of the above and your statement as the hearings adjourned that the record would remain open for three weeks, I am submitting these comments for that record.

NCS is most pleased that you - with your industrial background - are providing the leadership to give the subject of productivity its proper emphasis. Whatever assistance you feel that you need to help bring this legislation into being or assist the center in implementing its objectives once it has been established, please do not hesitate to call on NCS.

Senator Percy

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April 9, 1975

My comments are divided into three (3) areas:

1. The hearings on March 21st
2. General observations on S765
3. Specific observations on S765

The March 21st Hearings

1. Both you and Senator Nunn asked questions on how the projects initiated by the center could receive financial support from the private sector. I have had specific experience related to programs which have involved joint government and industry support. These programs resulted in advanced technological developments to improve the competitive position of U. S. industry in the world market. I would be happy to contribute information relative to the operation of these programs whenever it is needed.
2. Mr. Vastine asked Mr. Staats if the center should be a strong one. Mr. Staats replied affirmatively - a view that NCS heartily supports. If the center is simply an advisory group which does not produce hard demonstrable results (as opposed to paper studies) it will fail to gain industrial support.
3. You remarked that it is vital to emphasize the impact of productivity improvements on worker attitude. I feel this is a key concept and one which is greatly under-appreciated. Experience has proven that sound new technology will not be implemented successfully - without worker confidence and support.

General Observations on S765

1. It is imperative that the center devote equal emphasis to projects designed to improve technology as well as projects which focus on the utilization of human resources and the quality of working life. To permit the dominance of one category over the other would amount to a failure to recognize the mutual interdependence of these two factors.

Although the effort (reflected by attitude) which workers apply to the production process can improve the productivity of the process, it cannot improve productivity - of and by itself - to the same extent as can technology improvements. But technology improvements cannot be properly implemented without the proper workforce attitude.

2. Therefore, it is important to understand the relationship between technology improvements and the quality of working life. Technology represents the method by which productivity can be improved. The quality of working life represents the environment which can foster productivity improvement.

A "sound" technological idea will fail to improve productivity in a hostile environment when it adversely affects the quality of working life.

3. There is a strong need to encourage demonstration programs where individuals and organizations can physically observe implemented technology. Such demonstration projects lead to the diffusion of successful technology designed to improve productivity throughout industry. It is far more effective in promoting the adoption of a technique to let it be observed in operation than to describe it in a research paper. We cannot afford merely to describe concepts. We must tangibly demonstrate successful implementations.
4. Government funding is essential in "high risk" areas. With few exceptions machine tool builders are not huge corporations that can afford big investments in research and development where the outcome is not guaranteed. In research and development not all projects are successful. A failure could jeopardize the life of the company.

A dramatic example which illustrates this point relates to the development of numerical control itself. The development would never have been possible without U. S. Air Force Sponsorship. No single machine tool builder could have afforded to assume the risk of the research project being a failure. Without this technology our machine tool industry would be unable to compete internationally and our aircraft industry would not be in a position to supply a technologically superior product in the world market.

Senator Percy

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April 9, 1975

Specific Observations on S765

1. Section 101 (7) - The point should be made in this section dealing with the need to preserve employment security that it is necessary to anticipate the impact of a productivity improvement on the quality of working life and provide for those who will be technologically displaced rather than react to the situation after it occurs.
2. Section 101 (13) - Experimentation in joint labor-management efforts at work and organizational redesign must be properly designed so that results may be adequately evaluated and compared. Sometimes too little attention is given to this aspect prior to conducting an experiment. This can result in not being able to substantiate the principal hypothesis of the experiment.
3. Section 203 (a) - The director should have balance. It is important that he be the type of person who will not pursue technology at the expense of the quality of working life or vice-versa.
4. Section 205 - The participation and expert contribution of technical and professional societies should be solicited.

The above comments are offered with the view of helping you to produce a bill which will maximize our ability to improve our national productivity. My duties take me to many sections of Europe and Asia on a variety of assignments - all related to computer aided manufacturing. At first hand I have observed the competition we face. I firmly believe that a bill such as yours is necessary to stimulate our productivity growth if our country is to maintain an internationally competitive position with respect to manufacturing.

Again, on behalf of NCS, I would appreciate the opportunity of discussing the points made above more fully with you or your staff at your convenience. I shall be in Japan for the next few weeks visiting the Japan Productivity Center, among other locations. I plan to return to the United States at the end of April.

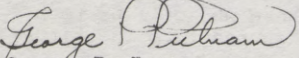
Senator Percy

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April 9, 1975

My business address is 10 W. 35 St., Chicago, Illinois, 60616
(312/225-9630) but I frequently travel to Washington, D. C.
Either location would be agreeable to me.

Respectfully yours,



George P. Putnam
Technical Vice President

GPP/em
Enc.

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