

**IMPROVING MANAGEMENT
FOR MORE EFFECTIVE GOVERNMENT**

UNITED STATES
GENERAL ACCOUNTING OFFICE

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**50TH
ANNIVERSARY LECTURES
OF THE
UNITED STATES
GENERAL ACCOUNTING OFFICE
1921 - 1971**

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Foreword

The year 1971 marked the 50th anniversary of the creation of the United States General Accounting Office. Established by the Budget and Accounting Act, 1921, the new office was empowered to perform numerous functions to strengthen the financial system of the Federal Government.

In recognition of its first 50 years of operation as an agency in the legislative branch of the Government and of the broadening scope of its operations, a series of lectures for the GAO professional staff was held throughout 1971. These lectures were delivered by recognized leaders from many fields, including government, industry, education, economics, law, accounting, and the press. The underlying theme of these lectures was "Improving Management for More Effective Government," a theme of great importance to the General Accounting Office with its ever-expanding concern with evaluating and improving Government operations.

The most significant part of our responsibility for financial management surveillance throughout the Federal Government is the audit of agency management activities. We devote the largest part of our professional staff time and energy to this vast area of responsibility. Our primary objective is to provide through this work useful information for the Congress in carrying out its legislative and oversight responsibilities and for agency management officials, all to the end of more efficient, more economical, and more effective Government operations.

Basic to our system of operation is the availability to our professional staffs of the most current and independent thought on management concepts, systems, and controls, as well as the evaluation of program results. Increasingly, in recent years we have sought assistance from other parts of government and from industry and the academic community in expanding our capabilities. To further this end, this series of 50th anniversary lectures was held, and the compilation of the lectures in book form is intended to preserve for continuing future use and study the excellent presentations that were made.

This book also includes an article that describes the important role played by the Institute for Government Research, a predecessor of the Brookings Institution, in the evolution of the Budget and Accounting Act, 1921. In the 50 years that have gone by, recollections about this role have faded. We are indebted to the Brookings Institution for preparing a paper for inclusion in this book to fill this historical information gap.



Comptroller General
of the United States

House Concurrent Resolution 309

Whereas June 10, 1971, marks the fiftieth anniversary of the signing of the Budget and Accounting Act, 1921, and

Whereas such Act provided for the creation of the General Accounting Office, under the control and direction of the Comptroller General of the United States, as an establishment independent of the executive branch responsible to the Congress, and

Whereas during the fifty years since its establishment the General Accounting Office has contributed significantly to the development of improved management in the Federal Government and has been of valuable assistance to the Congress with respect to determining the manner in which the Federal departments and agencies have carried out the mandate and the intent of legislation governing their activities: Now, therefore, be it

Resolved by the House of Representatives (the Senate concurring), That the Congress of the United States extends its congratulations to the former and present officers and employees of the General Accounting Office on the occasion of the fiftieth anniversary of that Office; and be it further

Resolved, That as it is fitting and proper to commemorate the fifty-year history of the General Accounting Office, the month of June 1971 is designated for ceremonies appropriate to such commemoration.



The Comptroller General, Elmer B. Staats, opens the first session of GAO's 50th anniversary proceedings on June 11, 1971, at the West Auditorium, New State Department Building, Washington, D.C. Seated on the platform are the Deputy Comptroller General, Robert F. Keller; the first speaker, George P. Shultz, Director, Office of Management and Budget; and GAO division directors and regional managers.



Leadoff speaker at the June 11 50th anniversary proceedings, George P. Shultz, Director, Office of Management and Budget.



Other speakers at the 50th anniversary proceedings on June 11 at the West Auditorium, New State Department Building. From the left: Dr. Robert C. Weaver, Professor of Economics, City University of New York; Elmer B. Staats, Comptroller General; Russell E. Train, Chairman, Council on Environmental Quality; and Robert F. Keller, Deputy Comptroller General.



A portion of the audience listening to the anniversary lectures given in the West Auditorium, New State Department Building, June 11.

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George P. Shultz
Director, Office of
Management and Budget

George Shultz was sworn in as the Secretary of Labor in President Nixon's Cabinet on January 22, 1969. A year and a half later, on June 10, 1970, President Nixon selected Mr. Shultz to become the first Director of the newly created Office of Management and Budget.

Mr. Shultz has served in many advisory capacities for governments and labor and management organizations in the United States and abroad. He has had experience as an arbitrator and mediator and has authored or edited many books and articles in his professional field.

He received a B.A. degree (cum laude) in economics from Princeton University in 1942 and a Ph.D. degree in industrial economics from the Massachusetts Institute of Technology in 1949.

From 1948-57 Mr. Shultz taught economics at M.I.T. He was Professor of Industrial Relations, University of Chicago Graduate School of Business, from 1957-68, and Dean of the Graduate School of Business, University of Chicago, from 1962-68.

Views on Improving Management for More Effective Government

Over the years, the General Accounting Office and the Bureau of the Budget (now the Office of Management and Budget), both created by the Budget and Accounting Act of 1921, have worked closely together, in many ways, to improve financial management in the Federal Government. Along with the Treasury Department, the two agencies were directed by law in 1950 to conduct the continuous activity now known as the Joint Financial Management Improvement Program. Mr. Shultz, Director of the Office of Management and Budget, reviews some of the traditions of his office that contribute to better management in the Government. He observes that if the Office of Management and Budget and the General Accounting Office are to do their jobs, it will be to a considerable extent because they have people who are able and motivated to get into the day-to-day work of making the Government work better.

I consider it a great honor and privilege to appear here on the occasion of the 50th anniversary of this landmark legislation. A possible theme here today would be "50 years of tradition." A number of fine traditions and a lot of good old things are part of the 50 years of operating under the Budget and Accounting Act of 1921. We have all of this to draw on, but there is still room for the new and renewed. Perhaps last year's plan, from the Office of Management and Budget (OMB) standpoint, is emphasizing that. We have new tasks and new ideas and we want, as the President has said, to help make Government work better.

Consequently, my visit with you here will be by way of emphasizing some of the management aspects of our new organization and some of the problems it faces.

Some Traditions

First, let me mention some things that seem to me to be in the Budget Bureau tradition, but which are, at the same time, fresh and ever-new and useful when looking at our responsibilities from the management standpoint.

The first, of course, is the budget as a process. I don't mean the budget total, but our use of the processes involved in the budget cycle as strong tools for management and for implementing things that the President wants implemented in the various departments and agencies. In short, we shall continue to use the budget process as a tool for understanding the total Federal enterprise and for thinking about priorities.

We need to improve the budget process so that we keep clear the relationship of the parts and the whole. We have

to concentrate on individual parts—how they are working, what we think of them, whether they should be larger or smaller—but at the same time it's impossible to be constructive unless we can see how these parts fit into the overall picture. It's hard to juggle things back and forth, but that's an essential ingredient. So, of course, is a constant effort to relate the whole to overall economic policy.

The second Budget Bureau tradition—and this is a very important old tradition—is the need to give attention to detail and to followup. One of the natural attributes of a political capital is essentially that—politics. The emphasis is on the things that have the most political visibility, that make the most news. For example, a tremendous amount of work can be done, with lots of compromising and arguing, before a program is first produced and announced. Everybody sort of takes a deep breath and says, "Well that's over."

It is not over. The detailed work is just beginning. If new legislation is involved, the Congress must act. Hearings will take place, then floor debate and conference—all requiring unremitting attention to detail. Finally a bill is passed and comes to the White House for signing. Everybody shakes hands with everybody else and often gets a new pen. There are deep sighs of relief and the feeling, "Well that's done." It's over and all of the flashbulbs have gone off. There's no more mileage to be gained.

Of course, we all know that when all of the flashbulbs have gone off a second kind of work starts, but a different kind of work. It's the kind of work that calls for detailed followup—the essentially nonpolitical (in the partisan sense) chores involved in making the program work. I think that's where the "Good

Gray OMB" and the GAO come in. We share an obligation for attention to detail and followup, for trying to make things work. This is the second tradition—an old role but fresh and ever-new and useful.

The third element of tradition that seems important to recognize and accept is the role of the whipping boy. The Budget Bureau has always been that and I can see that the OMB is that, too.

When I first came into this job I remember that a proposal came along for a new program. We looked it over and agreed on the program but we didn't think the agency was being ambitious enough to do the job right. As a result of our efforts—I'm not putting this forward as a typical case, believe me—the agency expanded its concept of the program and its estimate of resources required. The next thing we knew, the agency head was down in Congress and when somebody criticized the program for not being big enough, lo and behold, he said, "Well, it would have been a lot bigger if I'd had my way, but the OMB wouldn't let me do it." To be whipping boy in this case was clearly more painful than when we have had to be "no" man and are criticized for "negativism" and arrogant disregard of the will of Congress.

We recognize that that is one of our roles. It is an important role and somebody has to be willing to play it. In a political capital not very many are willing. That's one of our burdens and we mustn't shirk it; we must stand up to it.

When my appointment to OMB was announced, Bob Mayo, my predecessor, took me through his office and pointed out the pictures of past Directors of the Bureau on the wall. He said, "These pictures cover the last 22 years of the Budget Bureau. You can count up the pictures"—there were 11—and he said

"There's a message there." I think it has to do with this "no" man role. If you play it right—if you're willing to be unpopular—it's not good for longevity.

Terminal Facilities Needed for Government Activities

The fourth thing I shall mention is more a persistent problem than a traditional activity of the Bureau. This is a more overwhelming need in Government to have terminal facilities on activities or programs. It seems to be practically impossible to stop something once Government starts it. No matter how bad it is, it just keeps going. The only question is whether it should be bigger, but never whether or not it should just be eliminated. I think this is a problem that has been around for a long while and it certainly needs our continuing attention.

I was amazed the other day when I picked up the papers. I had gradually become quite a fan of a product called Corfam. I have a pair of golf shoes that I've been wearing for quite a while that seem to be very good. I picked up the newspaper and encountered a story about how the DuPont Company has stopped the manufacture of Corfam. They've given up because it isn't profitable. At first I was astounded and disappointed because I said, "Where am I going to get another pair of shoes like this?" Then I began to reflect, "Well, isn't that wonderful? Somebody has terminal facilities on a program that apparently people aren't willing to pay enough to sustain."

I'm sure that if we in the Federal Government had been in the business of making Corfam, nothing could stop us. This is a real problem. I don't know how to do it, but somehow or other we have to figure out how to stop marginal

things that we do. I suppose the real message is that when you are in the stage of formulating new policies and programs there ought to be a terrific burden of proof on starting anything new because once it's started, it'll never stop. I have learned that we can count on help from the GAO in this regard. You are willing to make critical and constructive comments about programs that have outlived their purpose.

Expanded Role of OMB

Now let me turn to a different kind of a subject that has to do with management and budget. We have a new charter. We have a new label. The word "management" has been added to the word "budget." I'm going to talk about what that means within our own organization and what it may mean for people we are working with.

Management has a set of organized units and responsibilities and things that it wants to do. Some of these are new and some are traditional, in the same sense that some budgetary process functions are traditional. I think, however, that even the traditional ones are being strengthened in significant ways. We find we are concerning ourselves much more than we used to in the Budget Bureau days about things like executive development, personnel systems, labor relations, management structures, management information systems, and other things of this kind. If we really think that making the Government work better is important, then we know that a chief way to do this is through a continuing improvement in the quality, training, and motivation of the people who are working for the Government and the provision of better management tools with which to do that work. These have to be identified as key elements in our management work.

Second, we're putting a great deal of emphasis and have an organized set of responsibilities in the area of program coordination. Seemingly, most problems and initiatives involve many departments and agencies. The question is, "How does the Government coordinate all these things?" We've been trying to play a more effective role in doing this.

The President's reorganization proposals for realigning units of Government into four domestic departments with internally consistent missions will help us with this coordination problem. It will mean that much more can be done within each department. Each Secretary will have within his span of control a greater number, and perhaps all, of the relevant programs and resources that need to be coordinated. In that sense the OMB and other Executive Office units will have to do less of it and we welcome that. I think that's one of the good reasons why reorganization is called for.

The reorganization legislation and reorganization plans of the President do not relieve the OMB from going forward in other ways. We are moving forward in the area of management information systems and statistical policy. We shall continue, of course, the traditional legislative reference work which has been a revelation to me. From the department standpoint, I knew that this was done in the Budget Bureau and more or less how, but to see the legislative reference operation as a management tool in the policy formulation process is another matter. I have to take my hat off to the way it operates today and to all of those who have had a key part in developing it and making the organization as good as it is.

We have charted a new course for our own evaluation work, some of which is not too different from the investigation

and evaluation work of the GAO. It is not formally located on the management side of OMB, but is kind of a swing element now associated with the budget side of our office. We think that application of microeconomic thinking to the budget process is constructive and important in trying to get a sense of program workability.

Organizational Tension

The addition of institutional management responsibilities has created our own special kind of internal organizational tension. I say that as one who believes that if there is no tension, there is no action. I don't identify tension as something bad. I'm not saying we need too much of it, but on the other hand the fact that the introduction of the management function has brought a tension to the organization is both apparent and good.

Our new management responsibility does not really embrace a separate set of functions. In fact, as soon as we start working on almost any undertaking, the first thing we find out is that the budget side of our organization and the management side have to be closely linked and coupled. The program divisions have the necessary knowledge of the programs of the departments and the agencies and how they work. The management divisions provide the crosscut on how one can be related to or differentiated from another. Together they make an effective and comprehensive process through which we can make contact with the whole governmental enterprise and try to get something accomplished.

What all of these things mean is that people in our program divisions either have to reallocate their time, or they have to have some additional people to take on some of these tasks. In either event, we get tension. If it weren't hap-

pening, I would say that our "M" side of the house was not really pushing hard. It is happening and it's good on the whole.

Need for Better Program Management

Increasingly, I think the combined management and budget analysis approach is going to be more and more necessary. The gigantic buildup of the budget is obviously outrunning the willingness of people to cough up the money. "Fiscal Overkill" is not an acceptable answer to today's problems.

Better management of programs has to be the answer to the people's demands for more service from the Government. This fact alone means that the change in our organization gives us new opportunities. It pushes us to look at the budget process in what you might call nondollar priorities as well as dollar priorities. It forces attention to the impact of the functional skill that the management side of the house brings to the problems. I suppose, in a different sense, in a subtle way, it lengthens the attention span that the organization can give to some designated issues by forcing them into the process in a more pervasive and constant way.

By way of emphasis, let me reiterate three attributes of the work we are doing in our "M" and "B" roles.

Involvement in Special Projects

First of all, we seem to be getting involved in a fairly massive way in all sorts of special projects. Many of these involve following up on Presidential initiative or on the passage of a piece of legislation, or trying to get a newly passed piece of legislation started in a way that's going to be workable. For example, when the President decided that he wanted to go forward with the broad reorganization

that has now been put before the Congress, the implementation—the drawing up of the bills, the backup work, and the details of getting this broad Presidential decision out—fell as a special project to the OMB. This took a tremendous amount of effort just as the budget process and all of the work involved in that was coming to an end.

Of course, we welcome this sort of thing, because it gives us an opportunity to put managerial thinking as well as cost thinking into the policy process. Here we find ourselves helping fill out Presidential initiative, helping departments and agencies develop a system for results, trying to figure out ways to set goals, developing organizational arrangements that will implement the goals, setting interim targets, and finding ways of checking on whether we're getting to those targets or not. These are standard management tools, and we're trying to bring them more into operation in Government programs.

Institution Building

A second attribute of our work to which we've been giving a strong push in the last year is what you might call institution building on a wide variety of fronts. For example, there is the whole business of better information systems about the budget and what's happening to it, through better access to data using the best of modern information technology. We are doing the same thing with respect to legislation and what's happening to it.

In the area of institution building, we are also much concerned with lines of authority and responsibility—not only within the Washington level of the Federal Government, but especially out in the field. How are the lines of responsibility and authority to be set up and how can we clarify them? How can we apply

the principle of trying to find somebody, someplace, to whom we can say, "All right, you're in charge, and you're responsible. If it doesn't work, you're accountable. If it does work, you get the slap on the back"?

We must try to get greater clarity into that whole picture. This involves a lot of difficult work. Some people who shouldn't have it want authority and responsibility; others who should, shirk it and prefer a much more ambiguous situation so that if something doesn't go right, one really can never know who is responsible. There's a lot of struggle about this, but at any rate, it is all along the line of what I think we might call institution building in a greater variety of ways—all directed toward the objective of making Government work better.

"Coping"

Finally, I would identify one of my favorite managerial subjects—"coping." I don't really know yet whether I'm on to something important here or whether I just sort of like the idea. I think if you will review your own work days, you will agree with me that you spend a disproportionate amount of your time coping with what seems to be an endless stream of problems and mini-crises of all sorts. You have to do something about them: you cope and decide to do this, that, or the other thing in order to rearrange the situation and solve the problem. Well, I think that this is one of the most important managerial tasks that we have. We must think about it carefully and organize ourselves for it.

The great temptation is to solve today's problems today on their own terms and let it go at that. I suppose that's mostly what we do. Problems arise which interrupt a train of thought or action. We resent them and try to brush them off or simply pacify the situation as best

we can. I think that's what most people do when they cope on an *ad hoc* basis, but it seems to me we can do a lot better.

I had a colleague at the University of Chicago who wrote a very interesting article—I think the title was "Top Management Doesn't Make Policy Decisions." The general thesis was that the stereotype of the big businessman, sitting behind his desk with a cigar, cracking off a big policy decision every other day is all wrong. The way in which policy really gets made, the way in which an organization changes directions is really through a host of operating decisions that get made day by day. Any one decision in itself doesn't seem to have much magnitude, but over a period of 6 or 8 months they add up to a sense of direction, a tone, a push in the organization. The effective top manager has his eye on these operating decisions and is trying to implement them in a way that moves in the direction of the strategic objective he is seeking.

It seems to me that the notion of trying to cope not simply *ad hoc* (although there has to be a lot of *ad hoc* efforts in any problem-solving process), but rather, in terms of a long-term strategy that you're trying to implement, is very important. I think that coping and organizing ourselves for it is extremely important. Our program coordination division is getting extremely good at taking problems that arise, grappling with their various dimensions, trying to relate them to ongoing policy matters, and getting the crisis handled in a manner that helps to support the President in terms of his general strategy.

OMB—A Renewed Organization

That is my overall message. As you can see, I find myself in the position of a person who has inherited the obligations and opportunities established 50 years

ago by the Budget and Accounting Act, a person who has inherited fine traditions—not the least of which is the tradition of attracting first-class people into our enterprise. If we in OMB are to do our job—and if you in the GAO are to do your job—it will be to a considerable extent because we've managed to get into these organizations people who have the ability and the motivation to get into the day-to-day work of making Government work better.

I am grateful for what I have inherited and of course also for the chance to take part, at least in the early stages of the second 50 years of the implementation of this act with a renewed—I won't say new—organization. The Office of Management and Budget is a renewed organization that will build on its traditions in meeting its new responsibilities and possibilities for achievement.

We recognize the stresses and strains that this effort brings within the organization and to our relationship with others outside. We accept that tension as an index of some effectiveness. If there weren't tensions, we would not be doing our job, which is to serve as an arm and an aid to the President, whoever he may be. If we can assist the President in the policymaking process and in making the programs that the President has put forward and the programs that the Congress has enacted work as effectively as possible for the American people, we shall have fulfilled the trust placed in us.

Discussion

The administration and coordination of the many categorical grant programs is one of the most troublesome management problems in the Federal Government. Is it intended that action to consolidate these programs will be taken, possibly in conjunction with the imple-

mentation of the proposed departmental reorganization?

Mr. Shultz: I agree completely with what I believe is the implication of the question—that the proliferation of categorical programs reduces their net effectiveness because of overlaps and conflicts. They represent a distribution decided at the national level that doesn't necessarily fit each locality. Localities differ as to their particular needs.

There have been now for some period of time programs of grant consolidation. We have been working on them very hard and have made some progress. Although they haven't answered all the problems, they have improved matters. In terms of administrative machinery, there have been efforts to establish common boundaries for the domestic departments and, to the extent we can, have the same city be the headquarters for related departmental functions. This means that anybody wanting to work with the Federal Government can go to a single city and see all the relevant people involved.

You mentioned the broader reorganization proposals of the President. These should be very helpful because they group related programs within the same department and give each Secretary the managerial authority and responsibility to look critically at the relationships between programs as he administers them.

Finally, I should stress the revenue sharing proposals made by the President. The special revenue sharing proposals in the areas of education and manpower and transportation and urban development and rural development and justice are explicitly for the purpose of putting a large number of categorical programs more or less into one bin. Under those proposals, Congress sets priorities for the area and sets an

amount of money that can be spent, but the people in the State or local area are given discretion as to the distribution of that money among what might be called the implicit constituent categorical programs. Thus, they can fit the use of the money to the needs of their own locality and, therefore, make much more effective use of the money.

The President's departmental reorganization program contemplates strengthening the staff function in the office of each departmental Secretary and delegating more authority and decision-making to the field offices. Couldn't this be done under the present departmental structure?

Mr. Shultz: I think the answer is yes and more is being done, but there are definite limits under the present arrangement. For example, the Secretary of Labor in trying to administer the Work Incentive Program doesn't have all the related actions within his span of control—neither does the Secretary of Health, Education, and Welfare (HEW)—neither does the Director of the Office of Economic Opportunity—so they can't very well coordinate in the field unless somehow they can get the program pieces together in a single framework. The same is true with rafts of other programs.

There are also limits built into the categorical programs which limit the degree to which each Secretary can manage, in an integrated way, the various programs that fall under his discretion. I think the reorganization proposal helps all of these matters, but that doesn't mean that you can't do anything right now. We've been trying to do something in the Labor Department. Arnie Weber did reorganize the Manpower Administration. He did decentralize to a greater degree.

We have established common bound-

aries. There's been a good deal accomplished, but I think that after a while you run into an organizational blockage. We think that it's time to take a deep breath and to say, "We've gone as far as we can go making marginal adjustments to the existing structure. The time has come to look at the whole structure and rationalize it better."

Mr. Staats: Speaking as one who has made many efforts and failed to get regional boundaries for some of the regional centers, I think that this may well turn out to be one of the greatest things that has been done in many years to improve coordination and to make possible the delegations.

It has been said that some of the existing departments, such as Health, Education, and Welfare, are too big to be managed effectively. Would not consolidating seven existing departments and several independent agencies into four departments, as proposed in the President's reorganization plan, compound this problem?

Mr. Shultz: I've heard that question before, having testified on the Hill. First of all, as to size—the Department of Human Resources would be slightly bigger than HEW is now. Two of the Departments would not be large by present standards—those are Community Development and Natural Resources. The Department of Economic Affairs would be the largest one in terms of number of people. I think it is important to recognize that one reason why it would have a large number of people is that it would include two big administrations—the Coast Guard and the Federal Aviation Administration which together would account for more than half, I believe, of the total employment.

I think that maybe when you look at it that way you see how we are going to approach this question of manageability.

For that matter, it is well to remember that a very large proportion of HEW—perhaps 40 percent or something on that order—is accounted for by the Social Security Administration which is an identifiable and, I believe, extremely well-managed enterprise.

Now, having said that, I would add that I know of no evidence that size by itself necessarily produces poor management. In fact, I think you can look around Government, business, and religious organizations, and find examples of very large organizations that are generally thought of as extremely effective or, to put it even more strongly, as the most effective in terms of efficiency in their particular field.

There are positive keys to the management of the new departments. First, administrations within the departments will contain similar functions over which the person charged with responsibility has greatly expanded control as compared with the present. All related functions are there—he can manage it. He doesn't have to spend a large proportion of his time coordinating with half a dozen other Cabinet officers which is very debilitating in a managerial sense. Even with all our efforts at coordination and cooperation and the best will in the world, it is hard to manage through a coordinated mechanism. I think that this is one thing that we will achieve that will help management and help with the problem of size.

Second, there are the substantial efforts that are being made in thinking through the managerial structure of each of these departments—including the strength that is accorded to the staff and policymaking function in the Secretary's office. A tremendous effort has been made to put in place clear structures where we can put someone in the position of managing the programs that fall within an administra-

tion and thus give the Secretary a chance to work with people who have the authority and, we would expect, the competence and quality which will aid him greatly.

I think it's certainly a clear and proper question to raise about the size of the new departments. I also think when you look at it in terms of the breakdown of the departments and in terms of the efforts made to strengthen the managerial capacity of the departments there will be better management of programs.

The President's message on the departmental reorganization program stated that the Regional Councils would be strengthened to achieve further coordination at the lower levels of Government. Can you tell us in what way the Regional Councils will be strengthened?

Mr. Shultz: Yes, I think you'll find more detail on that in the backup material. Have you seen this gray booklet that we put out? There's a lot of backup material in there that fleshes out the nature of the flow of work to the field as contemplated in the reorganization plan.

We have left room for some discretion for the Secretary of the new department to develop field operations in a way that seems to be workable. I think that the reason for expecting a better ability to work in the field is related to the things that we've already talked about here. If you group like things together within the same department and under the same Secretary and you delegate to the field through one set of policies and coordinating mechanisms, authority will flow to the field in a clearer fashion.

A great deal of thought and attention has been given to this area, but I think that fundamentally a cleaner structure at the top and a desire to put greater authority in the field give promise of a more effective kind of field organization.

I for one believe that it's essential, that you just can't manage things from Washington. It's impossible; it's just too big. You have to develop more strength out where the programs are if they are going to work. It seems to me that if tiny little outfits like American Telephone and Telegraph and General Motors have to decentralize, goodness knows what a really big outfit like the Federal Government has to do. Of course, that goes back to your problem of size.

We have to develop a managerial capacity in the field and we have to put responsibility there. We have to put trust and some discretion there and learn a stronger pattern of decentralization. A strong pattern of decentralization doesn't mean that everything gets decided in the field. It means, however, that you have to have a clear-cut policy formulation process at the top. The field person who is supposed to be implementing policy has to know what the policy is; otherwise he's lost. I think that having the kind of departments we are talking about will help that policy process.

We will have to work hard on learning a stronger pattern of decentralization as part of the implementation of these reorganization programs. When somebody comes in with a program proposal

which is clearly covered by policy and the regional people decide it should be handled one way and the mayor or somebody thinks that's all wrong and comes to Washington—well, that's the point where what people do in Washington will decide whether decentralization means anything or not. If the Washington people just overrule the regional man who was operating properly and in good faith, then decentralization is over with. You've got to stand behind that person in the field and if what has come up is a problem that really suggests that the policy is wrong, then change the policy.

I hope you will be at least somewhat reassured when you look through this booklet to see that it's been thought about quite a lot. I think it's going to work a lot better.

I'm very grateful for this opportunity to pay respects, on my own behalf, on behalf of the OMB as an organization, and on behalf of the President, to the Budget and Accounting Act—to what it has accomplished and to the continuing accomplishments that you all expect that we will be able to generate by the kind of efforts that people like the ones gathered in this room have put forward over many, many years. I salute you and I thank you for your consideration.

A Nonpartisan and Reliable Source of Assistance

The General Accounting Office is not only an indispensable agency of the Congress but in my judgment is also one of the finest in Government. If we did not have the GAO we would have to immediately create one. It helps Congress fulfill the high duty of monitoring the administration of appropriations to operate the Government and thus helps Congress in its continuing responsibility for seeing that executive departments and agencies keep faith with the laws and undertake to secure a dollar in value for each dollar expended.

The General Accounting Office has been headed by men of outstanding ability and devotion to the public interest. From Elmer Staats, the present Comptroller General, on back through my experience in the Congress, Comptrollers General have been men of great devotion to duty, dedicated to zealously maintaining one of the key aims of the Congress of 50 years ago, which was to equip itself with an independent facility to serve as a nonpartisan and reliable source of assistance in carrying out its constitutional responsibility for the use of the public moneys.

Congressman George H. Mahon
Chairman, House Appropriations
Committee

Congressional Record

June 10, 1971



Russell E. Train
Chairman, Council on
Environmental Quality

Russell Train, a native of Washington, D.C., has served in all three branches of the Federal Government: executive, legislative, and judicial. He began his career as an attorney for the Joint Congressional Committee on Internal Revenue Taxation in 1947 and became Clerk and then Minority Advisor to the House Ways and Means Committee, 1953-56. From 1956 to 1957 he headed the Treasury Department's tax legislative staff. In 1957, President Eisenhower appointed him to the Tax Court of the United States and reappointed him to a full 12-year term in 1959.

Mr. Train is an active conservationist. He founded and became first President of the African Wildlife Leadership Foundation, and in 1965, he left the Tax Court to become President of The Conservation Foundation, a nonprofit research, education, and information organization concerned with a broad range of environmental matters.

Mr. Train's deep commitment to conservation and environmental problems led to his choice by President Johnson for a membership on the National Water Commission in 1968, and his selection that year by President-elect Nixon to chair a special task force to advise the incoming administration on environmental problems. He was nominated to be Under Secretary of Interior, in early 1969, by President Nixon and was appointed Chairman of the Council on Environmental Quality on February 9, 1970.

Improving the Management of Environmental Programs

Among the major Federal programs that the GAO undertakes to assess are those concerned with improving the quality of our environment. Mr. Train, speaking as a Government executive directly concerned with policy and coordination of Federal environmental programs, discusses the governmental organizational problems that exist in programs that involve more than one agency. He points out that while universally applicable principles of governmental organization do not exist, we have been reorganizing the Federal Government for almost 200 years and thus have a vast body of experience to draw upon. Unfortunately, we do not have an institutional mechanism for systematically analyzing and learning from this experience. He states that some of the most recent interesting innovations in governmental organization have been made in the area of Federal environmental protection programs.

In the 50 years of its existence the General Accounting Office has been one of the great forces for more efficient and effective government. Never has that been more true than under the distinguished leadership of the present Comptroller General.

I wish to discuss with you the management of environmental programs. Although there are factors which are unique to environmental policy, I hope that much of what I will have to say is equally applicable to other policy areas. We are engaged in some interesting organizational experiments with respect to environmental policymaking, and the experience derived from these experiments should tell us something about how to organize other areas.

Good management in the broadest sense is dependent upon all of the factors

which contribute to program success—good organization, adequate legal authority, public support, adequate resources of money and qualified personnel. I would like to focus today primarily on the question of organization because it is with respect to organizational matters that some of the most interesting innovations have been made in the environmental area.

Need To Learn From Experience

It is very doubtful whether there are any grand general principles of organization which are of much help in organizing the Federal Government. A professor of public administration at my alma mater, Princeton, used to ask his students: "Are there any general principles of organization? If so, what are they? If not, why do people hire man-

agement consultants?" Most of the students ended up by trying to explain the hiring of management consultants.

Although there may not be universally applicable principles of administration, there is a vast body of experience to draw from. We have been reorganizing the Federal Government for almost 200 years. There have been countless task forces, commissions, and study groups devoted to asking how the Government can best be organized. And yet each of these groups has started out with only the experience which its individual members have been able to accumulate.

The same questions are asked whenever Federal organization is considered. Can an agency be "too large," and what does too large mean? Should agencies with conflicting missions be placed in the same department? Under what circumstances do two agencies cooperate or communicate with each other? How are disputes between bureaus or agencies in the executive branch settled? Is it really true that no Cabinet department can influence any other Cabinet department? Are interagency committees ever successful, and if so, at what tasks and under what circumstances?

Despite the frequency with which such questions are asked and their obvious relevance, we have no institutional mechanism for drawing upon our experience to provide the answers. One of the characteristics of vital and growing individuals is that they learn from experience. The same is true of institutions, and sound policymaking requires mechanisms for institutional memory and feedback. Our file cabinets are full of institutional memories, but our experience with different organizational forms has not been analyzed or evaluated, nor has it been made available to those charged with making future policy decisions.

It seems to me that it would be very worthwhile for the Office of Management and Budget, particularly given its new emphasis on management, to begin to collect and analyze data, perhaps in the form of case studies, on the types of organizational questions outlined above. No magical answers would emerge from such an effort, but hopefully we would begin to learn something from the vast collective experience the Government has had with the situations underlying these questions. If the effort were a continuing one, it would provide the basis for the institutional memory which is the beginning of institutional wisdom.

Events in the environmental area over the past year provide a good example of some of the ongoing experiments which we are undertaking in an effort to discover optimal forms of Government organization.

Creation of the Council on Environmental Quality

The Council on Environmental Quality (CEQ) was created by statute in early 1970 primarily because of the need to provide top-level policy advice and coordination in the environmental area. It also served the purpose of giving visibility and prominence to the environmental issue. In an age of mass media and massive numbers of problems, visibility has become an important organizational value.

The charter given to the Council was extraordinarily broad. It was made responsible for, among other things:

- Receiving from all Federal agencies reports on each major action which significantly affects environmental quality and reviewing those reports;
- Coordinating all Federal agencies with respect to their actions which affect the environment;

- Reviewing existing environmental monitoring systems;
- Collecting, analyzing, and evaluating information on environmental quality;
- Promoting knowledge of the effects of actions and technology on the environment and encouraging means to prevent or reduce adverse effects on the environment;
- Preparing an annual report;
- Analyzing conditions and trends in the quality of the environment;
- Documenting and defining changes in the natural environment;
- Conducting investigations relating to ecological systems and environmental quality;
- Making recommendations to the President on national policies to improve environmental quality and making such studies as the President may request;
- Conducting public hearings or conferences;
- Recommending to the President and Federal agencies priorities among environmental enhancement programs; and
- Advising and assisting the President and the agencies in achieving international cooperation for dealing with environmental problems.

To do all this we were given in the first year a staff of about a dozen professionals. Given the disparity between our legislative mandate and the resources we had to carry out this mandate, it was clearly necessary to establish priorities. We placed highest priority on two general functions—providing policy advice to the President, particularly in the form of reports and legislative proposals, and coordinating the activities of Federal agencies, particularly via the environmental impact statement process.

CEQ Policy Function

The Council is the only major part of the Executive Office of the President devoted exclusively to a particular substantive policy area. There are several potential disadvantages to placing such an organization in the Executive Office.

It is obvious that the process of creating agencies within the Executive Office responsible for particular program areas could be self-defeating if pursued too far. It is hard to envision an Executive Office containing Councils for Urban Problems, Energy, Transportation, Consumer Protection, Rural Development, and so forth doing anything but creating total chaos. In the case of CEQ, there does exist special rationale—the environment cuts across the entire fabric of the Federal Government.

A more complex problem is the relationship of the staff Executive Office agency to the operating line agency, in the case of CEQ the relationship to the Environmental Protection Agency (EPA). Although officially the Council "sets policy" while EPA "enforces" the policy, this distinction is not overly helpful in practice. Anyone familiar with pollution control knows that many of the critical policy decisions are enforcement decisions. The decision to cancel DDT, for example, was an enforcement decision, but at the same time it involved a number of major policy decisions.

The head of a major operating line agency, particularly when he reports directly to the President (as does the Administrator of the EPA), is not likely to rest content with letting some other body make policy decisions for him. He will want a voice in the decisions, and the public and the Congress will hold him responsible for the policy whether or not he had a hand in deciding it.

Given the far from neat division of

labor, one might expect considerable conflict between the staff and line agencies. However, in practice this has not been the case. The good relations which have prevailed between CEQ and EPA are due partially to good personal relationships from the top of each agency on down. But they are based also on an acute sense of the interdependence of the two agencies. Each is necessary for the survival of the other. A mistake by either agency reflects on the competence of the other. This provides a major incentive for good working relations.

The experience of the past year has provided much evidence on the utility of a substantive policy council within the Executive Office. It is doubtful, for example, that this year's very extensive, environmental legislative program could have been developed by an operating line agency. No matter how well organized, policy proposals in a large bureaucracy get diluted as they work their way through the hierarchy. Also, the gap between the policymakers at the top and the subject-matter experts at the bottom often makes it difficult to fuse imaginative ideas with the constraints of administrative and substantive realities. The Council's small size and its ready access to experts both within and outside the Government enabled it to avoid these difficulties and to put together what in all due modesty I consider the boldest and most imaginative set of measures ever proposed in the environmental field.

CEQ Coordinating Function

A major part of CEQ's work involves coordinating the activities of the Federal bureaucracy. Environment in the broad sense cuts across the missions of every Federal agency, and thus the potential for agencies to work at cross-purposes is very great.

Much of the coordination done by

CEQ is informal. We are involved in a seemingly endless round of meetings, telephone calls, and exchange of memoranda, on an incredibly broad range of problems, with the primary purpose of assuring that the administration speaks with a consistent voice.

The Council is also at the nexus of a formal mechanism for coordination—the environmental impact statement process. Section 102(2)(C) of the National Environmental Policy Act requires that any Federal agency undertaking an action which will have a significant impact on the environment must file a report with the Council. The report must describe the proposed action, the environmental effects expected from the action, and any alternatives to the action which were considered. The reports are circulated for comment to other relevant Federal agencies, to concerned State and local agencies, and to the public. The comments received become part of the final impact statement. We are now receiving more than 200 such statements a month.

The environmental impact statement process is a fascinating experiment in coordination. Its primary purpose was conceived to be changing the ways in which agencies made decisions by establishing a formal method whereby the environmental implications of an action would become part of the factors considered at the time a final decision was made. This purpose is being fulfilled by the 102 process. However, it is being fulfilled through means which were not fully appreciated at the time the act was passed.

The circulation of the 102 statements to other Federal agencies has become a significant method for coordinating Federal actions and for giving focus to issues which had only been vaguely perceived. Many Federal actions have side effects which contradict or make more difficult

the missions of the environmental agencies. Before the initiation of the environmental impact statement process, there was no way to identify such actions and, even if an environmental agency were aware of such an action, it had no way by which it could intervene in the decisionmaking process. This has now changed, and not only can issues be identified and joined but the existence of a written statement provides a rational basis for delineating and settling issues.

The other aspect of the process which has become clear with experience is the key role which can be played by non-governmental groups. Much of the success of the 102 process to date has been due to the actions of private citizens who have taken steps, some of them involving judicial action, to force compliance with the environmental impact requirements and to improve the quality of the impact statements. We have created a new and constructive role for the citizen, which has given the citizen a sense of greater control over the decisions which affect his life and which has improved the quality of the decisions made by the Government.

The section 102 statements are not an end in themselves. We are not interested in simply adding to an already mountainous Federal paperload. The environmental impact statement is an action-forcing mechanism, and it is the reality of the underlying process—one in which thorough consideration of environmental factors is an integral part of decision-making at every level of government—that is our overriding concern.

Creation of the Environmental Protection Agency

Of the recent managerial experiments in the environmental field, the one that perhaps has received the most attention is

the creation of the Environmental Protection Agency. The creation of this independent agency, consolidating the major antipollution programs, is the culmination of several organizational changes designed to provide an improved framework for dealing with the pollution problem.

Until 1965 the air and water pollution and solid waste programs, and part of the pesticide and radiation programs, were organizationally grouped together as part of the Bureau of State Services in the Public Health Service. As might be expected, the emphasis was given to the health problems created by environmental pollution. This was fine for programs such as air pollution and radiation, but the oldest and largest program—water pollution control—had become increasingly less related to the goals of the Public Health Service. Typhoid and other waterborne epidemics had largely been controlled, and the major benefits from controlling water pollution were recreational and aesthetic. The major supporters of the water program came to believe, probably correctly, that the program was being neglected because of its lack of relevance to public health.

The Water Quality Act of 1965 removed the water pollution program from the Public Health Service and created a new Federal Water Pollution Control Administration within the Department of Health, Education, and Welfare (HEW). This arrangement never became a reality, because in February of 1966 President Johnson submitted to Congress a reorganization plan transferring the Water Pollution Control Administration to the Department of the Interior. The plan took effect in May.

The primary rationale for the transfer to Interior was that it would promote coordination between the water pollution control functions and the other

water resource programs, most of which were located in Interior. This illustrates one of the fundamental problems in deciding among organizational alternatives. There has been much talk about the need for a "systems approach" in reorganization matters. But all organizational choices inevitably involve a systems approach, in the sense that putting programs together in a department or agency assumes that they are more closely related to each other than to programs not included in the agency, and the definition of a system is a group of things more closely related to each other than to things not included in the system.

The real problem in organizational matters is not the use of a systems approach but rather *which* system is the correct one for analysis. In terms of the "water resources systems," there was no question that the water pollution control program belonged in the Department of the Interior. However, in terms of the "health system" it should have stayed in HEW, and in terms of the "pollution control system" it didn't fit neatly into either agency. The choice of the relevant system seems to be a matter of the political priorities and personal perceptions of the decisionmakers at the time the choice is made.

The difficulties of making such a choice are illustrated by the fate of the air pollution and other environmental programs which remained in HEW. Following the transfer of water pollution control to Interior, there followed a succession of reorganizations within HEW, each involving a somewhat different conception of the relevant system in which to group these programs.

The first step was the creation of the Bureau of Disease Prevention and Environmental Control. This placed the environmental programs with the preventive health programs, such as cancer detection, accident prevention, smoking

control, and epidemiological analysis. The Bureau searched in vain for a constituency which would tie these programs together. The Bureau was succeeded by the Consumer Protection and Environmental Health Service (CPEHS) which did not include the preventive health programs but incorporated the Food and Drug Administration (FDA). However, the pressures on FDA proved to be very great and they were not the same pressures which played on the environmental programs. FDA was thus restored to its independent status, and CPEHS was converted into the Environmental Health Service.

The reconsolidation of all the major pollution control programs under the Environmental Protection Agency had its genesis in the President's Advisory Council on Executive Organization, headed by Roy Ash. The Council concluded fairly quickly that the guiding organizational principle should be to group together the pollution control programs. However, this did not completely solve the problem of the most relevant system, because the Council still had to decide where in the executive branch to locate the pollution control programs. They could be assigned to HEW because of their important concern with health and because many of the programs were already there; they could be assigned to Interior, because of the close relationship between natural resources and pollution control and because the largest single component, the water pollution control program, was already there; they could be assigned to the Department of Housing and Urban Development, because many of the pollution problems are primarily urban problems; they could be placed in a reoriented National Aeronautics and Space Administration (NASA), giving new vitality and a strong sense of mission to both NASA and pollution control.

In the end, the Council was impressed by the extent to which the pollution control programs impinged on a large number of existing agencies. The programs were important for health, for natural resources, for urban development, and for several other areas. The Council decided that the only way in which these various elements could be adequately considered in making pollution control decisions was to put the programs in a separate, independent agency which would not bias such decisions in favor of the mission of one of the preexisting departments.

The Council thus recommended to the White House the creation of an Environmental Protection Agency whose Administrator would report directly to the President. This recommendation was accepted by the President, sent to the Congress as Reorganization Plan Number 3 of 1970, and on December 3, EPA came into existence.

Rationale for EPA

One of the major questions which the Ash Council had faced was what is colloquially known as the "fox in the chicken coop" problem. Should programs dealing with similar subjects but with opposing constituencies and missions be located in the same agency? The question was posed most acutely when location of the pollution control programs in the Department of the Interior was considered. Interior had a number of "promotional" programs which dealt with the same problems as the pollution programs, but from a very different perspective. The Bureau of Mines and the Office of Oil and Gas encouraged the use of fuels which were essential to the economy but which were also major sources of air pollution. The Bureau of Reclamation promoted irrigation projects which often had the incidental effect of increasing water pollution.

There were many good arguments for combining the environmental and the promotional programs. Agency decisions might be more balanced and judicious. Disagreements would not have to be escalated to the White House but could be resolved within the agency. The environmental programs could exercise a check on promotional programs at an early stage.

These arguments were outweighed by the advantages of separation. The absence of any conflict of interest could impart a sense of mission and esprit to an agency which would not be possible otherwise. Conflicts would not be blurred by quiet negotiations within the agency but could be sharply defined and brought to public attention. The risk of the environmental programs being checked by the promotional programs would be avoided.

Thus EPA came into being as a single-purpose agency, without significant major internal conflicts concerning its mission. This is one of the experimental features of EPA, because although other such agencies exist, EPA is unique in the degree to which its mission affects that of other Federal agencies and the private sector.

The nature of EPA and its mission will require close coordination with other Federal agencies in the performance of its functions. The Council on Environmental Quality has and will continue to play an essential role in such coordination, and in resolving the conflicts which will inevitably arise. But there is much room for innovation and experimentation in ways to promote coordination. Exchange of personnel, joint budget planning, interlocking information systems, and many other techniques should be tried out, and their success or failure evaluated.

One other vital area of managerial ex-

perimentation is the internal organization of EPA. The primary rationale for EPA's creation was the need to recognize and deal with the interrelationships among the different forms of environmental pollution. Control of water pollution may be achieved at the expense of creating more air pollution. Many pollutants are not limited to air or water but cut across the boundary lines of the existing programs. There is a need to deal with *all* sources of particular pollutants and to be able to trace their *total* ecological effects.

If these requirements are to be met, it is clear that EPA must achieve a high degree of internal unity. And yet the constituent bureaus operate as semi-independent. The model of the "holding company" department, within which the constituent parts of which it is composed, is the typical one at the Federal level. There are few examples of truly unified agencies above the bureau level.

The EPA reorganization plan set the stage for overcoming this problem. All program authority was formally vested in the Administrator, and he was given complete power to reorganize internally. On April 28 of this year, Bill Ruckelshaus took advantage of this opportunity. He announced a new internal organization of EPA, largely along functional lines. Five Assistant Administrators—covering research and monitoring, standards and enforcement, planning and management, media programs, and categorical programs—have been given line responsibility. This represents a rather bold venture in achieving internal agency integration of disparate units.

Conclusion

As I hope I have made clear, there are a number of exciting innovations which

have taken place over the past year or two in environmental management. I have touched on only some of these. State governments are undertaking similar pioneering ventures, but I have not described these. I also have not described the content of our environmental legislative program which involves a number of new concepts with major implications for better management. The Department of Natural Resources, proposed by the President last February, also promises to markedly improve the administration of environmental programs.

The Council on Environmental Quality and the Environmental Protection Agency are significant experiments in Federal management, and, as I stated earlier, I hope that those concerned with better management and organization will record our successes and failures so that all can learn from our experience. I am convinced that they will record far more successes than failures, and that CEQ and EPA will provide the organizational framework for achieving the improvement in the Nation's environmental quality which is so badly needed.

Discussion

Do you feel that, over the past 5 years, we have made progress in cleaning up our environment, have merely held our own, or have lost ground?

Mr. Train: I said we were responsible for developing and documenting status and trends but I didn't say that we had been really able to do it. I remember last year when we were doing up our annual report and trying to wrap it up and develop a crystal-clear concept of the status of the environment, I suggested—although we did not use it—"Things are getting worse less rapidly now." Maybe we'd better use it, because actually there is truth in the statement.

There are so many different aspects of environmental problems. Some are getting worse, some are getting better. Exactly how you weigh all these is a problem. We don't really have any system for it as of yet. Our indicators are very weak. Our base line data and our monitoring systems are very weak.

Now, to say a few things that are hopeful. The level of sulphur oxide in the atmosphere of most of our cities is definitely going down. This is a very major air pollutant. At the same time having said that, I've got to point out that the total volume of sulphur oxide in the atmosphere of the United States is going up. Maybe we are shifting the problem from the city to the country. But we are getting on top of this particular problem. Likewise, levels of carbon monoxide in the urban environment are going up. We have more automobiles but this too in a period of a few years will reverse. The level of total emissions from automobiles is going down and has been for a couple of years. At some point, possibly, this graph will start going back up again as the population of automobiles increases.

There are other kinds of indicators which give rise to some optimism. In the Federal Government, State and local governments, and in private enterprise generally, we are developing a much more effective institutional base for environmental management. It doesn't make the sky any clearer overnight but in the long run it provides an essential underpinning for progress. I think the level of public interest, concern, and activity is going up more all of the time. This, too, I think is a very important thing, both here and abroad. I think that things are getting better but we can't jump up and down about them yet. There is no room for complacency. We have a long job that is going to be with us for many years—as long as you and I

are around and probably a hell of a lot longer.

How much is all of this going to cost? I can't really answer that one satisfactorily at the moment. We are devoting a whole chapter in our annual report to the economics of environmental problems with very heavy emphasis on cost estimates.

On the water quality side, we have estimates, upon which the most recent legislative proposals were based, of \$12 billion, representing a total need for secondary treatment of municipal waste with a 50 percent Federal share of \$6 billion in the next 3 years. I can't talk about 10 years from now but that's what we are talking about over the next 3. That is just the municipal waste field.

Industrial costs are approaching something around \$1 billion a year. I saw some figures the other day indicating both public and private air and water programs at the present time are running almost \$10 billion annually and are expected to reach \$23 billion or \$24 billion in 1975. So we are talking about very substantial levels which are rapidly increasing.

Throughout our history we have built factories with little or no concern for the pollution they cause. There are undoubtedly many old factories that cannot be modified economically to meet current or proposed air and water quality standards; yet to close them would mean loss of jobs and taxes. What do you think is the answer to this dilemma?

Mr. Train: I don't think you can simplify either the problems or the solutions by saying that the real problem is economic growth or the real problem is technology. If you look at a country like India or the city of Calcutta where the level of economic affluence is low and technology is equally low, you see that

the pollution problems are pretty horrendous.

I think that we can certainly trace many pollution problems to economic activity and to the effects of technology. At the same time, I don't say that in technology lies the solution to the problem. The solution is much more complex than that, as there are social, political, and economic factors and all of these have to be involved.

However, I do think that technology is exceedingly important in the solution of environmental problems. Certain pollution problems, like automobile emissions or removal of sulphur oxide from the air, are technological problems. There are alternate technological approaches to these problems. In the case of the automobile, the development of more efficient mass transit—in part, a technological problem—is one solution. In the case of sulphur oxide emission, largely an electric generating problem, the development of new alternate sources of energy—nuclear reactors or solar energy—is a possible solution. These are technological problems as far as economic growth is concerned.

I don't say that economic growth is again the culprit. I think we need economic growth in our country to do a lot of things like providing jobs; rebuilding our cities; and providing mass transit, better delivery of health services, and a wide range of other things. There are a substantial number of people in the country who would not be very happy with zero economic growth. I don't think economic growth need be equated with pollution. I think that more and more we need to understand the environmental impact of our economic activities and technological activities and plan to avoid adverse results. I suspect that more and more of our economic activity is going to emphasize the quality of goods and

services rather than simply the quantitative aspects as much as we have in the past.

We are going to need some quantity too. We have a growing population. Even if we went to two children on the average per family right now, the population would still climb by 100 million. So I think we need economic growth.

I think we also need technology. We simply ought to be sure that economic activity and technological activity are directed to meeting real human needs. Economic activity and technology ought to be dedicated to improving the quality of our life—and not simply to business for the sake of business or to technology for the sake of technology.

What level of funding by the Federal Government do you feel is necessary over the next 10 years to make reasonable progress in cleaning up our environment?

Mr. Train: I don't think the public wants to accept a reduced standard of living. One does hear a great many statements, particularly by those whose standard of living is high, that they wouldn't really worry about it. Polls do indicate that a large percent of the public at least say that they are willing to give up some things if this would be important to environmental protection. I think that in most cases what they are talking about is a shift rather than a reduced standard of living.

What do you mean by standard of living? At the present time, we estimate that the sulphur oxide in the atmosphere, for which there is no accounting in terms of our normal books of business, is costing the American people about \$8 billion a year in medical bills, emphysema, bronchial problems, lung cancer, deteriorating plant and equipment, and damage to crops. These are the big cate-

gories. Eight billion dollars a year. That's probably in the GNP somewhere. If we could get that out, it would be a very substantial net profit to the American people. I think that in a sense it would be an increase in the standard of living.

We are told that this Nation's needs for energy are doubling every 10 years. Fossil fuels are among the biggest contributors to pollution, and many people are concerned about the possible effects of nuclear power on our environment. How can we meet our huge needs for energy and still protect our environment?

Mr. Train: He is asking for me to direct my attention to the facts that the production of electricity is related to our standard of living and our economic activity and the production of electricity involves some adverse environment impact. That is the understatement of the year. It represents a lot of adverse environmental impact. Fossil fuel generation of electricity involves thermal pollution of water and air pollution, typically sulphur oxide, most importantly. It also involves production and

transportation of the fuels to our generating plants; for example, strip mining in the case of coal or transportation of oil from North Africa or the Alaskan pipeline. These are all parts of the side effects that electrical energy production causes.

Likewise, nuclear energy, as we presently know it, involves considerable thermal pollution. Air pollution is not a substantial problem, but radiation and disposal of radioactive wastes are. This is the major alternative at this time and the President in his energy message directed himself to this dilemma.

We have tried to approach this problem in several ways. We have before Congress an electrical power plant siting bill to deal with the siting of electrical power plants and transmission lines, to make the whole process more acceptable publicly, and to do a more effective job. Research is being done in sulphur oxide removal and in developing new energy sources. If we recognize that we must make a substantial effort to develop them, we will, in time, find clean energy sources.



James E. Webb
Former Administrator
National Aeronautics and
Space Administration

James E. Webb's term as Administrator of the National Aeronautics and Space Administration spanned the first eight years of our Nation's drive to achieve the goal set by President Kennedy to land a man on the moon by 1970. His years at NASA are part of a career covering four decades during which Mr. Webb has been one of the most active men in the United States, and his distinguished career continues.

Mr. Webb served as Director of the Bureau of the Budget, 1946-49, and as Under Secretary of State, 1949-52. He has won 10 public awards, received 28 honorary degrees, and is a member of 38 organizations. He was a reserve officer in the U.S. Marine Corps from 1932 to 1966 when he retired as a lieutenant colonel. He was commanding officer of the 1st Marine Air Warning Group on active duty from 1944-45.

A native of Granville County, North Carolina, today Mr. Webb is an attorney at law in Washington, D.C. In addition to serving as a director of several private firms, he is a trustee or officer of nine major public service organizations, including the Committee for Economic Development and the Smithsonian Institution.

Leadership Evaluation in Large-Scale Efforts

When he was Director of the Bureau of the Budget, James E. Webb was cosigner with Comptroller General Lindsay C. Warren and Secretary of the Treasury John W. Snyder of the original charter of the Joint Financial Management Improvement Program in 1949. He has long had a strong interest in the work of the GAO.

The management challenge of almost inconceivable complexity that Mr. Webb faced as Administrator of NASA in the 1960's—to make a manned landing on the moon—required the harnessing of the highest talents in our Nation in the fields of science, engineering, production, business management, public administration, and congressional relations. Drawing on this and other experiences, he observes that executive leadership in governmental large-scale efforts needs much more research to identify and maintain the qualities needed for success. This research should be carried out by scholars from numerous disciplines who can observe and describe what successful executives do to produce success and what causes them to fail.

Thank you for this opportunity to participate in GAO's 50th anniversary. In the life of an organization, 50 years is a long time. Many do not survive that long. It has been my privilege during more than half of GAO's 50 years to either participate in or follow closely developments under the 1921 Budget and Accounting Act which set up the GAO and the Bureau of the Budget. Perhaps some might think of these 25 years as a half-life in the decay of these institutions. I prefer to think of it as a period of growing strength and usefulness. Each has evolved on a different time scale and in response to different pressures and opportunities. But the common heritage of the 1921 act has helped maintain many common goals. Both the Congress

and the President have recognized that the GAO and the Bureau of the Budget could help them make decisions based on organized facts as opposed to organized prejudice.

World War II seems a long time ago, but some of us are old enough to remember the organizational problems of the prewar buildup and of mobilization. Patterns of governmental action changed radically. Many have commented on President Roosevelt's leadership in this period, but most have not associated this with the transfer of the Bureau of the Budget to the Executive Office of the President in 1939. When the War began 2 years later, the Bureau and Harold Smith, its able Director, had already

learned to use its base of power, resting on its location in the Executive Office and its mutually supporting activities, to strengthen the institution of the Presidency. This Presidential strength was able to shape in many ways the form, substance, and administrative structures needed for the war effort. It helped to preserve coherence on the homefront. Also, during the mobilization period and the war, the General Accounting Office recognized the urgency of the times and adapted its work to the essential needs not only of the Congress, but of the executive branch as well. It thus played an important role in the successful war effort.

As to the postwar years, our memories are much fresher. In the 1946-47 period the Federal Government was restructured for a return to what was hoped would be many years of world peace. The wartime organizational and management lessons were studied and efforts were made to apply them to the new peacetime problems. A close and effective working relationship between the General Accounting Office and the Bureau of the Budget continued and was broadened to include the Treasury Department. In 1947 as Director of the Budget it was my privilege to work with Comptroller General Lindsay Warren and Treasury Secretary John Snyder to establish the GAO-Treasury-Bureau of the Budget Joint Accounting Improvement Program, which has now matured into the Joint Financial Improvement Program.

There is an important message for us today, I believe, in this evolution, over the years, from emphasis on "Accounting Improvement" to emphasis on "Financial Management Improvement." Mr. Staats helped develop this project as a member of the Bureau of the Budget staff, and I believe he will remember, when we urged Comptroller General Warren

to participate, that he told us with some heat, "What you are asking me to do is to reorganize the General Accounting Office and nobody ought to be asked to do that."

Need for Changing Organizational Patterns

With the necessity for answers to communist pressures, and the initiation of the Greek-Turkey Aid Program and the Marshall Plan, many of the postwar planning assumptions gave way to cold war realities. But for the GAO and the Bureau of the Budget, these only added emphasis to the need for governmental patterns of leadership and organization that could produce successful results. Both organizations changed with the changing pattern, and today we have a long accumulation of shared experience. The introduction of new organizational concepts and structures to meet changing governmental needs does not seem so formidable as in those days, although there is nothing easy about it. In fact, today the complexities of large-scale organized efforts require more skill and judgment and stronger leadership than ever before.

Through the 25 years of these changing requirements, the GAO has shown that it is as truly concerned as any unit of government with measures to meet the needs of departmental, agency, and program leaders for thoroughly professional and multidisciplinary approaches to effective and accountable government. From both our successes and our failures, we have found that government cannot move forward without the kind of strength that can solve the organizational and administrative problems which have so often in the past limited effectiveness. In our constitutional government of divided powers it is very difficult to create and maintain such strength, but it can be

done. To meet the needs of their time, Lindsay Warren, Frank Weitzel, and many others put their shoulders to the wheel, and Elmer Staats, Bob Keller, and many of you here are doing the same today. The objective was and still is a more effective and responsible government, capable of doing its part in a world torn by strife, yet full of opportunities, and at the same time adjusting at home to new concepts of technology-based economic development, to new concepts of social and political relationships.

In the 1940's Federal leaders sought imaginative ways to enlist colleagues throughout the nation who shared these objectives. We sought cooperative relationships with State and local government officials, with industrial management leaders, and with both research and theoretical scholars in universities. There were many supporters of this effort among the members and staffs of congressional committees. We need more of this today. In these matters there is no substitute for at least a minimum of cooperation between the legislature and executive, between our three levels of government, and between industry and government.

Living with Uncertainty

As we finish the first and begin the second 50 years of the GAO, in many ways the greatest challenge is still the one we have faced all along—how to achieve our long-sought goal of more effective government. The difference is that we must now seek this goal under conditions where science and technology add so much so rapidly to our powers, but require us to set up such large endeavors as the National Aeronautics and Space Administration (NASA) to make use of these new powers. Today citizen expectations are higher than ever be-

fore. Failures are more conspicuous. The management requirements go beyond the proven capabilities of our present forms and methods.

In organization and administration, as in other areas, today's leaders must learn to live with uncertainty and evaluators must learn to assess how well they meet this requirement. Harvey Sherman, of the New York Port Authority, in what he calls "A Pragmatic Approach to Organization," states it this way: "The problem we now face in organization may well have changed in nature from one of adjusting organizations to meet present conditions; that is, maintaining equilibrium, to one of adjusting organizations to meet future unknown conditions; that is, maintaining desired disequilibrium."¹

In today's large-scale governmental efforts we are just beginning to learn what this means. We are told, and believe, that "the nature of scientific and technical knowledge is different from that of social science knowledge"² and yet we have not learned practical ways to incorporate the best of any of the three in our processes for deciding priorities and getting things done. Former Secretary of Housing and Urban Development, Robert Weaver, emphasized this in his recent anniversary lecture here at GAO and gave some of the reasons.³ I will refer to these in a moment.

It would be easy to turn away from these problems and to spend our time today reminiscing about the personalities, successes, and failures of the first 50 years under the Budget and Accounting

¹ Harvey Sherman, *It All Depends—A Pragmatic Approach to Organization* (University of Alabama Press, 1966).

² W. J. Haggerty, *Educating Technologists in Desirable Social Policy and Educating Social Scientists in Technological Capabilities*, Monograph 11, (American Academy of Political and Social Science, 1970).

³ See p. 42.

Act. I remember very well the day Harold Smith told me that the Bureau of the Budget "had survived because its name concealed its function." I remember my reaction to General Lord's * procedure, which was that when his secretary would come in and say, "General, Mr. So-and-so is out here to see you," he would answer, "Find out what he wants and tell him he can't have it." I remember that when President Truman told me he wanted to balance the budget and pay back \$5 billion on the debt, and I carried this back to the Bureau staff, it took a few days to get a clear reaction. Finally, Lee Martin who was then head of the Estimates Division came into my office, closed the door, and said, "Now, young man, I listened carefully when you said the President wants to balance the budget. You should not say that unless you really mean it, because if you do, I can show you how to do it!" My response was that I would go back and ask President Truman again if he really meant it. He did, and Lee Martin delivered on his statement.

Dynamics of Organizational Leadership

But I must resist the temptation to look backward. What I would like to do is to speak of the present and the future.

Today I believe the General Accounting Office finds itself serving a Congress that is deeply perplexed and quite unhappy about the way policy and program decisions are made, both in the executive branch and in the Congress itself. Some are even unhappy with the judiciary. Individual Members, as well as the committees and staff, are not satisfied that our Government is doing an adequate job.

In his lecture, Professor Weaver con-

centrated on "the areas of program selection and evaluation." He called these "the new dynamics of effective administration." His emphasis was on planning and followup.

My approach will be from a different direction and my emphasis will be more on the dynamics of organizational leadership and the use of feedback for more effective leadership in the broad sense, in Congress as well as in the executive branch. My theme is that once the plans are made we need the kind of job done in administration that will enable both citizens and Congress to get a feedback against the assumptions which underlie program content and to see for a given program or project what was done, by whom, and with what result. This requires strong leadership. It also provides a way through which leadership can be constantly improved and the public dialogue and debate can bring about support for that which accomplishes the desired results and force changes in what does not. I believe we need to do more "looking at the record" of what results were achieved and by what means rather than to spend time listening to more promises thought up by speechwriters seeking a headline for their principals. We need to know more about why so many important undertakings seem unable to proceed except in perilous proximity to the rocks of disaster. We need to know a great deal more about what makes for successful leadership in large-scale endeavors.

When an important undertaking does escape the perils and delivers success, we need to learn why. In most such cases, I believe we will find that although it was judged inadequate for the task at hand, the best of available organizational theory and doctrine was put to use by the leadership group, that within the operational framework the best of proven self-policing and feed-

* *Editor's Note:* Brigadier General Herbert M. Lord was Director, Bureau of the Budget, 1922-29.

back procedures were employed, and that careful thought was given to the best known ways to generate cooperation between the legislative and executive branches. In most successful endeavors, I believe we will find that intelligent use of at least a minimum of social science and public administration know-how made a vast difference, both in the operational and nonoperational areas. But my point is that we will have to find out, because we do not know today.

Success of the Apollo Program

Perhaps you will permit me to use Apollo as an example of a success. I know of no events more clearly fixed as successes in the minds of millions of people than Apollos 11, 12, 14, and 15. I know of no better illustration of the value of first-class systems engineering and management—or of the value of linking the best of the machine and the best of man. Even in the failure of Apollo 13, but with the successful return of the crew, we find an example that a complex system, properly designed and staffed, can survive when otherwise it would fail.

We all know Apollo 15 landed safely even though one of its three parachutes failed, and that NASA as an organization survived the perils which faced it in the period following the Apollo 204 flash fire that took the lives of Grissom, White, and Chafee.

Let me immediately make the point that is in my mind. It is that Apollo succeeded and NASA survived because it followed a clear management philosophy and steadily tested its assumptions as well as its hardware. The basic assumption was that rocket-powered transportation for men cannot avoid high risks and public visibility; that rockets are much more dangerous and

difficult to use than other machines; that bold objectives require conservative engineering; that in rocketry if anything can go wrong, it will; that even the best of plans cannot incorporate all contingencies; and that when an unplanned-for event occurs the immediate need is to find out what happened, to apply the best available knowledge and technology to fix it, and to thoroughly test the fix.

Under this philosophy we turned away from both the "find the culprit" and the procurement-oriented concepts that when trouble shows up one should look first for a person to blame or to the contract to determine who is at fault and who should pay the price for not being able to foresee or prevent the troublesome happening. We based our incentives for creative and innovative performance on the assumption that scientific methods could be used to help solve the developmental problems of high-performance vehicles and that we must be prepared to rapidly identify and solve many complex problems that could not be foreseen. Our assumption was that to build this capability to work with the known and to meet the unknown would prove the most efficient and least costly way to proceed.

We learned what we could from military developments and experience of the National Advisory Committee for Aeronautics (NACA). We knew that before NASA was formed NACA had developed a pattern for encouraging and guiding research and development which involved industry and universities as well as Government, in guiding the total national research and development effort in aeronautics and utilizing the results. Under NACA, the policy was to support promising efforts to expand scientific knowledge in areas of aeronautics where practical applications could be foreseen. Engineers as well as scientists were a part of this process and new de-

signs were encouraged. At a point of accumulated progress, a summary of the state-of-the-art emerged and formed a basis for new approaches. Both component and systems development were supported. In the 1950's, this approach that had proven so effective in aeronautics was expanded to include rocketry. Thus for the Apollo effort NASA was able to draw on a well-worked-out basic pattern of intelligent support for research and development in both aeronautics and rocketry. Without this, and the closely related developments of our military services, NASA could not have done its job so rapidly.

Apollo took almost a full 10 years. To get into position to build and fly these large space systems, and to carry out the other parts of the NASA program, a capital expansion of NASA's plant had to be put in place amounting to \$3 billion—one and one half times the amount spent on the entire Manhattan District project. The program was first presented to the Congress as costing between \$20 billion and \$40 billion to be spent over 7 to 8 years.

This was at a time when NASA critics were claiming it would cost \$100 billion. After 2 or 3 years of work and a careful study of what we had learned, Congress was informed that the total cost would be \$20 billion, and that for each year of delay there would be an increase of \$1 billion. The program was delayed 3 years and the cost ended up \$23 billion. This shows, I think, the great value of early planning and the great value of building up a capability to revise the plan as experience shows the need. It also shows the great value of adequate investments in facilities for simulating the conditions to be encountered in a new environment like space, and for testing.

The Apollo requirement was to take

off from a point on the surface of the earth that was traveling 1,000 miles an hour as the earth rotated, to go into orbit at 18,000 miles an hour, to speed up at the proper time to 25,000 miles an hour, to travel to a body in space 240,000 miles distant which was itself traveling 2,000 miles per hour relative to the earth, to go into orbit around this body, to drop down to its surface, and then to repeat much of the process to get back home. While that was the immediate and most visible job of work, the real objective was to create, as a national asset, hundreds of thousands of specialists in all scientific and technical disciplines trained to do what was required to "sail on the new ocean of space." The real objective was to increase the competence of the Nation to a level adequate to meet any challenge and to take advantage of opportunities in the air or in space.

At the start of Apollo, President Kennedy, Vice President Johnson, and many of our Nation's senior leaders felt this increased competence was the only way to assure that our voice and our technological preeminence would be heeded when the large decisions affecting the future of the world were made. There was little doubt in those years among those most knowledgeable that we needed both the image and the reality of being able to contest for a leading position in space exploration and to utilize our growing potential to the fullest extent possible for peaceful purposes for the benefit of all mankind. It is in this broader context that we need to evaluate NASA's management philosophy and performance, and to ponder how different the world would look upon our Nation's power today if Apollo had failed. It is in this same broad context that I believe oversight organizations like the GAO must learn to evaluate the leadership requirements for success in such large-scale efforts. There is also the

problem of how best to communicate such evaluation to Congress.

In making these points it is not my purpose to emphasize the successes of Apollo as one project. Rather I do it to come to this question: In GAO's evolving pattern of evaluating and reporting on the effectiveness of management, and in assessing a particular management's way of working, what can be learned from Apollo? And even more importantly, what can be learned from the broader NASA experience? It is clear that NASA had to fit Apollo into an even larger program that included a search for life on Mars and Venus, an extensive program of studies of the solar system and the universe beyond, and a search for better means to utilize the earth's atmosphere. NASA had to break new ground in the use of materials, in achieving reliability in both large and small rockets, and in advanced aeronautics, through planes that could hover over one spot, and others that could fly more than 4,000 miles per hour. We had to learn to use the private sector for over 90 percent of our work but to build up an in-house capability strong enough to effectively manage all resources employed.

Can some future manager be told without ambiguity whether it was wise for NASA to let contracts that would involve 20,000 prime and subcontractors, over 370,000 employees in American industry, and another 10,000 in American universities? At the time this decision was made some critics were saying loudly that this would absorb all the scientists and engineers in the country and strip bare every other program. How can one judge whether our decision to employ 33,000 in-house personnel was the right one? I would assume that as long as our decisions produced the results intended, and did not do the damage forecast by our critics, we would get

a plus. But how much of a plus? And how much of what worked for NASA can you reasonably expect others to incorporate in their programs? It is certainly true that GAO, on a number of occasions, could have taken a more hard-nosed and critical view of what it found in its audits and investigations of particular NASA projects. That you gave us a chance to use our resources and our ingenuity to work out of our difficulties contributed much to our success. Are there precedents here that will help in the future?

Need for Multidisciplinary Approach

As you in GAO expand your capability to evaluate how well management is performing in large endeavors like NASA, I can assure you that if you dig deep enough you will find that the decisionmakers, at every major turning point, received conflicting advice. I am sure you will also find that one element of many crucial decisions is a deep inner searching and assessment by the senior responsible officials as to whether they have the strength and ability to supply the leadership required to get the job done. I suggest also that you will more and more have to look into whether a prime concern of the leadership group is to incorporate the best of administrative theory and doctrine in their program plans and to couple these with the scientific, engineering, and other essential elements. Under the pressures generated by a large and complex program that is a pretty tall order.

We hear much today of the multidisciplinary approach to problems. Many competencies are needed to reach valid judgments on the elements necessary to success in large-scale efforts. Success will not follow decisions based only on scientific and engineering knowledge.

It is an interesting fact that in NASA's most tumultuous years the fourth ranking officer in the hierarchy was a sociologist—Mr. George L. Simpson, now Chancellor of the University System for the State of Georgia. NASA was deeply concerned with the use of social science knowledge and Dr. Simpson made important contributions to our leadership group.

To illustrate the way our senior executives, Dr. Hugh Dryden, Dr. Robert Seamans, and I, sought a basis for our decisions in theory and doctrine and sought to learn from what had gone before, we made studies of the problems faced by the developers of our transcontinental railroads in the 19th century. We noted that the railroad builders faced, just as we did in NASA, an inadequacy in established management doctrine and practice applicable to the size of their undertaking. We found that in the railroad-building period it was the successful efforts to meet the "problems inherent in the operation of a large railway, rather than theory or previous experience" that determined the nature and content of those elements relied on for success.⁴ There was also a warning in the fact that after 1865 "forces within the American economy threw the railroads into cut-throat competition, that this caused emphasis on the non-operational problems," and that in this situation, "the operational managers were thrust aside and control gravitated to financiers." This railroad experience clearly showed that administrative structures lacking an adequate basis in theory and doctrine, and which did not take into account the full range of operational requirements would prove inadequate. It seemed to us that the railroads never had a chance to show what they could do as an optimized operational system.

⁴ *The Railroad and the Space Program*, Bruce Mazlish, ed. (MIT Press, 1965).

Very early in NASA it became clear that we could never succeed unless we faced up to both the nonoperational and the operational problems of what would certainly become a very large endeavor.

Based on these and other studies, NASA leadership determined to use the best theory and doctrine we could find and to consider the environment outside NASA as an important element in forming our management judgments.

Now that I have expressed my concern over the inadequacy of administrative theory and doctrine to guide managers of large scientific and technical efforts, let me immediately say that there are available to managers, who will examine the literature, important areas where well-proven theory and doctrine can be of great help.

As far back as the 1930's Mary Parker Follett summarized the leader's relation to the fundamental principles of organization, using such words as "evoking, interacting, integrating, and emerging."⁵ She saw the duties of the leader of an organization as to "draw out from each his fullest possibilities," to "understand or get others who understand, the scientific methods which have lately been applied. * * *" She saw the leader in his organizational context as "more responsible than anyone else for that integrated unity which is the aim of organization." She stated that in undertakings of vast size and complexity "success * * * depends on their parts being so skillfully related one to another that the best leader is not the greatest hustler or the most persuasive orator or even the best trader, the great leader is he who is able to integrate the experience of all and use it for a common purpose."

It was my good fortune in the 1930's to study Follett's teachings and seek to

⁵ Mary Parker Follett, *Dynamic Administration* (Pitman, 1941).

apply them in a large and fast growing business enterprise. I tried to do the same in NASA in the 1960's.

One effort among many was the creation of an executive secretariat skilled in communications which formed a kind of monitoring and control overlay on the information and procedures networks of both the line and staff organization. This group reported directly to me as Administrator and constantly followed, through the flow of correspondence, documents, conferences and personal contacts with key participants, the dynamics of the evolving total NASA effort, including both the informal and the prescribed ways of working. This group was charged with developing both knowledge and judgment on the organizational and decisionmaking approaches of the men operating the system and the procedures which they used. They were specialists in the flow of decision-related information. They were charged with assisting, guiding, and teaching those who would take advantage of their help, from senior officials down to key personnel at all levels. Their effort was to encourage everyone to work within the "system" but also to know when *ad hoc* or informal substitutes were being used. It was their responsibility to know where authority resided at a given time on a given matter and what information was flowing in the system, up and down, correct and incorrect. The secretariat was, in one of its aspects a "communications network overlay" and as such was intended to make available reliable information and feedback at all levels as to what was happening so that everyone willing to take advantage of this reality-maximizing tool could do a better job of relating decisions to current reality.

Incentives

Chester Barnard, in his book on the functions of the executive, also written

back in the 1930's, laid down good doctrine on incentives.⁹ He described their role in organizations as "to secure and maintain the contributions *** that are required ***" and stated "that the determination of the precise combination of incentives and of persuasion that would be both effective and reasonable is a matter of great delicacy ***" which, as he said, "can only evolve in a specific situation." In the 1960's NASA followed Barnard's theory of developing its incentives through evolution and learned to apply them effectively in many different situations.

Does anyone in the General Accounting Office today have a judgment as to what would have happened if NASA had not followed an evolutionary path in developing its pattern of incentives? Can GAO find a way to ask the managers of the 1970's, not what incentives they are using, but what systems they have for evolving better incentives? In your search, it will be well to keep in mind Barnard's admonition that this is a "matter of great delicacy."

Organizational Stability and Control

In seeking to develop among senior executives desirable habits of organizational thought and desirable patterns of leadership action, I have frequently found analogies useful. One of those used in NASA, because it came from the field of aeronautics, was the concept of the Wright brothers that a successful flying machine must be designed as an unstable vehicle with a system of controls powerful enough to overcome this instability and also powerful enough to meet all conditions of turbulence in the air; and further that the controls must be so designed as to be natural for the pilot to use. The Wright brothers realized that

⁹ Chester Barnard, *The Functions of the Executive* (Harvard University Press, 1938).

in the turbulent and unpredictable atmosphere a too stable flying machine would not respond quickly to the pilot's controls and that the delay in following the pilot's commands would cause it to crash. They also realized that the complexities of control in the new three dimensional flight pattern, when man was separated from his traditional earth reference, could hardly be accomplished, even by the most skillful pilot, if he had to use a separate lever or wheel to control each axis of motion. Therefore they developed an unstable machine with a fast response to pilot commands and a coordinated system of controls which permitted the pilot to fly it by doing the thing that was natural for him as his senses provided him with data inputs.

In explaining to NASA personnel the objectives of our dynamic and evolving organizational and administrative patterns, it was not hard to convince most of our executives that we were required to fly our administrative machine in a turbulent environment, and that a certain level of organizational instability was essential if NASA was not to lose control. The next step was to show them that we could develop information systems, patterns of authority, and procedural controls that were effective, responsive, and flexible, and which fitted in with what an executive could and should do naturally.

As an example of the importance of this, and the discipline which it generates, let me cite an example. President Kennedy called me to the White House in September of 1963 and told me he was thinking of making a speech at the United Nations which would urge further cooperation with the Russians in space, and that he was somewhat concerned that he would be undercut by adverse reaction from NASA. He told me he had seen newspaper articles quot-

ing senior NASA experts as saying that the Russian and American space systems were incompatible. Although he and I were sure none of them knew this would bother the President and that it represented their best judgment, we both understood it would make my job of controlling their reactions more difficult when he made his speech. Nevertheless, I was able to assure him that NASA Headquarters had sufficient control to prevent his being undercut. I told him that he only had to let me know, with a little leadtime, that he meant to go forward and I would take the necessary steps. A few days later when I was in St. Louis, he sent me a message that he planned to make his speech the next day. In that speech he went much further than I expected and proposed a joint US-USSR lunar landing, something none of us believed possible at the time, but he was not undercut in NASA. There was a very considerable reaction in the Congress, and concern that he was changing his policy away from seeking preeminence in space, but no NASA official added his voice.

When President Johnson, soon after President Kennedy's death, was endeavoring to get a tax bill through Congress, he called me over to his office to say that a certain Senator was demanding assurance that for the next year NASA expenditures would be held below \$5 billion. This was the price for his support of the President's tax bill. This would hold back our fast-building effort, but again I was able to assure the President that if he decided to do this we had sufficient control to accomplish it although if the hold down went beyond the 1 year it would seriously affect the program.

Need for More Research on Leadership

As we think about what the experiences of the past 25 years can mean for

future managers, let me close by stating my conviction that we need much more research on what executive leadership in Government needs to do to nourish and effectively attend to the care and feeding of the organizational entities without which we cannot develop and maintain all the qualities needed for success in large-scale efforts. Many competencies are vital. We know that some leaders can bring all of them together for great accomplishments, but we know little of how they do it. How a leader placed in charge of a large, complex effort can relate his operational to his nonoperational problems and to the forces at work in the environment needs a great deal of study. I believe that in Government today we have no greater need than to involve scholars from many disciplines in this research, scholars who can observe and accurately describe what successful senior governmental executives do to produce success and what causes them to fail. We particularly need close cooperation between these researchers and our best governmental executives so that the research results can be translated into new and better teaching in our graduate schools. And then we need to select and support the kind of executive—the kind of leadership groups that can bring this new knowledge into use in real-life situations. And, to add to all this, we need the kind of audits and evaluations by GAO that will enable Congress to feel confident that it is using its oversight function to improve program performance in the executive branch as well as to improve its own performance in the authorization and appropriation process. This, to me, is one of the major challenges to the GAO in its second 50 years.

Discussion

Evolution of the defense acquisition process has produced excessive and re-

dundant levels of management both in the Department of Defense and in industry plus a proliferation of functionally specialized staff groups whose functions tend to be viewed as ends in themselves. This has led to diluting management authority and obscuring responsibilities, particularly in such areas as contract administration. How can we eliminate unnecessary layers of management and provide effective coordination and control?

Mr. Webb: I think that any group of senior leaders in an effort such as a large acquisition project must have a thorough knowledge of the resources it requires for success and not lose control of the power to direct those resources. It must not become the prisoner of the very forces which they must rely on to get work done. It has seemed to me—from studying the procurement systems that were developed back as far as 1926, when the aeronautical industry was required to go to design competition, and then later through the 1930's when profit limitations were being put on procurement but when an exception from such limitations was made to encourage research in scientific equipment for fire control, communications, navigation, and target detection—that it is very important to recognize that in very large efforts, such as for World War II and in NASA, the procurement relationships must be so arranged that when you have a major or unexpected problem, the work habit to follow is Dr. von Braun's practice. If he had a major failure on a test and a worker stepped up and said, "Wernher, I know why that rocket failed, I goofed; or Joe Smith goofed," he wouldn't criticize the person at fault but would hand him a bottle of champagne. When a rocket fails it generally explodes and burns, and it is very hard to get the information needed to fix the next flight. Von Braun knew he couldn't do any-

thing about the one that had just failed, but he could use this kind of information.

In NASA we departed from the previous practice of having the procurement organization do the procurement and forced the three senior officers—Dr. Dryden, Dr. Seamans, and myself—to make the decisions on every contract that was over \$5 million. We formally appointed Source Evaluation Boards that were required to develop their own plan for evaluating every facet of all proposals—the business management, the engineering, the science, and such questions as the reliability and capability of the contractor to deliver on his contract. This included his ability to meet the uncertainties that would be faced in the development. These Source Evaluation Boards were required to report in numbers rather than in adjectives. Instead of taking those reports home and reading them by the bedside lamp, NASA's three senior officials sat side by side in a formal hearing, heard the evidence presented by the Board, and asked many questions. We had sitting with us people like Paul Dembling from the Legal Office, the procurement experts, the small business set-aside experts, and all Headquarters staff that were concerned. The staff experts asked many questions so as to evaluate the thoroughness of the work and to test the assumptions and judgments of the Source Evaluation Board members.

The three of us then went to another room, discussed the basic elements that would determine success or failure, and made our decision. In essence, we were required to have a direct confrontation with the problems at the beginning of the work effort and this gave us a much better basis to make the project management decisions and follow what happened as work went forward under those contracts. But even more important, through this process, day after day, we

three senior officers came to know a great deal about the resources that were available in American industry where about 95 percent of our dollars were going. And the point is that through the Source Evaluation Board process and the frequent program reviews which were conducted on the same carefully structured basis, everybody in NASA was constantly reminded that the agency's three senior officers were following the agency's progress on its projects almost on a day-to-day basis. From this they had confidence that, if something went wrong or needed to be done differently than it had been planned, they could get a receptive hearing before people at the top who were clearly knowledgeable. Also, through the Source Evaluation Board and program review processes, we were able to clarify and overcome deficiencies in the understanding of our headquarters and field center leaders as to NASA policies and the proper procedures to be followed.

So I would say that in large acquisitions you must have a clear idea of how not to lose control, how to effect a continuous but not too detailed control, and how to inspire confidence up and down the organization that knowledgeable people are always available to make decisions when needed. It seems to me that in research and development particularly, there is a need to do all possible to have the project leaders feel strong support. This is related to your question of not letting a gap develop between the lower and senior levels. In these large developmental projects I think it is very important to get away from the idea that computers, or PERT or critical-path analysis, or companion costs can show you exactly how to do the development job. We used all of these, but also found that many of the leadership and social science features are not susceptible to this kind of treatment. Understanding the total problem of leadership and developing

valid judgments as to how far the leadership can go in pressing the organization to do what is required are not revealed in computer analyses. It has seemed to me that in many cases, you find too late that a computer analysis that looks good is not developed from a basic file of reliable data, but it is based on information drawn off from aggregates somewhere up the line and sometimes from data prepared for another purpose.

Another problem arises when the contracts are so detailed that when you encounter technical troubles you have to go to the contract to decide what to do instead of identifying and putting into use the kind of technology it takes to fix the situation. Of course it is important to have a relationship with R. & D. contractors under which you can determine at the proper time the full cost of a fix and the extent of the contractor's liability. The in-house capability to determine the practicability of a contractor's proposed technical effort to solve a problem and to judge its probable cost is extremely important. There are three questions in most such cases: Can we rely on the contractor to accomplish what he proposes? Do we have to put in our own technical judgment ingredient to make sure that the fix will work? Do we bring in another contractor to supplement these elements?

Project managers have to make those decisions—make them almost in real time—and to do so they must have confidence that, up the line, the kind of judgment and assumption basis that they are using will be understood at the top. So I say that in research and development, if you expect the unknown and plan ways to fix the problems that you will certainly encounter, you are a lot better off.

Some writers believe that the present procurement atmosphere between Government and industry is strongly ad-

verse, whereas what is really needed is a stronger sense of cooperation in attaining what is really a common goal. Do you believe that there is a need to develop a better working relationship between Government and industry? And, if so, what do you think could be done about it?

Mr. Webb: I believe that you have to have both cooperation and conflict. In the selection of one contractor out of say four or five who are making proposals, it is very important to have something of the adversary relationship as a component of the governmental process. In the negotiation of the contract, I think it is very important to have some kind of a reserve or fall-back position. You will note that in NASA we announced who had been selected for negotiation of a contract, always with the implication that, if we cannot negotiate a satisfactory contract, there are other contractors we could turn to.

I think that this is basic to our country's way of doing business. Our courts are based on an adversary process. Business understands this and it is constantly looking at its competitors, as well as the Government, and there is a sort of a three-way adversary relationship. But it seems to me, even in that framework, there must be cooperation, and within the early phases of a major development project. It is very important for the Government to tell all contractors those things that are important to success. It is very important also to have intelligent thought by both governmental and contractor personnel as to how each is going to proceed to get the job done. In this kind of an arrangement there is no substitute, that I've found, for confidence of the industry leaders in the people in the governmental set-up, that they are going to face up to all the situations, all the problems, and do a fair, honest, and honorable job.

We had a policy in NASA to keep an open door to the senior officers of companies, or Governors, Senators, or Congressmen, or chambers of commerce, who wanted to come in and say, "This contract is extremely important and makes all the difference in the world to our State." In answer I would say very frankly, "We are glad to hear what you have to say; we will listen to it; we will keep it in mind. But the decision is going to be made in the following way, and I, as a person, am only one of those involved in this process." I would tell them, "You can see that it's a self-policing process, so if something—some force—is brought to bear to distort the process or to bring in inequities or favoritism, this is very likely to come out through the self-policing features and find its way into the newspapers."

Now when these kinds of procedures are used, it makes it easy for industry leaders, presidents of companies—fortunately for NASA I had known most of them in the aerospace industry for many years—to come in and spend an hour with a senior Government official and during the first 30 minutes wear his company hat and say what he thinks is in his company's interest. I believe that's helpful, and it's also all right and helpful in the second 30 minutes for him to say he is putting on his public-interest hat and talk about the problems of the industry, how NASA looks to him, and what interdepartmental relationships are causing problems. I'm willing to listen to what industry leaders think would make for better relationships in the public interest. Maybe that will at least give you my view. I'm sure there are others who have different opinions about this.

Many people believe that one of the causes of cost growth starts at the source selection process, that is, that the tendency to award development contracts largely on the basis of price has created

a "liars' contest." Do you believe this is a problem? If so, do you have any suggestions for a solution?

Mr. Webb: Well, I think that part of this is maintaining adequate competence within the Government to form a judgment on how the Government is going to get the most for its money and how it is going to get the job done that it is starting out to do. Let me point out that in the lunar orbiter award we chose the highest bid, not the lowest bid, and that every one of the five flights to the moon in this project was successful and the entire moon was mapped in just five flights. The basic reason that we chose the highest bid was that there was incorporated into the system a means of protecting film from solar radiation in the event of a solar flare. It happened that on the first flight there was a solar flare that would have destroyed the film if we had chosen any other system. As might be expected, we were challenged in the Congress, and the low bidders were very upset and felt that the Government had done a wrong thing. But in NASA we said "We did the right thing because it was the best way to ensure success for the project."

Now I think you must have a way to develop a basis for good judgment and then you must have the courage to apply that judgment. It seems to me that there are times, and certainly we have done this in NASA, when you reject a low bid for good and sufficient reasons. I think you must take account of any factor, including a clear effort to buy-in, that is not realistic in terms of getting the work done. There was no substitute in our program for the clear understanding by everyone that the rocket which was being built was going to be launched, that they were going to be there when it either succeeded or failed, and that their costs as well as their technical work were going to be closely followed. So all of their

decisions were looking toward that moment of truth when the rocket would succeed and fly or would fail. We all were clear that while you can bring back an airplane that has a few troubles and improve it, and send it off again, a rocket has to work on its first flight or the whole thing is lost.

Recognizing the need for encouraging the advocacy function in program management, what steps do you see as essential for top management to employ to protect itself against "brochuremanship"?

Mr. Webb: Again I think that judgment must be based on careful, intelligent application of thought and analysis. As a unit of mass or energy, the total of human intelligence is infinitesimal in the vastness of the universe. But if you look at human intelligence in terms of its effect on everything we do, you will find that it is the most tremendous and powerful force we have. It seems to me that, in the application of human intelligence to the problem stated, it is possible to analyze what you need for success.

In NASA we spent about 5 percent of our funds for in-house capability. We started out with many people in industry knowing more about how to make big rockets fly and the various technologies related to them than we did. We determined that we were going to change that balance to where we in NASA, the Government people, knew more on every subject vital to our success than did the people on the outside. Therefore, when a contractor came to us with a proposal, such as the lunar orbiter proposal, we subjected it to the most careful examination and scrutiny. If a contractor ran into a problem he could not solve, we worked with him on the specifics of the problem and sometimes would take his equipment into our own laboratories for analysis and tests. We built the needed

centrifuges, vacuum chambers, sun simulators, and other test facilities so both we and our contractors could use accurate measurements rather than conceptual arguments in resolving issues. We added \$3 billion worth of capital plant to the \$1 billion worth that NACA had already put in. So here was a \$4 billion capital plant manned by 33,000 competent civil service people working with another 380,000 in industry. Not all of the 33,000 in-house people were involved in technical evaluations; there were administrators, managers, and lawyers, but basically we tried to have in our various units all the skills and disciplines that would permit us to apply intelligence to whatever problem arose, whether it was expected or unexpected. And I believe that this is the only way to proceed in these very large endeavors.

One of the things which you have mentioned is the value of the NASA laboratories to your program. Do you have any general thought as to whether similar problems of other agencies, such as the Department of Defense and AEC, that have large R. & D. programs, could have been dealt with better if the agencies had similarly equipped laboratories?

Mr. Webb: I am convinced that more in-house competence would have been of great value. When North American started to reengineer the Apollo spacecraft, after the 204 fire, we were able to send Dr. Eberhard Rees, second ranked official at Huntsville, to render expert advice and assistance at the North American plant and at the same time to send astronaut Frank Borman out to serve as the chairman of the spacecraft reengineering committee. We didn't just say to North American, "It is up to you to produce a reengineered capsule." It was our responsibility as well as that of the contractor. We had the capability to get right into the job with the company and make sure our combined know-how

would produce an acceptable result. Frank Borman knew he would have to fly in the next spacecraft. As a result of the fire, we had learned that, in the whole industrial structure of the country, very little was known about the true value of how things burn under special conditions. We had to do a massive job of testing in a hurry. We had to join our in-house capability with that of our contractors to amass the new data and apply it to the new designs.

For this kind of thing, you cannot simply let a contract and assume you will get what you need. I think that many project managers have tended to rely too much on computer analysis, logical analysis, and model-building because they did not have the in-house capability to take a piece of equipment into a laboratory and test it to find out whether it works under unusual conditions, how reliable it is, and this kind of thing. The fact that the project manager and the contractor knew that NASA had this kind of capability was a very strong force for better performance on the part of our industrial partners.

May I give you one illustration? We used the instrumentation laboratory at MIT for the Apollo guidance system. We did this because we needed gyros that would be adequate and thoroughly reliable for doing our job, but we did not want to pay for research for some other purpose. We knew we did not have the capability to monitor an industrial contractor in this field in the same way we could in areas like propulsion. Both Seamans and I had worked closely with Dr. Stark Draper, the Director of the laboratory in World War II and later. We were sure he was the best leader we could get for this very complex project. The result was that for about \$66 million, Dr. Draper and his colleagues at MIT give us these kinds of gyros and the designs needed to produce them in quantity. We

then went to industry with over \$200 million worth of procurement. But the industrial contractor was constantly monitored by NASA and by the MIT people who had done the original design. The system was so critical to the success of Apollo that all agreed this was necessary. One of the contractors ran into labor troubles and had to lay off some of the younger workers who had the greatest know-how. As a result, we began to get unreliable gyros. We had to spend about \$3 million to pick up these unreliable gyros from the industrial contractor and to test them at the MIT laboratories to be sure those we used in Apollo would work properly.

This kind of relationship, a kind of over-the-shoulder supervision, is very complex, and I don't know that I could describe it in every detail. But it seems to me that you simply cannot develop very large and complex systems without the kind of in-house competence we found so effective. It is doubly important now that complex acquisitions require more than half the money for electronics. The electronic components of these systems are very difficult to integrate with the mechanical components.

The growing complexity of weapons is resulting in projections of higher and higher costs. May we have your views as to whether truly alternative sources can be maintained simply to have competition and whether this might not be more costly to our economy than close management of an arsenal industry and the use of a nonprofit organization?

Mr. Webb: In the NASA program, once a contractor was selected there was no alternative source unless it became clear that a process or a component could not be delivered in time. Then alternative projects were developed and new contracts let. In most cases, the cooperative efforts of our contractors and

our in-house people provided success so that no alternative contractors were required.

I certainly think that there are some jobs that the nonprofits can help you with. But look at NASA's experience. We chose not to create a single nonprofit organization. When we asked Bell Telephone officials to create a computer capability for Apollo and a software capability, which became BellCom, they first proposed it as a nonprofit organization like Sandia. Our answer was, "No, we want to hold the Bell top management responsible and we want you to put your best people on it. We want to make it easy for you to transfer the needed people in or out. If they have stock options we want them to keep them, so this will not become a criteria for judging a transfer." We made it clear that we preferred an ordinary profitmaking entity of the Bell System, and the officials after considerable discussion finally agreed.

In another area of Apollo, we went to a nationwide integrated checkout system, which cost about \$1 billion. Each engine and major component was measured by the same type of test equipment at all locations, and computer data banks were used to store the results of this accurate, reliable, and uniform system for testing, whether the tests were conducted in California, Florida, or some other place in between. To get this done, General Electric took a contract and set it up as an integral part of its organization, on its normal profitmaking basis.

On the other hand, we did absorb the

nonprofit Jet Propulsion Laboratory (JPL), which had been established by the Army and is run by Cal Tech. As NASA's lunar and planetary phases expanded, it was extremely difficult to get JPL to think in terms that it constituted the only lunar and planetary exploration capability on which the Government could rely. It was in one sense the Government's in-house capability. In another sense, JPL people had the feeling that, as university people, they ought to do the research work on the projects and handle them the way they thought best, that the state-of-the-art would thus be best advanced, that science would advance, and so forth. Yet there were scientists and engineers in other places who needed to be incorporated into the governmental pattern for lunar and planetary exploration.

So we had the experience of having one quite large nonprofit operation which was very successful in its projects—Ranger, Surveyor, Mariner, and so forth—but which, in between and in the process, could not adopt the kind of operating pattern that the leaders of NASA thought was essential for the total program operations of the U.S. Government. I believe there is no great virtue in being a nonprofit organization. I am a great believer that if everyone is doing one thing, you might want to try something different, and that is what we did in NASA in this case. We simply said that we were not going to rely on these nonprofit organizations to the extent of becoming their prisoner. They might be more difficult to fit into our system of working than industrial contractors.



Robert C. Weaver
Professor of Economics
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Dr. Weaver, a native of Washington, D.C., has distinguished himself at all levels in government. In 1954-55, he was Deputy Commissioner of Housing for New York State and from 1955-59, State Rent Administrator. From 1960-61, he served as Vice Chairman, New York City Housing and Redevelopment Board. From 1961-66, he was Administrator, U.S. Housing and Home Finance Agency, and in 1966, President Johnson appointed him Secretary of the newly created Department of Housing and Urban Development, a position he filled until 1968. In 1969 and 1970 he was President of Baruch College, City University of New York.

Dr. Weaver is the author of numerous books, monographs, pamphlets, and scholarly articles concerning housing problems, problems of Negroes in the United States, race relations, and urban problems.

Among his public service activities he has served as Chairman of the National Board of Directors, NAACP, and Chairman and later President of the National Committee Against Discrimination in Housing. He is a fellow of the American Academy of Arts and Sciences; Chairman, Task Force on the Democratic Development of New Towns; Member of the Visiting Committee of the Joint Center for Urban Affairs, M.I.T. and Harvard University; and Member of the National Academy of Public Administration.

Dr. Weaver is a graduate of Harvard College (cum laude) 1929 and holds M.A. and Ph.D. degrees from Harvard. He has received LL.D., Litt.D., D.H.L., D.S.S., and D.P.A. honorary degrees from 30 colleges and universities.

Management of Urban Programs

Speaking as a former Government executive with substantial responsibilities for improving housing and other aspects of urban life, Dr. Weaver presents some important basic principles for successfully planning and managing urban programs. He emphasizes that urban program managers, and evaluators as well, should have a single overriding purpose—to provide the best possible delivery of services to society. Constant interchange of ideas and information is required and managers, evaluators, and legislators must become more concerned with the nature of the urban structure and its problems.

I

Lee Rainwater recently published a study of black family life in a Federal slum. In the preface of the book that evolved he observed: "the research on which * * * [it] is based began as a study of problems in a public housing project, Pruitt-Igoe in St. Louis, and ended as a study of the dynamics of socioeconomic inequality."¹ In a somewhat similar vein, my approach to the management of urban programs expanded to include analysis of the nature of urban problems and program development.

The first requisite of good management is an effective program. That, in turn, calls for an understanding of the problem or problems involved and machinery for choosing from alternatives that which is most efficient and effective. With this understanding and conscious choice, it is possible for competent peo-

ple to evaluate meaningfully the effort and for administrators to relate their and others' appraisals of their activities. Thus we must turn our attention to basic research, tools for program development, and modes of evaluation. In each of these there is a significant role for governmental and nongovernmental institutions.

In this paper I shall say less than the title suggests about management *per se*. This is deliberate. It is not meant, however, to imply that administrative skills and management expertise are no longer required. As a matter of fact, as government becomes more and more involved in domestic social and economic—as well as ecological—activities, a higher order of performance is needed. But this is old hat for you who have long been in the business of stressing the quality of management and reviewing its results. You know that it is not enough to formulate new programs and fund them. Unless they are operated with skill, the results are wasteful, inefficient, and sometimes disastrous.

¹ Lee Rainwater, *Beyond Ghetto Walls* (Chicago, Aldine Publishing Company, 1970), p. VII.

Program Selection and Evaluation

To do more than refer to these obvious conclusions would, in my opinion, repeat what your experience has made commonplace. Rather, I will concentrate upon the new dynamics of effective management. They are in the areas of program selection and evaluation. Unless and until all elements in government join together in selecting programs with greater understanding of social institutions, the environment that surrounds us, human behavior, and potential effectiveness, the best administrative skills will be misdirected.

I approach the subject matter of this lecture from the perspective of one who has long been concerned with urban affairs and housing and who has, on occasions, differed with specific findings of the General Accounting Office. (A notable example was the GAO report on the design of a public housing project in the Bay Area of California.) This, however, is not the occasion for discussing such differences or rehashing piques of the past. Time, fortunately, mellows one, and its passing puts into proper perspective what once seemed to be all-important controversies. You may therefore relax in the expectation that I shall today attempt to display an unprecedented degree of objectivity. I cannot, however, resist marveling that a program operator—albeit an ex-administrator—has been invited to lecture to the General Accounting Office.

Importance of Clearly Defined Goals

Management of urban programs involves not alone the evaluation of specific activities in terms of what is assumed to be their mission but also a constant effort to define more clearly the goals involved. It implies a recognition that urban programs are interrelated, so that action in

one area often produces unexpected and frequently unanticipated consequences in other aspects of the urban complex.

Before we can achieve real advances in management of programs addressed to urban problems, we need to widen our horizon from concern with a cluster of finite activities to consideration of a system. This can best be illustrated in the context of specific examples.

One of the problems is confusion as to the goals and objectives of existing or proposed programs. This matter can be approached from two points of view: the basic objectives of a complex activity, such as urban renewal, or the goals of a whole complex of activities, such as Federal assistance in urban affairs and housing. In either instance, it is clear that evaluation of performance must be developed in the perspective of the effort's announced objectives. If there is ambiguity in the stated or implied goals and objectives, a given performance record may simultaneously be criticized or defended by several competent evaluation agencies or individuals. Each can and does cite impressive evidence in support of its or his position.

There remains, however, the larger issue of whether or not the program being evaluated is either capable of achieving a given objective or the most efficient and effective instrument for doing so. As I shall elaborate later, failure to recognize this basic factor leads to confusion between evaluation of results and evaluation of goals.

Something more should be said about goals and objectives at this point. "Realization as soon as possible of the goal of a decent home and a suitable living environment for every American family" was enunciated as national policy in 1949. It was a statement of a long-term result, the desirability of which was obvious and the time of realization un-

stated. Thus there was no real proposal to evaluate: rather, there was dictum of an achievement in the indefinite future. By 1968 Congress reaffirmed the earlier goal and declared that "it can be substantially achieved within the next decade by the construction and rehabilitation of twenty-six million housing units, six million of these for low and moderate income families."

In contrast to the broad goal of 1949, the 1968 action set forth a specific objective to be achieved in a specified time. The act to which the above statement was a declaration of purpose included two new Federal Housing Administration (FHA)-insured subsidized rental and sales housing programs and reorganization of the Federal National Mortgage Association. The 1968 national housing goal provoked much controversy. Some asserted that it was unrealistic in light of the capacity of the building industry and the availability of required physical and financial resources. Others criticized it as too modest, declaring that it could and should be achieved in 5 rather than 10 years. Both positions were generally undocumented, relying upon conventional wisdom or invoking wishful thinking.

At this point the Kaiser Committee on Urban Housing—a Presidential task force—carried out an independent and comprehensive analysis of national housing goals. Its conclusions were similar to those produced by earlier comprehensive analyses of the Department of Housing and Urban Development (HUD). These developments demonstrate that a specific goal with delineated objectives can be, and frequently is, evaluated both inside and outside of government soon after it has been enunciated.²

²Goals can be altered by changing definitions. "In the Second Annual Report on National Housing Goals, President Nixon revised the goal by including mobile homes within the definition of

Goals and objectives are no less crucial in audits and reviews aimed at promoting efficiency and economy, while assuring that legislative intent is followed.

In the process of program operation, frequently the stated objectives are questioned and modified. Not always, however, is this specifically articulated. Or the operating agency, recognizing the inadequacies or ambiguities of a program, may attempt to shift or modify its emphasis or direction. Sometimes, of course, this gives rise to new or amended legislation or the development of new legislative history to justify changes in operation. But highly desirable changes may be initiated by administrative actions alone—actions, incidentally, which may have congressional support. Usually, complicated programs undergo many significant changes, and those who evaluate the activity do not always recognize the reasons or authority for such modifications.

When evaluations are undertaken by a governmental agency, such as the General Accounting Office, there is a con-

housing units. The administration forecasts that 4 million mobile homes will be built during the goal decade. Since most mobile homes are thought to be principal residences, their inclusion broadens and improves the definition of housing units, but it also implies a reduction of 4 million units in the goal as originally defined." Charles L. Schultze with Edward K. Hamilton and Allen Schick, *Setting National Priorities: The 1971 Budget* (Washington, The Brookings Institution, 1970), p. 96.

Discussion of national housing goals continues as new data and situations develop. See, for example, Sherman Maisel, *Money and Housing*, a paper delivered before the Producers' Council Conference, Washington, D.C., May 6, 1971; C. L. Schultze, *et al. op. cit.*, pp. 282-288; and Henry B. Schechter and Marion K. Schlefer, *Housing Needs and National Goals*, papers submitted to Subcommittee on Housing Panels on Housing Production, Housing Demand, and Development of Suitable Living Environment, Committee on Banking and Currency, House of Representatives, 92d Cong., 1st sess. (Washington, U.S. Government Printing Office, 1971), pp. 1-139.

tinuing need to make sure that findings reflect program objectives. Obviously, if the administrator sought to achieve goals and objectives differing from those accepted by GAO, the record of achievement may be poor. If, on the other hand, GAO accepts a mission which deviates from the stated or evolving objective of the program, this poor rating may, in reality, reflect good performance. There is more food for conflict in defining goals than determining what results occurred.

Evaluating Objectives

The question remains as to the degree to which GAO should attempt to evaluate the established objectives of programs. As an arm of the legislative branch of Government, its first responsibility is to look at performance in the light of the pertinent legislation. But even here, more is involved than reading the law and its legislative history. Comprehension of problem areas and appreciation of changes in administrative emphasis are needed. Where this broader point of view is accepted, the GAO becomes more effective in carrying out its traditional function of recommending legislative changes either to modify or clarify program objectives and content. And certainly it should make appropriate recommendations for desirable further evaluation where such is beyond its audit capacity but revealed in its review.

Where private evaluation is involved, it has been my experience that frequently the researcher establishes his own set of program objectives or fails to inform himself on the legislative history and the basis for current administration actions. Thus there is often confusion between evaluation of objectives and evaluation of performance. Granted that results may be less than maximum or even inimical to solving a problem, from the point of view of upgrading

management of programs, it is desirable to differentiate between these two types of evaluation.

II

The Problem of Conflicting Goals

The frequent lack of agreement on objectives between the operators and the evaluators is really a reflection of something more pervasive—the absence of clear program objectives and the inevitability of their modification over time. And there is impressive evidence that urban affairs and housing programs have been peculiarly plagued by indefinite and often conflicting objectives. Obviously, this seriously complicates application of PPBS to urban activities.

Urban renewal, for example, was conceived in controversy and it was nurtured in controversy. In the process, two extreme schools of thought have grown up. On the one hand, there are those who can see no good in the program and would do away with it. The champions of urban renewal, both inside and outside of government, have often been equally dogmatic in its defense, denouncing all critics as biased and all criticisms as unfair.³

One of many sets of conflicting goals in urban renewal comes to mind. As the program operated in scores of localities, its main objective was to attract middle-class and affluent whites residing in the suburbs back to central cities, thereby strengthening the tax base of the city. But it was also a federally assisted program for slum clearance, and the legislation clearly delineated this as a major program goal. This implied a responsibility for providing and upgrading the supply of housing for the poor and the disadvantaged. Clearance of slums meant

³ Robert C. Weaver, *Dilemmas of Urban America* (Cambridge, Harvard University Press, 1965), p. 40.

displacement of large numbers of nonwhites, reducing the amount of shelter available to a group already undersupplied, and occasioning further upward pressure upon rents, especially for the disadvantaged. But it did more. Since, during the earlier operational phase of urban renewal there was a tight housing market, the need for relocation resources and resulting upward pressures on sales prices and rentals created incentives for whites to sell or rent their central city houses and move to the suburbs. Or, had the central city become as attractive to whites as was assumed, more would have come back and fewer would have left, thereby lessening the amount of housing available to nonwhites and slowing the filtering process.

Urban renewal could never have been, simultaneously, the economic savior of the central city, an instrument for clearing all the slums, the means of attracting hordes of upper-middle-income families back into the central cities, and a tool for rehousing former slum dwellers in decent, safe, and sanitary housing, while generating a volume of construction involving private investments four to six times as great as the public expenditure. It could, and did, in its various aspects, do some of all of this. But the expectation that the total package would be realized through urban renewal was unrealistic from the start.⁴ Few evaluations of the program recognize this.

Model Cities

Model Cities was an effort to encourage development of specific goals and minimize conflicting objectives. In addition, by encouraging the utilization of many existing programs in a well-conceived package, it was hoped that these could complement rather than cancel out each other, at the same time that supplementary grants, operating within the

constraints of an approved plan, would be *de facto* block grants. It was assumed further, that the coordination of efforts through detailed planning would be most effective at the local level rather than in Washington. And this seems logical, providing a potential for development of greater flexibility in categorical aids and providing funds for related activities in fields not covered by existing grant-in-aid programs.

If, as one academic evaluator of Model Cities has suggested, local officials have opposed the approach, asserting that detailed short- and long-term plans are superfluous, this is not necessarily a defect of the concept of Model Cities. Rather it may be a criticism of the planning process employed in certain, but not all, localities, reflecting, perhaps, the purchasing of application preparation rather than a true effort or capacity to develop a program responsive to local needs.

The Model Cities program is significant, too, because it reflects the problems inherent in experimental and demonstration efforts. The original concept emerged from a Presidential task force. It was intended to demonstrate how consolidation of existing grant-in-aid programs, *de facto* block grants, and local planning could be combined to produce human and physical rehabilitation in blighted urban areas. Initially consideration was given to selecting a single city as the demonstration area. Then, because of the heterogeneous nature of the country, more than one location was proposed so as to encompass various sections of the Nation and cities of different sizes. Because of the magnitude of the problems and the recognized necessity to embrace relatively large sections of the localities involved, the amount of authorization proposed was large. Only a limited number of cities were contemplated, and the activity was originally called the Demonstration Cities program.

⁴ *Ibid.*, p. 75.

Semantics and politics occasioned a change in the name and a radical modification in the scope of program. In the hearings before the Banking and Currency Subcommittee of the House of Representatives, a member observed that (in 1966) we had enough demonstrations in our cities without proposing a program so identified. Demonstration Cities became Model Cities. Earlier it had become obvious that the Congress was not going to authorize or fund a program involving large expenditures unless more than six to 10 localities could hope to participate. Thus, ultimately some 150 localities were included. What was conceived and proposed as a demonstration became a full-fledged operational program.

Even from the vantage point of hindsight, I doubt if it could have been otherwise. Two factors were overriding. First, there was a national desire to do something about the erupting ghettos.⁵ Second, regardless of the extent of participation, any action in the field required large expenditures. These two considerations meant that participation had to be expanded or no action would be taken on the proposal.

Model Cities never had a chance as an experimental program.⁶ Yet because we

⁵ "The problems [of Urban America] are so serious that small-scale experimentation is insufficient. Massive undertakings are necessary. The politicians must be prepared for failures and they, in turn, must prepare the public. Thus far no new generation of metropolitan leaders has appeared willing to take the kinds of political risks implied," Alan K. Campbell and Jessie Burkhead, "Public Policy for Urban America," in Harvey S. Perloff and Lowdon Wingo, Jr., eds., *Issues in Urban Economics* (Baltimore, The Johns Hopkins Press, 1968), p. 644.

⁶ For a brief discussion of recent developments in the program, see Schultze, *et. al.*, *op. cit.*, pp. 94-96, and Judson Lehman James, *Evaluation Report on the Model Cities Program*, papers submitted to Subcommittee on Housing Panels, *op. cit.*, pp. 839-856.

cannot delay action in vital and crucial areas until our knowledge about their nature is comprehensive or definitive, experimentation is a must. It is a part of the trial and error process that yields knowledge and comprehension, providing a basis for program design, planning, and evaluation. Of course such action should be carefully formulated to assure its yielding results. Congress and the GAO need to have a full understanding of what is involved and be prepared to avoid recrimination when some of the experiments fail. And any experimental effort must have funds for its evaluation as an integral part of the program, as was provided in the Model Cities legislation.

From the Model Cities experience, it becomes clear that an experiment must be of limited size if it is to maintain its integrity as an experiment. Otherwise there is the probability that political pressures will direct it into an operational effort or defeat it.

The Systems Approach

This brings me to another point. Because local governments are so harassed by financial troubles, they tend to assume that all urban problems are basically financial. While, of course, greater financial resources are an absolute requirement, money alone will not solve our urban ills. Equally important are greater knowledge and more qualified people to do what needs to be done. Three B's are involved: brains, bodies, and bucks. Our primary need is for better understanding of the urban complex and more sophisticated techniques for dealing with it. All involved in the process—the executive and legislative branches of Government, and the evaluators, public and private—share this need.

During the last decade, in the field of urban affairs and housing there has been

less emphasis upon administration and effective management and more upon analysis of how modern society really operates. Much has been said about the potential of the systems approach to urban problems. Such an approach, ideally, would reveal the impact of a proposed action upon other elements in the system. This would make manageable the will and resources to change the urban environment. So far, we have not been able to perfect such an approach, reflecting, in part, the departmentalization of knowledge in our universities and the complexities of transferring the technology of weapons and aerospace to human and urban problems. For as we have been reminded, the systems approach "enjoyed its initial success in a field in which the goal was preselected and clearly defined, unlike the manifold goals to today's heterogeneous city."⁷

Yet there seems to be great promise and immediate application in utilizing systems analysis, not to set goals, but to select the best program mix from a set of programs so as to get the most service delivery from the resources available. To date this approach seems to be more effective in solving specific and less complicated problems than broader and interrelated issues. It should be utilized wherever possible, as we continue our search to discover techniques which will avoid the continuing development of a bundle of conflicting finite solutions of specific, but related, problems.

III

Revenue Sharing Objectives

The current controversy over revenue sharing illustrates the importance of

⁷ Walter A. Scheiber, "Commentary of Relevance of Science and Technology to Urban Affairs," *Governing Urban Society: New Scientific Approaches* (Philadelphia, The American Academy of Political and Social Science, 1967), p. 72.

sound objectives. All of the major proposals espoused by responsible advocates would succeed in distributing funds to State and local governments. Most, in varying degrees, would lessen reliance upon regressive taxes. On the other hand, some of the proposals will do little to stimulate State and local tax efforts or make their revenues more reflective of economic growth. Nor will others contribute significantly to raising the income levels of the poor or dealing with the problem of tax revenues resulting from residential mobility and institutional restraints. Only a few are responsive to the need for national support of social services which are national in scope and impact.

Clearly, until there is some decision as to what the principal objectives of the program are, no meaningful determination can be made of the best tool or tools for achieving the desired results. And the only way there can be significant evaluation is to look at results in light of stated goals and an analysis of the soundness of these goals.

More is involved in urban affairs and housing. There are two difficulties. The first is related to goals and policy. It involves failure to differentiate clearly between general and special revenue sharing, not recognizing that special revenue sharing and categorical grant programs provide different solutions to different types of problems. After half a century of urbanization, this Nation affirmed a national concern for urban development. The proposal for special revenue sharing in this field would say that this is no longer a national concern but solely one for random local decision. The second—not unrelated—is a matter of management. Are our States and cities, acting individually and without some national guidelines, capable of extracting the maximum benefits in an effort which has national and regional

implications? The record of urban development to date suggests a negative answer.

This is what the controversy is all about. Fortunately, in this instance, discussion of goals and objectives is waxing eloquently before the effort is defined in law.

Problems Are Complex

In housing and urban affairs, any significant action involves a complicated process and affects a complex organism. Both the administrator and the evaluator need to understand these complexities and the complicated processes that are set into motion by the programs. And, of course, better laws would be passed, had the congressional committees access to more realistic and sophisticated analyses of the urban process. Much of the frustration and many of the failures reflect a lack of such information. Indeed, we have frequently depended upon trial and error since our analyses and models are often crude and imperfect. But only recently and inconsistently have we added the crucial ingredient of evaluation. For if we are to learn by trial and error, there must be a systematic analysis of program effectiveness.

Billions of dollars have been spent for compensatory education for poor children, and yet there is little agreement as to how effective the effort is or how best to design the activity. In urban development and housing similar problems exist. As suggested above, urban renewal has, from its inception, been harassed by a series of conflicting, and at times, inconsistent goals and objectives. Doubtful assumptions have been made about the economic structure of the city, particularly the housing market, and the nature and functions of slums. In programs for the housing of low income families simi-

lar conflicting goals and objectives developed. Today we have come to realize that slum dwellers are not a homogeneous group, nor are the poor—save in their poverty. In recent years the composition of the consumers of public housing changed radically. Thus a program that was initially successful became less viable with the passage of time.

A major complication is that the nature of urban problems and the characteristics of the people involved change over time. Since most of the basic deficiencies require long-term solutions and are slow to move from planning to execution, obsolescence seems to be built in. The only way to minimize it is constantly to review assumptions, institutional structures, and human components. Currently we tend to initiate activities in urban development and housing based upon reasonable assumptions, some of which prove to be wrong. Another approach would be emphasis upon basic means-end and cause-effect relations. In a period of social upheaval we cannot be purists. But we can, and we should, accelerate our activity of the latter type so as to reduce the waste and frustration incident to excessive trial and error. First the issue has to be defined, more needs to be known about the problems involved, and priorities have to be set. Then there needs to be analysis of the impact of suggested action upon the specific problem to which it is addressed, as well as upon other elements in the urban environment. And always where people are involved, a certain degree of flexibility must be anticipated and accepted.

In recent years departments and agencies have significantly stepped up their in-house evaluation. A part of this reflects a budgetary situation. As the Great Society programs found unprecedented translation into legislation, many departments and agencies began to feel a real money crunch when they faced the

Budget Bureau and Appropriations Committees of the Congress in an effort to fund them. Capitalizing upon this situation, the people at Budget killed two birds with one shot. They saved money by questioning existing programs, and they insisted, with the full support of the President, that obsolete programs be trimmed if money was to be forthcoming for more urgent activities.⁸

What Needs To Be Done

As one reviews the current situation, it appears that a better job is done on evaluation of ongoing activities and the preparation of proposals to deal with specific problems than in basic analysis of urban and housing problems. It seems to me, therefore, that several things need to be done. First, the Federal Government should provide more funds for basic research, and nongovernmental organizations should be encouraged to widen the scope of their research, concentrating more upon comprehensive analyses: for I agree with Adam Yarmolinsky when he said that the greatest source of important and successful ideas is probably still in the academic community.⁹ Parenthetically, I have found many of my current university colleagues more creative and productive in the field of ideas than evaluation. Second, both administrative and evaluative agencies should keep abreast of research and increasingly review both ongoing and proposed programs from the point of view of their impact upon the broader environment. Third, it is most important that the "idea people" from academia flow into and out of government, for they effectively supplement the career

personnel who are concerned with program planning and research.

The departments and agencies also can and should periodically pause and take stock. This may involve looking back upon what has been done, or looking ahead to what can be done. It may be formal and group oriented, or it may be an individual effort. I recall two instances of a formal type. The first occurred after the Kennedy administration had been in office for 15 months. A small group of college professors, businessmen, and government officials were assembled by the Housing and Home Finance Agency (HHFA) in Washington to discuss the effectiveness of existing programs and to develop new strategies. Papers were prepared and circulated prior to our convocation and there was healthy exchange of ideas and critical evaluations.

When the Department of Housing and Urban Development was organized, in cooperation with the Office of Science and Technology, we called a second major conference. This one was in June 1966, located away from Washington at Woods Hole, Mass. Its function was to bring together scientists and urbanists with the aim of involving the former in urban affairs. From it there emerged a more meaningful dialogue between these groups. Significantly, and by design, most of the participants were scientists.

Administrators need to be concerned with concepts, goals, and objectives as well as operations. Hiring idea and research personnel, while imperative, is not enough. My own attitudes toward the role of ideas and analyses in public administration were set forth some 6 years ago when I indicated the desirability of an administrator's putting away—for a time—the operations of an agency and substituting the process of problem formulation and analysis. On that occasion I said:

⁸ Kermit Gordon, "The Budget Director," in Thomas E. Cronin and Sanford D. Greenberg, eds., *The Presidential Advisory System* (New York, Harper and Row, 1969), p. 65.

⁹ Adam Yarmolinsky, "Ideas into Programs," Cronin and Greenberg, eds., *op. cit.*, p. 94.

Public administration is popularly conceived of as action-oriented. And, too often, it is just that and no more. Action without program, program solving without problem analysis, day-by-day decisions without a philosophy are a travesty of public administration. They are inexcusable and dangerous in the modern world where public policy is so vital to the well-being of all citizens.¹⁰

IV

While evaluation at the executive level has significantly improved in recent years, the situation at the legislative level is mixed. Too often special committees of the Congress concentrate upon uncovering deficiencies or malfeasance. The GAO, too, emphasizes, as its mandate requires, specific performance and suspected irregularities. Both of these circumstances militate against administrators' championing experimental programs or utilizing more sophisticated tools of evaluation.

Need for Better Coordination of Evaluation

There is need for better coordination of evaluation in the Federal Government. Not only have programs proliferated but evaluation has done so too, creating an obvious danger that evaluation may become an end in itself rather than a means for upgrading management. In this regard, I suggest that evaluation be concentrated upon new programs and those activities which have become institutionalized, thereby developing longevity through seniority. Unless some priorities are developed to maintain a proper balance and greater coordination occurs among the governmental evaluators, there is the possibility that official evaluation may result in a neglect of the operational aspects of management.

There is no reason, however, why there can not and should not be greater professional contact and exchange of ideas among groups of evaluators. This occurs in the legislative process when professionally competent employees of committee staffs, Presidential commissions, and departments and agencies maintain continuing contacts with each other. Indeed, there is frequent temporary assignment of knowledgeable personnel from the department or agency to the committees and commissions, and the staffs of the latter provide a rich source of talent for the departments and agencies.

One consequence of such contacts is the development of a body of data and information responsive to the needs of several groups and uniform in content. This has been recognized by the Congress. The Legislative Reorganization Act of 1970, for example, directs the Secretary of the Treasury and the Director of the Office of Management and Budget, in cooperation with the Comptroller General, to establish standard program and activity classifications. A subsequent step would be the development of an integrated data system. Together these actions would, among other things, facilitate measurement of agency overlaps and identify more clearly the total resources allocated to different objectives.

In addition, the evaluators, either directly or through professional associates, are brought closer to the operators to the benefit of each. But more important is the early give-and-take between qualified people with different backgrounds, biases, and points of view. This usually results in better designed patterns of research, legislation, or evaluation and the early resolution of differences relative to the nature of the problem under study or review.

¹⁰ Weaver, *Dilemmas of Urban America*, p. VIII.

While the GAO will remain a part of the legislative branch of Government concerned with exposure of malfunctioning, it, too, benefits from greater involvement with researchers, administrators, and other evaluators. One means of accomplishing this would be to have representatives from GAO observe and analyze the early and subsequent phases of program development. The more that is known about the origin and the evolution of an activity the better its operation can be appraised.

GAO's mission is traditionally to evaluate the effectiveness of Federal programs in achieving the objectives intended by the Congress and to facilitate efficiency and economy in the administration of these programs. It can also be helpful to the administrators by informally calling to their attention tendencies or situations which suggest trouble spots. Evaluation should be more than surveillance and monitoring. In its creative expression the prime objective is to facilitate as quickly and effectively as possible the delivery of services. Evaluation organizations should not hesitate to speak with administrative agencies since the real objective of their effort is not to occasion censure but to encourage positive results. Such contact would also weaken the all-too-frequent feeling on the part of departments and agencies that GAO is engaged exclusively in adversary proceedings.

V

Early in this paper, I stressed the importance of greater understanding of urban and housing programs, sound goals and program objectives, and differentiation between evaluation of goals and performance. Also I emphasized the need for research, inside and outside of government, as the basis for more soundly conceived goals and programs.

Values and Limitations of Quantitative Approaches

In the literature and discussion of urban development and housing and of publicly assisted programs in general, increasing reference is made to cost-benefit analysis, program planning budget systems and the like, as a basis for program decisions and evaluation of results. All agencies concerned with management, administrators, and Congress itself will, I believe, increasingly look to these techniques.

As public goals and services become an even greater part of our consumption, there is a concurrent growing tendency to minimize the differences between the operations and mechanics of the private and public sectors of our society. No doubt, in large measure, this reflects a desire to achieve more rational decisions in the latter. As Norton E. Long observed:

Consumership becomes the synonym for citizenship and all problems are solved by the workings of the political analogue of the market. This reduction of politics to economics has an escapist attraction. But it won't work. Even the democracy of the buck requires political action to insure the freedom of the market from noneconomic discrimination.¹¹

In a word, to assume a free and totally competitive housing market in a situation typified by racial residential segregation is to assure such noneconomic discrimination.

There is no magic in the newer, largely quantitative approaches. Indeed, the fact that they are quantitative gives them an image of being scientific and exact. Not only is this an exaggeration—since we are still learning how to utilize

¹¹ Norton E. Long, "Local Government and Renewal Policies," in James T. Wilson, ed., *Urban Renewal: The Record and the Controversy* (Cambridge, The M.I.T. Press, 1966), p. 433.

them effectively—but also it ignores many significant realities. Not the least of these is the fact that political, as well as analytical, considerations are involved in the choice and perpetuation of public programs. The possibility of uncritical acceptance of new techniques is not justification for their rejection; rather, it requires sophisticated understanding and intelligent application of them.

Kermit Gordon, an economist and former Director of the Bureau of the Budget, has observed:

• • • In the best of all possible worlds, the federal government would launch or continue a program only when the resources employed yielded greater aggregate benefits in the public sector than they would have yielded in the private sector. It would review the alternative means of pursuing each program goal, and it would choose the means which accomplish the goal at least cost. It would settle on a scale for each program such that benefits yielded by the marginal dollar were equal in all applications.¹²

The former Budget Director recognizes, of course, that such a standard is too high to be fully realized. He has indicated several complications: first, the very nature of Government's role in redistribution of resources and second, the absence of a market test of benefits.¹³ Yet there is a significant range of applicability for evaluation standards which approach those described above. Even where benefits and costs cannot be quantified, alternative strategies can be analyzed with the goal of some approximation to a cost-benefit evaluation, and, of course, we can always utilize more and better information about the direct and indirect consequences of programs.

Recognizing that there are lobbies, clients, and special interests and that compromises are the name of the game

of political decision, there still is a vital role in the process for more exact tools of analysis and evaluation. Without them, we are forced to compromise from positions of uncertain validity and effectiveness. Since compromise we must, it would be most useful if we knew more of the possible choices and the relative cost-benefits of each. William Gorham, President of the Urban Institute, says: "Surely it is better that policy be chosen in the light of whatever relevant information can be obtained, however incomplete it may have to be."¹⁴

Those agencies of Government which are concerned with the public purse are widening their perspective. And the General Accounting Office is no exception. You are involved in systems analysis, and your activities in this field indicate that your major client, the Congress, is concerned with the process. Also, the very nature of this approach on your part involves greater contacts with Federal agency officials.¹⁵

This clearly indicates that the agency's mission has expanded beyond that of a watchdog intent on exposing what it believes to be improper, wasteful, and ineffectual. It raises the horizon of the office beyond that of audits and suggests that much more than analysis of details is required. To me it represents a justification for greater coordination between GAO and other branches of the Government engaged in the application of systems analysis to the management of programs. Such contacts would upgrade the quality of the process at the same time that it brings operators and evaluators into closer contact. It also involves emphasis upon goals and evaluation of

¹⁴ William Gorham, "A Social Report and Social Policy Advisers," Cronin and Greenberg, eds., *op. cit.*, p. 70.

¹⁵ 1970 Annual Report of the Comptroller General (Washington, U.S. Government Printing Office, 1971), p. 8.

¹² Gordon, *op. cit.*, p. 66.

¹³ *Ibid.*

results within the context of these goals, as well as an appreciation for the inevitability of changing objectives.

As the domestic governmental activities become more extensive and complicated, the requirements of management assume new dimensions. Program evaluation not only calls for more sophisticated approaches but also needs to be ever conscious of its potential for interfering needlessly with operations. Those who engage in evaluation are required to walk a narrow path which avoids too great reliance upon mechanical measurement on the one hand and receptiveness to improved evaluation techniques on the other.

Both the evaluators and the program managers should have a single overriding purpose—to provide the best possible delivery of services to society. This involves constant interchange of ideas and information, and it places upon both, as well as the legislative branch of Government, the need to become more concerned with the nature of the urban structure and the problems which arise therein. Clearly, as you face your 50th anniversary, you must reevaluate your mission and operations in light of these developments. That, I believe, is why we are assembled here today.

Discussion

What are your views on the President's proposal for revenue sharing? Do you feel that the revenue sharing technique will be more effective in achieving program objectives for the social programs?

Dr. Weaver: The question assumes that I was against revenue sharing, particularly special revenue sharing. Wasn't the special revenue sharing really a technique for consolidating programs which are now proliferating and overlapping? Was my opposition to consolidation *per*

se or was it to the type of consolidation that would flow from special revenue sharing? Clearly I think anyone who has had any exposure to these problems must be in favor of consolidation. The whole context of my remarks was the fact that these programs often conflict with each other. They certainly don't always complement each other. I think one step in the direction of consolidation, and one which has really not been sufficiently evaluated from that point of view, is the Model Cities program. It attempted consolidation at the level where it has to be and where it would be under special revenue sharing—not in Washington, but at the local level—because Model Cities required a local program which could put these programs as well as other activities together and put them all in one package under the supplemental grant.

I am opposed to special revenue sharing because I think that in urban affairs and housing, there should be national policies. These are national concerns. Over the last decade we have worked with the Congress, first in HHFA and then in HUD, in order to encourage regional approaches to regional problems; for example, giving either an extra amount of grant if an area-wide approach were taken or requiring that it be taken as a condition for the grant. Now to give this up, to give up this national approach or this regional approach to regional problems and turn this back to localities to go ahead and operate within the proliferated local government situation that now exists is, I think, a step back. I don't think it will work and I think it is undesirable. I am, as you can see, somewhat opposed.

What role should the Department of Housing and Urban Development perform in the establishment of national and local housing codes, particularly with respect to rehabilitation of older houses? What has HUD done in this area, and

has HUD satisfactorily performed its role?

Dr. Weaver: This is a complicated issue because too much Federal intervention in an area which has traditionally been local, but which is constitutionally State, gets you into difficulty. The role of the Federal Government is going to have to be that of seduction—a very delightful role even in administration. This means that it offers goodies and it encourages people to do things and gives a *quid pro quo* if results are forthcoming. That is a peculiar definition of seduction, but I'll have to research that.

The problem, of course, is that the matter of building codes is legally—and I'm not a lawyer, therefore I speak with impunity on this—a matter which falls under the purview of the State. This authority has been delegated to the local government and the local governments have proliferated. In one building area you might have five different building codes, which is a great impediment to a large-scale production. In the central cities you get a different problem. There you find a building code which was not designed for the rehabilitation of housing that you want to last maybe 10 or 15 years more but for brand new units. The result is the codes become an impediment to rehabilitation.

Now what has been done? Of course, there has been exhortation but that's sort of moving with deliberate speed. More recently, as programs for rehabilitation have been proposed with the Model Cities program and others, there has been pressure placed directly upon localities for changes in their building codes. I

think that the biggest impact on building codes is probably going to come indirectly because I think that the first and largest impact of Operation Breakthrough is going to be the changing of certain institutional impediments to new types of construction and new types of approaches to houses. I would say that we are moving and having been moving in this area and the present administration is also working on it.

A few of the States are assuming greater responsibility; New York State, for example, has a model building code as have three or four other States. As we look more and more towards industrialized houses, the Operation Breakthrough type of thing, as we look more and more toward rehabilitation of necessity, we have to come to grips with these problems. They are very difficult problems because, first of all, our form of government has the power residing in the States and the States are not assuming too much concern about urban affairs, and secondly, because of the proliferation of governments.

The most significant development is the creation of the Urban Development Corporation in New York State. This corporation is authorized to modify housing codes as well as zoning. It hasn't done it yet but you'd be surprised at how much more amenable people have been to change when they know someone has the authority to make them change. Sometimes you don't necessarily have to assert the bare hand of authority, but you can get people to do things voluntarily if you have a little bit more behind you.

GAO's Environmental Challenge

Many of the real problems are multiple faceted. Many of the programs and points of attack overlap and, in some cases, are at variance with or counter-productive to other programs and proposed cures. The whole structure shows signs of becoming so unwieldy as to inhibit the solution of the urgent problems involved. Strong, prompt action to correct this tendency seems indicated lest it collapse of its own weight. Also, the point of diminishing return may be near in these efforts as well as in their size and cost to the Federal Government. This is the environment in which the Comptroller General and the General Accounting Office now operate in their efforts to strain mismanagement and financial extravagance from this tide.

The Comptroller General and the General Accounting Office serve the Congress by searching continually for means of achieving greater effectiveness in the execution of authorized programs and increased economy and efficiency in the management of program execution.

Congressman Frank T. Bow

Congressional Record

June 10, 1971



David E. Bell
Executive Vice President
The Ford Foundation

After David Bell graduated from Pomona College in Claremont, California, in 1939, he went on to Harvard where he received his Master's Degree in economics in 1941. He remained for a year as a teaching fellow. Mr. Bell also holds honorary Doctor of Laws degrees from Pomona College, the University of Vermont, and Harvard University.

Since 1942 Mr. Bell has spent almost half of his working life in the Federal service. His first position was that of a staff member in the Bureau of the Budget. This job was interrupted by 4 years as a commissioned officer in the Marine Corps. He returned to the Bureau in 1945 and remained until his appointment as a special assistant on the White House Staff in 1947. Here he rose to the position of Administrative Assistant to the President in 1951, and continued in that post until the end of the Truman administration.

David Bell received the Rockefeller Public Service Award in 1953 and returned to Harvard University as a Rockefeller Public Service Fellow to teach. During 1954-57 he served as adviser on general economics to the planning board of the Government of Pakistan and as project field supervisor of the Harvard Advisory Group in Pakistan.

In 1957 Mr. Bell rejoined the Harvard Department of Economics to lecture and to teach, and in 1959 he wrote a book entitled Allocating Development Resources: Some Observations Based on Pakistan Experience.

In 1961 President Kennedy appointed Mr. Bell Director of the Bureau of the Budget. He served in that position until 1962, when he was appointed Administrator of the Agency for International Development. In 1966 he became Vice President of the International Division of the Ford Foundation, and since 1969 he has been Executive Vice President of that organization.

Assessment of Efforts To Assist Underdeveloped Areas

There has been considerable emphasis in the Congress and elsewhere on the need to establish better criteria for assessing Government programs for which quantitative data are inadequate or, in some cases, entirely lacking. GAO is called upon to analyze and express judgments as to the effectiveness of many of these programs. None is more difficult than the area which David Bell discusses in this lecture. As he points out, evaluating Government programs is complicated enough because the evaluation function itself is a relatively new art and is still not understood as well as other elements of governmental management. The difficulty is increased in trying to evaluate development programs in foreign countries with multiple, interrelated objectives of an economic, social, military, and even political nature.

I am very honored to have been asked to join in this 50th Anniversary Lecture Series here at the GAO, and I am especially delighted to be here at the invitation of my long-time friend and colleague, Elmer Staats. I think the United States is extremely fortunate to have Elmer in this post. No one could have had a better background for becoming Comptroller General: strong professional training, long and intimate acquaintance with the executive branch, including high-ranking office which gave him direct acquaintance with several Presidents under both Republican and Democratic administrations, and extensive personal acquaintance with Members of both Houses of Congress. In addition, if I can say so without embarrassing my old friend, I think he is the right man for this job because of his constructive and large-spirited character, based on unimpeachable integrity but including a readi-

ness to see the value of new approaches and an understanding of the rich, stubborn variety of human values. I congratulate all of you in the GAO on your good fortune in having Elmer Staats as your leader.

I am also glad to join in discussing the general theme of this 50th Anniversary Lecture Series: "Improving Management for More Effective Government." We are in a period, as we are all well aware, in which the ability of the U.S. Government, or any government, to get things done is under great question. People in this country and in many countries around the world are increasingly skeptical that any government—Federal, State, local, provincial, whatever the terms may be in the country in question—can act effectively for the common good. People say that governments have been working on slums for years and the

slums are worse than ever; governments have been attacking drugs, but more of our kids are in drug trouble every day; pollution increases; hunger does not diminish; and so on. Most of us who work, or have worked, in government consider that these charges are greatly overdone and are prepared to defend government as an institution. Nevertheless, I think all of us would agree that there are very serious shortcomings in what governments have been able to do until now and, consequently, it is most appropriate for the GAO in this series to put the spotlight on the effectiveness of government and its services.

Is the Government getting anything done? If not, why not; and how can its effectiveness be improved? The particular aspect of that general topic that I have been asked to discuss "Assessment of Efforts to Assist Underdeveloped Countries" is a pertinent aspect of this overall theme. As you know, through a series of acts and agencies beginning with the Inter-American cooperative program starting in 1941, the Congress has authorized a long series of programs supporting the improvement of conditions in less developed countries. This type of activity has never been a major program of the U.S. Government. Year by year the funds spent for these purposes have been, on the whole, less than those spent for agricultural price supports, or for veterans benefits, to cite a couple of random comparisons.

But the Government's programs of assistance for developing countries have always been important, touching as they do the lives of hundreds of millions of people around the world, necessarily affecting U.S. foreign policy, and involving our country in an activist role in many parts of the world. This role of working with people in less developed countries is a new one in our history. It has been controversial from the begin-

ning. The Inter-American cooperative program in 1941 was controversial. Point Four was controversial in 1949. AID was controversial when it was started in 1961 and, of course, it remains controversial to this day, with the current AID bill in its customary cliff-hanging, last-minute status, not clear whether it is to go forward for 1 more year and, if so, at what level of financing. So the program is important and it has been controversial.

The question to be addressed here, however, is how can we assess, how can we evaluate, the results? Have these programs had any impact? What have we learned about how to be effective in assisting the developing countries? I will make a few remarks first about how one should assess or evaluate these foreign assistance programs and, second, offer a few personal assessments—simply by way of indicating that I think we can draw some conclusions, although one of the themes that I will stress is that it is extraordinarily difficult to evaluate these particular programs.

The problem of assessing development assistance is complicated, first of all, because evaluation or assessment is itself a relatively new art in government and is still not understood nearly as well as other elements of management, such as forward planning and budgeting, which by now have a rich literature based on many varieties of experience. We are still learning things but if anyone wants to understand program planning and budgeting—how to get it done effectively, how to organize for it—there is a lot of information available.

If you want to ask about evaluation, however, which is organized hindsight, then you do not find as rich a literature or as much experience. I doubt even that there is agreement on definitions as yet. Personally, I have used some definitions that were provided by General George

Lincoln, (Abe Lincoln), some years ago when he was at West Point, before he joined this administration as Director of the Office of Emergency Preparedness. At that time, he spent a sabbatical year with us in the Agency for International Development. We invited him to explore this subject of evaluation, which was relatively new in AID then, and he provided a set of definitions and concepts which I have found more useful than anything else that I have run across on the subject.

Lincoln defined evaluation as the process of looking back at programs and projects which have been undertaken, analyzing the results, and learning from your own experience. As Lincoln saw it, evaluation fits into a three-part concept of management: planning, execution, and evaluation. He drew it neatly in triangular form, the implication being that the three parts mutually support each other. The results of evaluation feed back into better planning and better execution in the future.

Two Questions To Be Asked

The particular point, however, that sticks in my mind as most illuminating was that two key questions need to be asked when you are evaluating anything. One is: How did the performance compare with the objectives: did you actually accomplish what you set out to accomplish? The second question is: By hindsight, looking back, were the objectives right; would you do it again? This is not the same question and it is important to ask both.

Let me give a couple of illustrations that show this. They are both AID projects. The first is the Kandahar airport. Kandahar is a city in southern Afghanistan and, in the middle 1950's, with AID financing, a fine international airport was built at Kandahar. The project was

to build an airport. The project was carried out. The execution was impeccable. The runway is solid. Costs came within reasonable range of estimates.

The only trouble was that nobody wanted to use this airport. It was designed by somebody who thought that when the jet age came there was going to be need for an airport at about this place in central Asia and, if an airport were built at Kandahar, all the international airlines would stop there and this would have an important positive effect on the development of Afghanistan. None of this happened. When I was in AID some years later, the weekly count of aircraft landings at Kandahar was something like 16, most of which were crop dusters and local people.

The evaluation in terms of the objectives of that project was excellent, but the project itself was a mistake. It should not have been undertaken. The objective was in error.

A second case, which in a sense illustrates the opposite outcome, was the famous Cambodian road that sank into a swamp. A road was designed and built under AID financing between Phnom Penh and the southwest coast of Cambodia. When the road had been built, most of it stood up but an important section gradually sank into a swamp over which it had been laid. This was a very poor performance. The objective was to build a road and when it was finished a crucial section of the road was not usable. On the other hand, the objective of building that road turned out to have been correct. The road—once the swamp part had been rebuilt at great additional cost—turned out to have all the economic and social benefits that had been anticipated, and it is a major and important highway in Cambodia today. So, if one simply asked how the performance compared with the objectives, the an-

swer would be: Terrible. But, were the objectives right? Yes, indeed.

I might add, incidentally, that this case also taught me something important which I have tried on several occasions to explain to the Members of Congress who were upset about what happened to this road. The road was designed by a reputable American firm of highway engineers. And it was built, under the supervision of that engineering firm, by a reputable American highway construction company. If AID or anybody else were to build that road over again, they would do it, I suspect, exactly that way. The lesson, therefore, is not that AID did a terrible job. The lesson is that every now and then the best techniques fail, and the American engineers, in this case, did a bad job. They did not recognize that this particular swamp was a special kind, and they needed more research and experimentation, or maybe some special kinds of advisory services that they did not call on, and hence the road disappeared into the swamp. But the process was all right. We did not have to change any of our engineering or management processes; we simply carried them out with even more care thereafter.

I emphasize, however, the two questions of Abe Lincoln. How did the performance compare with the objectives, and, looking back with the benefit of hindsight, were the objectives sound? I stress this because I read the other day a recent statement by the Committee for Economic Development called, "Improving Federal Program Performance," published in September 1971. This publication seemed to me to contain many good ideas. But on this question of program evaluation, to my surprise, the CED emphasized only Lincoln's first question—evaluation against objectives—and not the second question, evaluating the objectives. For the reasons I have

indicated, I think this is an inadequate concept.

One other introductory remark. I am very conscious of my own limitations in discussing this subject. I am 5 years out of date on what is going on in the Government, and I have not followed the professional literature on the subject, so what I offer here today is very much a layman's view.

Evaluating Assistance to Developing Countries

Now, if we address the question of how we should evaluate assistance to developing countries, we run into some exasperating complexities. Start with a single objective. Suppose our purpose is to help a country achieve self-sustaining economic growth as measured by gross national product. Set aside for the moment other objectives often involved in foreign assistance, such as larger military forces, establishment of U.S. bases, or other purposes; concentrate for the moment only on the single objective of economic growth. Then look at a single project, say a power plant in Korea. First of all, evaluation requires an examination of the project as such. Was its construction sound? Were the raw materials plans appropriate? Does the plant work? Does it produce power at an acceptable cost? And so on. These are standard and necessary questions, but they are only the beginning.

Secondly, in a developing country such as Korea one must analyze the setting for the project. Normally, if the development assistance project is designed right, there is much more to it than simply a construction job. There will have been important additional conditions, such as training the necessary Korean staff. It may be a relatively simple training process, or quite a complex

one—as, for instance, in training managers for a power system.

In addition, there may well have been conditions involving the managerial structure of the power system. There was a case when I was with AID in which we used a potential loan for a power plant as a major bargaining tool in trying to get a recasting of the power-management process in a developing country. In working on the negotiations for a power plant, one could also aim at important changes in the rate structure or other aspects of the power system.

The evaluation of a project for a power plant therefore involves a good deal more than simply the plant itself. What were the associated changes that were supposed to take place—training, rate structures, overall management systems, or what not—and did they, in fact, occur?

As a third element of an evaluation, still thinking of a developing country and only economic objectives, one must analyze the effect of the additional power produced. The project should not have been undertaken unless the gains from investing in power and the impact of that power on economic activity would be higher than the potential gains from any alternative use of the capital. By definition, a developing country is extremely short of capital. Capital must be applied, whether it is their own or capital from outside, to the maximum advantage and an evaluation process necessarily asks whether, looking back, that in fact was done.

And, finally, as if that were not enough, one must ask whether this project was part of a program of investments and other activities undertaken by the Korean Government and other Korean institutions which would move Korea most rapidly toward self-sustaining economic growth. At that point, the fat

is really in the fire because, if the purpose of the United States in its development assistance is not simply to establish a series of viable projects around the world, but, in fact, to assist the evolution of self-sustaining economic growth in developing countries, then any individual project must be looked at not simply by itself but as part of an overall effort.

I have been very pleased to see that in the reviews your International Division makes, you are asking this kind of broad question. I congratulate you and applaud your courage and the appropriateness of your logic. I note, however, that having asked the question, the Division frequently quotes an answer from the State Department or AID, or simply says that it is too soon to tell, or that the evidence is scanty, all of which is certainly true. This is a most difficult kind of question to analyze because one is required to examine a country's economic policy and ask whether it is appropriate and effective, whether it is all that the country can do, and whether it has been matched by the best kinds of assistance from outside.

The difficulty of the task can be illustrated by noting that it is as if the GAO, or any evaluation organization, were to be asked to review the current economic policy of the U.S. Government. Have the Council of Economic Advisers, the Secretary of the Treasury, and others been right in advising the President on Phases I and II, and on the preceding policies in recent years? I do not mean that these questions are beyond the scope of the human mind. I simply emphasize their breadth and complexity. But, complex or not, that is what is at issue, because the purpose of the United States in its development assistance efforts has been to contribute to the evolution of self-sustaining economies in the developing countries. The questions follow in-

evitably from the nature of the program objective. Whether the aid takes the form of a grant, a project loan, or a program loan—whatever form it takes—the evaluator must reach conclusions as to the effectiveness of the development plan of the country in question and the effectiveness of the outside assistance to that plan.

To say this, of course, establishes a high and difficult standard. It will not be feasible in every instance to come neatly to a conclusion. But I think any economist who has been concerned with developing countries over the last 15 or 20 years would feel that it is not a hopeless task. When I was in AID, we did apply this standard of self-sustaining economic growth, and we did decide that sufficient growth was being achieved in a number of countries so that further external assistance was not needed. And on the basis of precisely that judgment, foreign assistance of a concessional nature was brought to an end in the cases of Mexico, Taiwan, Iran, and other developing countries. This was 5, 6, and 7 years ago. I assume there have been other cases since then. So that the art or science of the economist does permit some practical judgments to be reached in these cases. At the same time, I would again emphasize the delicacy and complexity of the analysis that is necessary, and hope that as the GAO ventures further on these slippery slopes, you will have at its disposal the advice of some of the top quality development economists like Ed Mason at Harvard, Hollis Chenery at the World Bank, Arnold Harburger at Chicago, or Dick Cooper at Yale.

Programs With Multiple Objectives

Let me remind you that I have been talking only about a one-objective standard, on the assumption that all the United States was trying to do was to help

achieve self-sustaining economic growth. In fact, a variety of other objectives are normally involved.

First of all, economic objectives are not usually one-dimensional. We are usually interested in the distribution of income as well as its size, and we are usually interested in employment as well as income. These various objectives, as economists have struggled over the years to understand, to some extent are compatible with each other and to some extent are incompatible. And they set up trade-offs which have to be understood and which complicate the process of measurement.

These are not light matters. For example, the assessment of the Alliance for Progress over the last decade has normally rested on the judgment that the economic changes in Latin America over that period, while valuable in terms of total economic growth, did not improve the distribution of income, and furthermore, as an additional complexity, did not have much value in improving the quality and responsiveness of government in Latin America. Let me emphasize that most people have judged the Alliance for Progress harshly, not because it did not help to bring about more rapid rates of economic growth in Latin America—by and large it did—but because the benefits of those larger rates of growth were not widely shared among the Latin American populations. It was the distribution of income rather than the rate of growth of income which did not move in the direction which the Alliance had set out to achieve.

I do not mean that the standard of evaluation is unfair. The standard is entirely fair. The Alliance did set out to achieve a broadening of the income distribution in Latin America. I am simply pointing out that two objectives were in-

volved; one generally was achieved, one generally was not achieved. Any evaluation must take account of both.

Beyond economic objectives, American assistance programs have typically had other objectives. Frequently those objectives have been military; that is to say, the United States has had an interest in strengthening the military forces of a given country. One of the reasons that the evaluation process becomes complicated is that you can assist the development of larger military forces in a country by providing military assistance, (military equipment and training), or you can add to the economic capacity of the government in question, in which event they can put more of their own resources into their military budget.

Most of us have felt over the years that the first step toward wisdom, both in planning and in evaluating military assistance programs, is to separate the objectives clearly in the analytical process, so that everything is as identifiable as possible all the way along the line. Nevertheless, as indicated above, there are limits to the possibility of separation because of the fungibility of the resources involved. Whether you put military assistance into a country, permitting it to shift resources toward the economic side, or whether you put economic resources into a country, permitting it to put more resources into the military, there is an inescapable relationship. You cannot separate them wholly. Consequently, there must be in the U.S. Government some sort of common approach to these matters. There must be some sort of joint negotiating process with the aid-receiving government in question. And anyone who is evaluating the assistance effort has to think about these interrelationships, and cannot simply look at one aspect or the other without reference to their interconnection.

Political Objectives

I have not talked about what are perhaps the most vexing kind of objectives, namely, the objectives of our development assistance programs in political terms. Over the years our aid to developing countries undoubtedly has been aimed in part at supporting or establishing certain kinds of government. It is a very complex subject, perhaps the least well analyzed of any in the aid field. With respect to economics and economic change you can go to quite widely recognized authorities, such as some of those I mentioned a few minutes ago. But if you are talking about the political side and governmental changes in developing countries, there is a murkier basis for analysis, less clear academic doctrine, and much more argument as to who is an authority and who is not an authority.

Originally, 20 years ago, the U.S. Government—the legislative and executive branches jointly—in its aid programs placed great emphasis on establishing and maintaining anticommunist governments. That simple idea is, of course, long outdated. By 1960, when the Alliance for Progress was under consideration, that aid program was explicitly not aimed simply to support anticommunist governments. It was aimed instead to encourage more democratic governments, and was intended to help achieve a broadening of the base of participation and more pluralism in Latin American political systems. It was, inferentially, aimed at reducing the number of military governments in Latin America.

Looking back at the Alliance today, I think most of us would feel that the experience of the last 10 years demonstrates that the program objectives were set too high for the means at hand. I think that economic assistance clearly could not have achieved the kind of changes in Latin American governments

—no matter how desirable—which were sought. The external leverage of aid was simply not a feasible means to those ends.

However, this is simply a negative comment. It is a step forward that we are no longer simply interested in anti-communism. We found in one case, a major case, that economic assistance has severe limits in improving the degree of pluralism and tolerance in foreign political systems. Where does this leave us today? I am not sure. I am rather inclined to feel that the principal lesson of the past is that, by and large, the people in developing countries are going to pick their own governments and there is not much that anybody outside can do about it. We should be interested in marginal gains for tolerance, pluralism, participation, and other democratic values but we should not expect too much. We should expect more effect in the long run on the political evolution and the governmental changes of other countries through the processes of intellectual, educational, and cultural interchange than through the process of government-to-government bargaining.

By and large, the people who are working most strongly for the kinds of values in Latin American societies that we applaud—values of freedom and justice and more equitable opportunity—are those who have had access to the same kinds of education and social insight that we have had. They see that we have many problems. We see that they have many problems. Neither we nor they are in a very good position to advise on how to change the others' government. So I think that to evaluate economic assistance activities in terms of their impact on foreign governments may well be asking more of our state of knowledge and more of the instrument at hand than is legitimate. But it is a

very complex and important element of the whole evaluation problem.

Technical Assistance

Finally, let me call your attention to the complications introduced by technical assistance and training as distinguished from capital assistance. So far, I have been talking mainly about capital assistance. Technical assistance can be seen as linked to capital assistance—as part of the process of developing self-sustaining economies. Seen this way, it does not introduce any new questions for analysis other than those I have already mentioned. When capital assistance is cut off, as in the case of Taiwan or Iran, because it is no longer needed, technical assistance is also cut off.

On the other hand, technical assistance can be seen more broadly as technical cooperation, as part of an international process of scientific, cultural, and educational interchange designed to enlarge the world's understanding of how to deal with major problems, and a process from which the United States has much to gain as well as much to give.

I cite two simple illustrations. Most of you know that great changes have been made in the outlook for food production in developing countries through the development of dwarf wheats which originated in Mexico, under a program originally started by the Rockefeller Foundation, and more recently joined by the Ford Foundation. These wheats have yielded two or three times as much as most of the wheats available in developing countries. They are a very important scientific advance. The point I want to make now is that these wheats are also being introduced into the United States in many places with considerable gain. This is a feedback from scientific work done elsewhere for purposes not having to do with the progress of the

United States. However, since U.S. scientists have been on the intellectual circuit, we are able to benefit from the results.

Another illustration is an important research project exploring the relationship between nutrition and early childhood, being carried out in Cali, Colombia. The results of that project can be of great benefit in dealing with the problem of the serious effect of malnutrition on young children from disadvantaged families in this country as well as elsewhere in the world.

I cite this possible way of looking at technical assistance because I think there is more future in the technical cooperation field than we have yet understood. In all probability, just as the French and the British have tried to do through formal government programs, we also should establish systematic and continuous technical cooperation between our scientists and educators and those in other countries because it will be beneficial to us as well as to them. It is a part of the internationalization of the world which is going on apace and from which we have a great deal to gain.

Some Personal Assessments

Let me close with one or two rather sweeping personal assessments of U.S. assistance to developing countries over the last 30 years. These are most casual and broad, and while I would be willing to defend them in the question period, I certainly do not argue that they are based on scientific analysis; moreover, they slide over a number of the tough questions which I have identified earlier in these remarks.

First of all I think that while there have been many difficulties, many mistakes, and much waste, the overall impact of U.S. aid programs has been powerfully positive. The overall rates of

growth in the developing countries over the last decade have been more than 5 percent per year, which is impressive by any standards. By now, furthermore, quite a few countries are well along toward self-sustaining growth. U.S. aid has been ended in a number of countries, and, no doubt, is en route to ending in others.

Secondly, however, growth in developing countries has been very uneven. Some countries have done very well, while others have done relatively poorly. Also, the benefits of growth have been very uneven within countries, so that there has been little if any improvement in the lives of many hundreds of millions of people. This does not invalidate the first conclusion but it indicates how much work remains to be done. Furthermore, there has not been much discernible effect of economic growth in encouraging more pluralistic and tolerant societies—maybe a little, but not very much.

Thirdly, the validity of the U.S. assistance efforts has been demonstrated in part by the great increase in aid programs of others. Twenty five years ago when we began hardly anybody else was doing anything significant. Over the years, country after country has established an aid program, and while there is much talk in the United States and some other countries of weariness with the aid effort, in other countries, such as Sweden and Canada, support for assistance activities is steadily rising and the share of their resources going to foreign aid is steadily increasing.

Lastly, the knowledge of how to provide assistance usefully, and how to achieve progress in developing countries, has rapidly increased. There was a great deal of naivete in the early years. We thought we could transfer know-how. Well, by and large, know-how that will

distribution objective we were working for in that case.

But that is not the same thing as saying that one can yet give a fully satisfactory analytical response to the question you raise. In my view, this is a problem we must continue to wrestle with.

Mr. Bell, you commented about the unevenness of the rates of economic growth between developing nations. One major purpose of U.S. developmental assistance is to help improve the standard of living of the citizenry in recipient countries. How can the United States better assess the extent to which the benefits of such efforts in a particular country may be flowing to small affluent groups instead of helping the large body of ordinary citizens?

Mr. Bell: The statistical and measurement techniques are available, I think, for almost any setting in the world. The statistical organizations are not always there as yet, and the interest in the question is sometimes not even present. If you are asking the question about a country like India, which basically has a democratically oriented government, which has a large and active crew of economists and sociologists scattered through the country, there is enormous concentration on precisely this question. There are official government bodies making estimates of income distribution and how it is changing over time. There are academic and other research commentators who are saying the government is right or the government is wrong. In short, there exists a lively, vigorous discussion process such as we have in our own country.

Other countries are in a different setting. Take a case like Paraguay which is extremely limited in the numbers of persons who have been trained to make the necessary measurements and estimates. The income distribution in Paraguay is

therefore largely a matter of guesswork and almost no one knows very much about it.

The circumstances differ greatly around the world. But in the biggest countries, and the most important countries, it is my impression that income distribution is not a hidden question, there are quite a few data, and it is possible to make sensible judgments.

In view of the serious debt-servicing problems that many of the less-developed countries have, should not more assistance be in the form of grants, not loans?

Mr. Bell: That is an important question, in my opinion, and one that might form a good question for some of the GAO evaluations. You will recall the difficult and controversial history of loan terms in Congress. In the early 1950's, most of the aid in the Marshall Plan was provided in the form of grants. Looking back, that was unnecessarily generous. The recipient countries could have assumed debt burdens which they could have paid off later.

We did not think so at the time. It was an honest decision, but that experience, in part, explains why so many people have felt that it is legitimate to ask even extremely poor developing countries to assume some debt burden for most of the resources that are transferred.

Partly for that reason, and partly because influential members of Congress, like Senator Ellender, have believed consistently that we should be charging commercial interest rates on most of our loans, the loan terms have grown progressively harder over the years. Most of us in the aid field when I was in the Government, and most of those I know who have been in AID since, have believed that these decisions by the Con-

work in India or Brazil does not exist in the United States. The know-how we have is responsive to U.S. problems, and new and especially tailored know-how must be developed to deal with the problems of India or Brazil. It is not a transfer process, but an adaptation and innovation process that is needed. My earlier illustration of the dwarf wheat is a classic illustration of how we have learned this lesson.

Finally, it is quite clear that in the early years nobody was paying enough attention to the problem of population growth. And let me simply close on this point by noting that if the GAO had been in the business of evaluating assistance efforts in the early and middle 1950's, one of the conclusions that it ought to have come to—although I do not know that the GAO or any other evaluator would have been brilliant enough and courageous enough to reach this conclusion—would have been that the U.S. aid programs were grossly inadequate because they were not paying attention to population growth. The appropriate recommendation would have been that the United States should change its policies and, if it was going to be serious about the improvement of life in the developing countries, it should undertake to support research on contraceptive developments and to support the expansion of family planning programs. These ideas are commonplace today, but in the early and middle 1950's they would have been rather difficult for anyone to put forward. So I suppose one of the conclusions we should come to is that we live and learn.

Discussion

Mr. Bell, apropos the postperformance evaluation of programs, some of my academic friends tell me that one of the big difficulties is that there is a lack of agree-

ment at the start about priorities, income objectives, or economic objectives. For example, is it better to have large magnitudes of income or is it better to get more equitable distribution of existing income?

Mr. Bell: I see significant improvement in the recognition that there are potential conflicts among these objectives. I think that 15 years ago most economists probably would have assumed that the most rapid possible rate of growth in GNP would automatically result in the most rapid possible gains in the distribution of income. That view is not held today. The two problems are recognized as somewhat different, and anyone seeking to arrive at an agreement on the objectives of development programs or of development aid would have to consider both.

Now, having said that, I cannot cite a good example of a development program in a developing country which, in my view, analyzes the problem precisely and establishes a clear and definite relationship between these two objectives. We are at the stage, as far as I can see, of appreciating that we do not automatically get a good income distribution if we get a large rate of growth, but we are not very clear as to how to translate that recognition into specific program objectives. That does not mean that we cannot reach conclusions that are of value. Often we can.

I recall, for an illustration, in the years when I was in AID, one of the things we were doing in Latin America was working to support the development of housing finance agencies. We were steadily trying to make housing finance available to lower income groups than had been the tradition in Latin America. That was a straightforward effort to move the benefits of housing—of new and better housing—down the income scale. It was a

gress have limited unwisely the flexibility of decisionmaking in this field, and in some cases have brought about the result you speak of, namely, that we have forced some developing countries, in the interest of getting resources at all, to undertake a burden of debt repayment and interest payments which is beyond their capacity. Consequently, we now face problems of constant reschedulings or some form of moratorium or repudiation, and this is an awkward situation.

This does not mean, however, that the results of aid loans have been bad in every case. There are a substantial number of developing countries whose economic prospects are good. Indonesia is one. Indonesia has rich natural resources which can be translated relatively easily, although not immediately, into foreign exchange earnings. Therefore, while the debt burden of Indonesia is high, in the long run they can probably handle it. But that is not true of India or of a number of other countries. So the difficulty has been that the Congress has provided a sort of single Procrustean bed which fitted some cases and not others. If it were possible to give AID or other lenders more flexibility, the results could be much more sensible.

You will recall that the World Bank over the years starting with Gene Black, has developed two patterns of lending—one on commercial rates and the other on soft rates—that is, the so-called “soft-window” of the International Development Association. The amount of money going through the IDA has steadily risen, and the World Bank has used these two authorities to work out differing combinations of hard- and soft-term loans appropriately related to the repayment capacity of the individual country. They have recognized the need for flexibility, and they have had the instruments available to achieve flexibility. In recent

years, the World Bank's instruments have been better than those available to AID.

There appears to be legislation in this Congress which seems to separate economic assistance and military security assistance. In your remarks you said that they are inextricably mixed. Do you think that this legislation will make it more costly to manage assistance programs?

Mr. Bell: I hope I used a phrase like “inextricably related” rather than “inextricably mixed.” I agree with the congressional tendency to distinguish them more clearly. We have indeed for some years had two parallel provisions of law, with the administration of military assistance being handled essentially by the Pentagon, and the administration of economic assistance being handled mainly by AID. Nevertheless, I think the point I made earlier still holds. The two forms of aid are inextricably related in the case of any country to which we are providing both.

Consequently, whatever the legislative pattern, I would hope it would provide for some kind of required joint look within the executive branch—joint decisionmaking and mutual understanding as between the executive branch agencies concerned—so that the United States, in negotiating with a given foreign country, is seeking objectives in the military assistance field which are consistent with those in the economic assistance field, and *vice versa*. For example, it would clearly be a mistake if the objective of the people running military assistance were to encourage country X to increase its military budget and at the same time the people in the economic aid business—because they felt it would contribute to more economic growth—were trying to get country X to reduce its military budget. The U.S.

Government cannot ask both things at the same time. There needs to be coordination within our Government in the planning and negotiating stages. But that is not an enormous burden or complication, and it is entirely possible, in my judgment, to run the two programs more distinctly than they have been run in the past and, so far as the congressional process is concerned, to put them in two bills rather than one is probably an encouragement to greater clarity rather than the opposite.

In his April message to the Congress proposing increased reliance on international financial institutions, the President said that the less developed countries should set their own priorities and develop their own programs. He also said that U.S. bilateral development assistance would operate within a framework set by the financial institutions and that the United States would look to these institutions to provide evaluations of overall development prospects. I have a two-part question. Do we have a basis for relying on the countries and the institutions to develop effective country programs and goals? On the other side of the coin, in view of the many areas of obvious need, how important is it for a country to have an overall development plan as a basing point for individual assistance programs—couldn't assistance simply be applied to those areas of most obvious need?

Mr. Bell: Let me answer the last question first, partly because it is easier. I have been involved by chance in development problems for quite a while now. I first served as a member of a development advisory team in 1954. One of the first questions we ran into was: What is all this talk about development planning? This country is so poor, we know what it needs. Any dollar that we can apply to such extreme requirements will

be valuable. It is a waste of time to try to build an overall development plan.

We thought then, and I think today, that is not a correct understanding of the situation. On the contrary, in a situation where needs are so overwhelming and resources are so scarce, it is more important than in a wealthier country to try to figure out what is the wisest application of limited resources, having examined the entire spectrum of alternatives available. I do not think this point is at issue among most of the people who have looked seriously at development problems over the years.

There are many appropriate arguments over whether the planners understand the problems they are working with, and whether their answers are reliable. Planners are fallible. There are many aspects of the behavior of economies—which, after all, are social entities, not machines—that are not well understood. Planners make mistakes; planners miss the point, and so on.

But there is nevertheless the necessity, when resources are scarce, to decide not to put the money simply on the problem that happens to be outside your door that morning, but to put it on the one that, on analysis, is the most important in terms of the maximum leverage to get the whole economy moving forward. In other words, where there are many needs, it is an illusion to say: "I know what to do." The opposite is the case.

Now, your first question is a more complicated one. I do not wish to comment on the President's message, because I read it a long time ago and I do not want to pretend that I have an intimate recollection of it. I understand your question to be: "Can the United States properly rely on analyses made by aid-receiving countries and international financing agencies to develop effective

country programs and goals?" My answer, with a reasonable degree of caution, is: "Yes."

The World Bank, for example, has contributed for a number of years to the establishment of consortia and consultative groups of donor countries. The Bank has provided secretariat services to these groups, including sending missions to individual, developing countries. They find out what the facts are and present them to the donor group, so there will be a common basis of understanding among the countries in the group. The various countries which are involved in consultative groups have found the Bank's reviews and analyses quite reliable.

Once in awhile there is a difference of view. When I was in AID, every now and then we found a situation that we saw a little differently than the Bank did. One needs to maintain an independent attitude of mind toward the Bank or any other financial agency. We used to argue more frequently with the IMF in those days than we did with the World Bank; mainly, because we thought the IMF sometimes was obsessed with stabilization and did not give sufficient weight to the necessities for development in local situations, particularly in Latin America. But if one checks the internal consistency and the logic of the reports of the international financial agencies, and if one maintains some sort of periodic independent check, I feel that the international financial agencies, by and large, can provide efficient, economical, and effective advisory services to the United States and to other donor agencies.

So far as the aid-receiving countries are concerned, I think you quoted the President as saying we should rely more on what they say their own needs are. I think that is true, but I do not think it is the same point we have been talking

about. My own view of the matter is that we should pay very serious attention to the sense of priorities that a country has about its own affairs. It comes back to the very first question asked here. If you have a choice to make between a more rapid rate of GNP growth and a better distribution of the results, the only way that choice can be made is through a value judgment. There is no technical answer. If there is a trade-off, then it is a matter of values. Which do you value the higher?

In a case like that, surely we should respect the values that are stated by the local people. That is different from saying we should rely on their analysis of the problem. We would want an analysis from an international financial agency or another independent source, to be sure there is in fact a conflict between economic growth and distribution. But once we get to the point of value choice, I think, by and large, we should simply respect what the country wants to do.

In view of your experiences, what is your feeling of the situation in India and Pakistan, and particularly with regard to the cutting of aid?

Mr. Bell: The questioner is evidently aware that the country in which I served 15 years ago was Pakistan. My wife and I, and our children, lived there for nearly 4 years—from early 1954 to late 1957. We gained and have retained many friends there and a lasting regard for the people of that country; thus, we are badly torn by the events of this past year.

Let me say a word or two about the current situation as I see it, and then go back to what I think are more generally interesting questions: that is, do the events in Pakistan suggest that the economic assistance the United States has provided there over the years was mis-

guided; was it wasted; or might other conclusions be drawn?

So far as the current situation is concerned, I must say that I perceive it rather differently than the present administration does. I thought that the election in East Pakistan last December was an extremely significant event. You will remember that the Awami League got all but two seats among those that were contested in that election and, as a result, would have had an absolute majority in the national assembly—if the national assembly had been allowed to meet. The National Government, which was controlled by West Pakistanis, did not wish an East Pakistan party to have control of the national legislature. They twisted and turned for some months and finally decided to outlaw that East Pakistan party, jail its leader, and impose martial law on East Pakistan.

That decision was taken in mid-March. It was ruthlessly carried out by the Pakistan army in East Pakistan and this, as we saw it, was a very tragic event. It led inexorably to what has happened over the months in between: (1) the development of a guerrilla-type warfare, with the Bengalis trying to attack and drive out the West Pakistan army; (2) the flood of refugees in India, somewhere on the order of 10 million refugees fleeing for what they obviously felt was their very lives, many, many thousands having been killed in East Pakistan; (3) the gradual increase in the support by India for the rebels, for the guerrillas and, eventually, the actual movement of Indian troops into East Pakistan in support of Bangla Desh; (4) the response of West Pakistan attacking across the West Pakistan-India line, and (5) the present state of nearly full-scale war.

It seems to many of us who have lived in Pakistan and who know many Paki-

stanis, both West and East, that with the results of the election held last December, the Pakistan Government had only two choices. One was to let the East Pakistan political weight—more than half the country's population live there—take effect in the national legislature, which meant turning the country over to the leadership of East Pakistanis. This the Pakistan Government was unwilling to do. Alternatively, it could have let East Pakistan become virtually autonomous and, if they wished, a new free country. Those were the only choices that would have prevented the kind of tragedy that we have been witnessing. The West Pakistan Government was willing to do neither of those things and the result is what we see now.

Now, back to the broader question of whether the outcome means that we have been mistaken all these years in trying to help develop economic strength in Pakistan. I would say no.

Let me shift the venue for a moment. I used to respond to questions like this when I was in AID with what still seems to me to be the exactly appropriate comment. During the period of the Marshall Plan, the country in Europe which got the most aid was France. I have forgotten the exact amount, but it was \$7 billion or something like that—virtually all of it in the form of grants. That aid did just what it was supposed to do; namely, to restore a viable French economy as a support for an independent French nation.

Fifteen years later, General DeGaulle was in charge of the French government. He was in the habit of kicking the United States in the shins every other day, and cutting across our policies in important ways. He drove the NATO Headquarters out of Paris and created all sorts of awkwardness. Did that mean that our aid to France had been wrong?

It did not seem so to me. The purpose of our aid to France was to restore a strong and independent France. We had to take our chances thereafter, and we still do.

This is a world of independent nations. It is a very difficult world to run, but it is also our kind of world. We applaud and admire pluralism inside our country and outside. We think that the world can be managed cooperatively. It remains to be seen whether this article of faith is going to be successful in the long light of history or not; but, that is what we think.

Correspondingly, in the case of Pakistan, the basis for our assistance to Pakistan over these years has been to try to encourage the establishment of an economically progressive and stronger nation. Suppose it turns out to be two nations? It does not make all that much difference. They are both big. One has a population of 75 million and the other a population of 55 million—indeed, therefore, two of the biggest nations in the world. They will constitute two of the entities which we will be trying to work with to try to solve important international problems. The basis for our effort has been recognizing that one of the problems that is most damaging to the world, namely, the problem of world poverty, can be attacked effectively and relatively cheaply, and the world has a better chance of dealing with other problems if that one is on the way to solution than if it is not on the way to solution. Those arguments, it seems to me, are valid and impressive. They do not mean

that we ought to put enormous U.S. resources into the AID program. We never have and we won't in the future.

Personally, I think that the U.S.' contribution to foreign assistance of only one-third of one percent of its GNP is rather niggardly, and that the United States could well afford to increase its contribution. I recently realized, with a start, that our GNP is supposed to go up by \$40 billion in the present year. Of that amount, we are not proposing to put one percent into foreign assistance. Well, why not? A small share of that increase as a contribution would result in very substantial improvements around the world and, to me, it would seem to be well warranted.

I do not argue the particular merits of a particular figure that is now before the Congress. I do suggest that the underlying rationale for economic and technical assistance to developing countries is not seriously challenged by the current tragedy in Pakistan. Our purposes will be set back. The purpose of most Pakistanis will be set back. It is a political failure within Pakistan—a political failure of enormous dimensions and with enormous human costs as a result.

However, we are not in charge of the world and there are going to be a lot of political failures in many places. It does not seem to me that they invalidate the steady, sensible effort to contribute to more constructive events where we have it within our power to do so, and where the costs are reasonable in terms of our own resources. I think that is the essential logic of the matter.

A Record of Service

• • • the General Accounting Office, which is completing its 50th year of operations this month, has compiled a fine record of service during the past half century: service to the Congress, service to the cause of a continually improving Federal administrative system, and service to the American people. I welcome the opportunity to join with my colleagues today in commending the GAO on its 50th anniversary and on the record of accomplishment which it has compiled during that period.

The Committee on Foreign Relations has called on the GAO on many occasions with requests for assistance in the field of foreign operations, and the resulting work is indicative of both the quality and diversity of the service which GAO can provide.

Senator J. W. Fulbright
Chairman, Senate Foreign Relations
Committee
Congressional Record
June 8, 1971



Chet Holifield
Chairman, Committee on
Government Operations,
House of Representatives

Congressman Holifield is serving in his 15th term in the U.S. House of Representatives and has moved up to the eighth seniority group in rank. He was elected Chairman of the House Government Operations Committee and its Subcommittee on Legislation and Military Operations.

Mr. Holifield relinquished, therefore, his position as Vice Chairman of the Joint Committee on Atomic Energy, becoming its Ranking House Member. He also was reappointed by the Speaker of the House to serve as Vice Chairman of the Commission on Government Procurement.

Mr. Holifield has been a leader in promoting legislation in the field of atomic energy both for a strong defense and for its peaceful application in research. He has served as a member of the Joint Committee on Atomic Energy since 1946. He has served as Congressional Advisor to the U.S. Delegation at most of the international conferences on the peaceful uses of atomic energy.

Mr. Holifield authored the legislation establishing the General Services Administration. During the 89th Congress, he managed the bill creating the Department of Housing and Urban Development.

In 1966 Congressman Holifield authored a bill which created the Department of Transportation, thus becoming the only Representative in our history to manage legislation creating two Cabinet-level departments.

The General Accounting Office and the Congress

Once each year, the Comptroller General presides at special ceremonies to bestow honor awards on GAO employees who have distinguished themselves through exceptional performance of their duties. The 1971 ceremonies coincided with the observance of GAO's 50th anniversary. Representative Holifield's address to the honor awardees, their guests, and all GAO officials and employees was related to both occasions. He observes that in its search for the imperfections in Government in order to make it more efficient and effective, GAO work is a highly satisfying form of public endeavor. That work is important for the assurance it gives the country that the Congress has created and works with an institution that keeps an eye on the executive branch and worries about the taxpayer's dollar.

I was pleased to receive the invitation from Comptroller General Staats to participate in the Fifth Annual Honor Awards Ceremony of the General Accounting Office. The House Committee on Government Operations, of which I am Chairman, has a very close relationship with your Office.

Before examining this relationship in some detail, I would like to express my high regard for Comptroller General Staats and my appreciation for his many contributions to the public service.

I knew him first in the Bureau of the Budget, and then I was greatly pleased when President Johnson appointed him in 1966 to the high office of Comptroller General. I have always regarded Mr. Staats as a dedicated public servant, as a man of keen intellect, broad experience, and deep understanding of the complex processes of Government.

Considering that Mr. Staats served so many years in the executive branch and the presidential orbit, I find it interesting that he has committed himself so firmly to shaping the GAO as a service agency to the Congress. And, more than his predecessors, he has refashioned the GAO as an institution to keep it abreast of the times, to expand its horizons, to diversify its skills.

In paying this tribute to Comptroller General Staats, I do not want to detract from the important work of his predecessors. Earlier Comptrollers General, including J. R. McCarl and Lindsay C. Warren, were congressionally oriented. Preceding his appointment, McCarl was a private secretary to Senator George Norris of Nebraska, and Lindsay Warren was a Member of Congress from North Carolina for many years.

When I came to the Congress in 1943,

Warren was in his third year as Comptroller General. He guided the GAO through the critical period of World War II, helped to establish the joint accounting improvement program, developed the concept of the comprehensive audit, extended the practice of auditing at the site of operations, and did much to make the GAO an increasingly effective force to serve the Congress.

In 1954, Joseph Campbell succeeded Mr. Warren as Comptroller General and served for 10 years. During his tenure the GAO became increasingly involved in defense contract audits and played an important role in the enactment of such landmark legislation as the Truth in Negotiations Act.

Each Comptroller General has an Assistant Comptroller General who is his good right arm. Frank H. Weitzel served in that position, culminating a long and distinguished career with the GAO over a period of 45 years, almost for the length of its existence. Robert F. Keller, the present Assistant Comptroller General, also has served with distinction in the GAO for many years. Both Weitzel and Keller have made outstanding contributions to the evolutionary development of the office.

There are many other career men and women in the GAO—I cannot begin to name them all—who deserve our thanks and appreciation for selfless and dedicated work in the public interest. They have helped to build the GAO as an institution. They have built their careers around this institution. The GAO is as good as its people, and judging by the reputation it has, I would say that the people are very good.

The half-century of GAO's existence spans the period of America's emergence as a world power and an urban society, with a big governmental apparatus and

farflung responsibilities. Depression and war and social turmoil have expanded greatly the responsibilities of the Federal Government and have made its operations infinitely more complex. The GAO as Government auditor for the Congress has had to deal with these complexities.

Comparing the Comptroller General's first annual report of 16 pages (fiscal year 1922) with his latest annual report of 150 pages (fiscal year 1970), one sees the vast change in functions and perspectives of your Office. When the GAO was created, the Federal budget was \$5 billion, compared to \$200 billion today.

Fifty years ago, the Office gave dry statistics on how many different types of accounts it received, checked, and settled in various Government departments. Today the GAO still settles accounts, but it is concerned more with the adequacy of agency accounting procedures than with checking individual transactions.

Although the dictionary definition of audit refers to the examination and verification of financial accounts, modern usage has broadened the term to encompass the evaluation of management or administration. The stereotype of the auditor with the green eyeshade gives way to that of the professional analyst with computer support. The accounting and auditing staff is being broadened to include engineers, economists, mathematicians, even an expert in cybernetics!

Today the GAO, by planned audit and by congressional request, tracks a multitude of Government operations. GAO regional offices are manned throughout the country and around the world, wherever American Government holds sway. The work of the GAO today is more sophisticated, more diversified, more attuned to congressional needs and interests.

Role of House Committee on Government Operations

Under the Rules of the House and the Legislative Reorganization Act of 1946, it is the duty of the Committee on Government Operations to oversee the work of the General Accounting Office. Our committee has legislative jurisdiction over budget and accounting matters (other than appropriations). For example, the Government Corporation Control Act of 1945 and the Budget and Accounting Procedures of 1950, both of which govern important segments of GAO operations, were handled by predecessors of our committee in the House of Representatives.

The Committee on Government Operations regularly receives the reports of the Comptroller General for review and followup action if necessary, and we draw upon GAO personnel for assistance in specific studies and investigations. Government annals contain records of many investigations through the years conducted jointly by our committee and the GAO. We have worked together in a constructive way for more effective Government.

These relations are by no means exclusive. The GAO works closely with the Committees on Appropriations, Armed Services, and others as the need and occasion arise. The Comptroller General details personnel to the committees on request. In fiscal year 1970, I am told, some 115 GAO employees were assigned to congressional committees. Also the GAO is prepared to respond to appropriate requests of individual Members as resources permit.

Our committee's relationship with the GAO has historical roots. The Committee on Government Operations is the modern-day successor to various committees throughout our Nation's history which dealt with expenditures in the

executive branch. There was a committee, for example, on Expenditures in the State Department, another on Expenditures in the War Department, and so on.

A few reports come down to us of significant investigations by these committees, but the historical judgment seems to be that the expenditure committees of former times were not very effective, often politically motivated, and more often in a state of suspended animation.

In 1927, 11 committees on expenditures in the House were merged into a single committee on Expenditures in the Executive Departments. In 1952, the name was changed to the Committee on Government Operations. This name change signified that the Committee wanted to go beyond the narrower historical identification with fiscal matters.

Just as the GAO may be said to have developed from a voucher audit agency to a management audit agency, so the Committee on Government Operations has taken a broadened view of its role and become, in a sense, the congressional auditor of executive management.

Our committee also has important legislative responsibilities in connection with Government reorganization, procurement and property management, administrative expenses, freedom of information, and other matters which have a Government-wide or multiagency impact. However, the Committee on Government Operations is the across-the-board investigating Committee of the Congress and, therefore, our investigative mandate—at least in the House of Representatives—is broader than that of other committees.

We are charged by the Legislative Reorganization Act and the Rules of the House with examining the efficiency and economy of the Federal Government at

all levels. For this purpose we have some specific tools, such as:

- A continuing subpoena power;
- A special statute giving access to Government records;
- The privilege of sitting when the House is in session; and
- A sizeable investigative staff.

Presently the Committee is divided into seven subcommittees, which among them cover all the departments and agencies of the Federal Government and certain functional areas of interest; such as intergovernmental relations, freedom of information, and foreign operations. The Committee employs approximately 60 staff persons in total, including professional, administrative, and secretarial employees.

The Committee on Government Operations, as I said, receives and studies the reports of the Comptroller General and works closely with the GAO in many ways. We have the responsibility of supervising GAO operations as part of our legislative oversight function. Frequently, we praise the GAO for work well done, but from time to time we criticize the GAO in the interest of getting work done even better.

No institution is perfect, not even the GAO, and not even the Congress. If the GAO, as commonly said, is the watchdog of the Treasury, there are those who want to know who watches the watchers.

The Congress and particularly the Committees on Government Operations watch the GAO. We are the source of its basic authority. We are concerned about the quality of its performance. The Congress has delegated to the GAO enormous power and responsibility. The Comptroller General passes upon the legality of Government expenditures, and, therefore, his writ runs far and

wide and touches everything that Government does.

The GAO declares itself on many matters in Government beyond the legality of expenditures. It reviews agency performance and makes numerous recommendations for improvement. For the most part, these are sound and well-considered, and the GAO has a high score in agency responsiveness.

However, honest men differ frequently about the best way to manage affairs, and no single agency, including the GAO, has a monopoly on managerial wisdom. The Congress itself does not always agree with GAO recommendations and reserves the right, through its committee system and membership, to take issue with the GAO and express its differences.

Who watches the Congress, you may ask. The press and public watch the Congress, which also has its internal checks and balances. Above all, the voters watch their Senators and Representatives. It is the voters who hire and fire the Members of Congress.

Some Issues Involving Congress and the GAO

The special relationship between the GAO and the Congress creates sensitive issues with respect to the Congress itself and the executive branch. I will devote the remainder of my remarks to a brief but candid discussion of some of these issues. My comments are not conclusive because the answers in a few instances are not easy to perceive and are still to be considered in pending legislation. Hopefully these comments will help you to identify some of the issues which must be thought through.

1. Since the Congress does not always speak with one voice, the GAO has to

serve many masters. There is always the danger of being hurt in the crossfires of political conflict. The GAO practice has been to stick to the facts and stay neutral in politics. Despite occasional carping and criticism, which every public agency is exposed to, and Congressmen are used to, the GAO has built a reputation for objectivity. This reputation should be jealously guarded.

2. The Congress in its quest for information has unbounded appetites. There is no end to what can be investigated and never enough staff to do everything which is requested. There are definite limits to GAO expansibility as an agency and, therefore, a need for care and selectivity in honoring and executing congressional requests.

3. The work of Congress is based upon a highly refined division of labor in the committee system. The GAO must give priority attention to the committees with important legislative and investigative tasks. On the other hand, much of the drive for expanded GAO authority and resources comes from less-senior Members of Congress who believe the committee system is not developing enough information for the Congress as a whole.

The GAO must keep in perspective these divergent trends and the subtleties of legislative maneuvering for position and influence.

4. There are those in Congress who will try to put upon GAO, not only more than it *can* do, but more than it *should* do. The issue may be evaluation of a complex weapon system, or defense strategy for the next decade, or some other demanding task of a high policy nature. The GAO is brought in because it is ready at hand and anxious to serve. The Comptroller General takes the view that the GAO should respond in the fullest extent possible to all reasonable requests.

The GAO is right to be responsive, but it cannot hope to be expert in all things. What the Congress needs from the GAO, in the final analysis, are auditors and investigators who are well trained and perceptive and can dig up the facts. The Congress cannot hope to develop a whole array of technical experts to match those in the executive branch.

5. The GAO holds itself out as the agent of the Congress, but it must be mindful of, and perhaps resistant to, developments which would tend to reverse in many particulars the agent-principal relationship. There are demands for legislation which would make the Comptroller General responsible for policing lobbies, political campaign contributions, financial holdings of Members (the Comptroller General already is custodian for Senators' financial declarations) and other matters affecting congressional conduct.

Since the Congress itself is not well constituted for administrative operations, the tendency to look to the GAO for such assistance is understandable and, in any given case, possibly merited. If this tendency is encouraged, however, and too many congressional policing and custodial functions are thrust upon the Comptroller General, the GAO may change into a quite different kind of agency—one which begins to acquire power over the Congress itself.

6. There are differences, not only within the Congress itself, but between the legislative and executive branches about many aspects of public policies and Government operations. As the agency which passes upon the legality of Government expenditures, the Comptroller General finds himself occasionally at loggerheads with the Attorney General as to what is legal and proper. Such conflicts are difficult to resolve.

The Congress has legislative options

to clarify policy and prescribe proper courses of agency conduct. Nevertheless, the Congress is not that flexible in legislative response because consensus may be difficult to attain, or the matter is left in limbo through inattention or deliberate choice.

The proposition has been put forth that the Comptroller General should have statutory authority to bring such conflict issues to the courts for resolution. I believe that if the Comptroller General is to acquire such authority, it should be exercisable in specific instances only with the full knowledge and consent of the Congress.

7. The Comptroller General believes that his office should have subpoena power, a privilege possessed by certain committees and accorded by statute to designated agencies of the Government. Since this power practicably cannot be exercised against departments and agencies in the executive branch, it is sought mainly in connection with access to records of Government contractors.

Does the Comptroller General need the subpoena power for effective work in contract audits? Some committee chairmen believe that when a difficult situation arises, committees can exercise their own subpoena power in support of the GAO. Perhaps the access-to-records statute needs clarification.

8. Finally, I should mention without necessarily exhausting the list of sensitive issues, the age-old problem of the auditor's lag. Audit reports look backward in time to past performance. They take a long time to prepare because auditing is an arduous task, and the audit agency understandably wants to be correct in its facts.

A frequent congressional complaint is that GAO reports are not timely enough. I know that many efforts are being made to overcome this time lag and to make the reporting process more responsive to the needs of the Congress.

There are no book formulas to resolve such issues, and I raise them to provoke thought and discussion in a time of change. The Congress is changing, and so is the GAO. We enter the decade of the 1970's and grope for answers to national problems of staggering dimensions and great urgency. I take an optimistic view, however, believing that this Nation has the resiliency, the imagination, the resources, and the basic inner strength to solve these problems while keeping a steady course.

Importance of GAO's Work

It would be fun to speculate how GAO would look on its 100th anniversary. This I will not do now, but to those of you who make your careers at the General Accounting Office, and to those who are receiving awards today, let me wish you well and say that you are engaged in a highly satisfying form of public endeavor. You search for the imperfections in Government in order to make Government more efficient and effective. You help to shore up the foundations of Government, to strengthen its bearing walls, to repair its cracks and crevices, to smooth its rough edges, to make it habitable and enduring.

Your work is important above all for the assurance it gives to the citizens of this democracy that the Congress has created and works with an institution that keeps an eye on the executive branch and worries about the taxpayer's dollar.



GAO Annual Awards Ceremonies, June 11, 1971

From left: Leo Herbert, Director, GAO Office of Personnel Management; Robert F. Keller, Deputy Comptroller General; George P. Shultz, Director, Office of Management and Budget; Chet Holifield, Representative from California; Elmer B. Staats, Comptroller General; and Professor Robert C. Weaver, City University of New York.



Elmer B. Staats
Comptroller General
of the United States

Elmer B. Staats became Comptroller General of the United States March 8, 1966, after 26 years of service in the Federal Government. Before his appointment as Comptroller General, he served as Deputy Director of the Bureau of the Budget under Presidents Johnson, Kennedy, Eisenhower, and Truman.

Mr. Staats joined the Budget Bureau in 1939 serving in various capacities prior to his appointment by President Truman as Deputy Director in 1950.

In 1953, Mr. Staats left Government service to accept a position as Research Director for Marshall Field & Company in Chicago. A year later he was appointed by President Eisenhower as Executive Officer of the newly established Operations Coordinating Board of the National Security Council. He held this post until he rejoined the Budget Bureau as Deputy Director in September 1958, and continued in this position until he became Comptroller General.

Mr. Staats was national president of the American Society for Public Administration, 1961-62. He is a member of several boards and committees, including the Board of Directors of the American Academy of Political and Social Science and the Board of Trustees of Public Administration Service.

A native of Kansas and a graduate of McPherson College, Mr. Staats received an M.A. degree from the University of Kansas and a Ph. D. degree from the University of Minnesota. He was a fellow of the Brookings Institution from 1938-39, is a member of Phi Beta Kappa, an honorary member of Alpha Kappa Psi, and received the Rockefeller Public Service Award in 1961. He also received an honorary degree of Doctor of Public Service from The George Washington University in 1971. He is currently serving on the Board of Trustees of The American University in Washington, D.C., and McPherson College in Kansas.

New Problems of Accountability for Federal Programs

The increasing involvement of external groups in carrying out Government programs and operations raises new questions of accountability for results. As concern for accountability increases, we must seek new ways to evaluate the management and effectiveness of Government programs. On behalf of the Congress, the GAO auditor's responsibility embraces evaluations of fiscal, managerial, and program accountability. However, the primary responsibility for an adequate accountability system lies in the executive branch and the performing agencies. (This address, except for minor changes, was delivered before the annual conference of the American Society for Public Administration in Denver, Colo.)

If I were to ask you as public administrators and political scientists what principally comes to mind when one refers to accountability, I suspect that most of you would reply in terms which would relate accountability as it bears upon our constitutional separation of powers—principally between the executive and the legislative branches.

Article II of the Constitution provides that the President "shall take care that the laws be faithfully executed * * *." It further provides that "he shall from time to time give to the Congress information on the state of the Union." In other words, he is accountable to the Congress for carrying out legislation enacted by it.

This aspect of accountability is certainly a timely one. The temptation is great to develop it at length. We hear much these days about "executive privilege," questions as to the President's

authority to commit our armed forces to combat, criticism of the President for impounding funds appropriated by the Congress, charges of a credibility gap in information made available to Congress, and so on. Concurrently, we hear more and more frequently that Congress has lost its "coordinate" position with the executive branch, that Government has become too large and too complex for adequate legislative oversight, and that the President—thanks to television—overshadows any similar figure or group of figures in the legislative branch, and thus has an overpowering natural advantage in molding public opinion.

An equally challenging and tempting aspect of accountability is whether the Congress has weakened its capability to exercise adequate legislative oversight because of its outmoded procedures and because of its preoccupation with details and hence insufficient attention to major program issues. This is a familiar

story to all of us. Perhaps some of you have made these charges yourself.

But, I shall resist these temptations. Instead, I would like to develop a different but increasingly significant aspect of accountability. It is not unrelated to accountability of the Congress to the electorate, nor to the subject of separation of powers. Indeed, it is impossible to separate them. I am referring to the problem of accountability as it relates to the increasing use of organizations outside the Federal establishment in carrying out governmental programs.

The idea of carrying out governmental programs through nongovernmental organizations is not a new one in our history. It is as old as the Erie Canal, land grants to the railroads, and the Morrill Act to support land-grant colleges.

What is new is the sharply increased dimension in recent years of the use of instrumentalities not directly administered by Federal employees—the private corporation, the quasi-governmental organization, nonprofit groups, international organizations, and State and local governments. The forms of sponsorship are many, ranging from Federal charters to subsidies, from contracts to grants. But, they all have a common denominator in that they are not administered directly by Federal employees: they share accountability to their own management and to the Federal Government.

It is a fundamental tenet of democratic society that individuals, organizations, or groups entrusted with public funds and responsibilities must be held accountable for carrying out their activities faithfully, efficiently, and effectively. This need for accountability applies not only to organizations supported wholly with public funds but to those financed only in part with public funds or those established by governmental charter.

Some have described this mixture of governmental and nongovernmental arrangements as the "contract state." Others have described it as a blurring of the lines between the public and private sectors. Still others see it as a dangerous and unhealthy situation in which the Government is in danger of losing—or has lost—its ability to act in the public interest. The phrases—"military industrial complex," "educational industrial complex," and "medical industrial complex"—are used to describe what some consider to be an unholy alliance between Government and industry under which the taxpayer and the general public come out as losers. Still others fear that accountability will bring with it governmental controls and the seeds of destruction of our pluralistic society.

For others, the issue—whether the growing trend is or is not desirable—is an academic one. They consider it inevitable and that the future will see an even more extensive use of such organizations.

As these people view it, the issue, therefore, is how the Government can hold these organizations accountable without losing the essentials of ingenuity, creativeness, and initiative which we have associated throughout our history with independent groups in our society. This is the view which I hold.

This latter thesis has been ably voiced in a current project sponsored by the Carnegie Corporation under the heading of "Accountability and Independence." Through joint United States-British conferences, through a series of papers commissioned for a conference at Ditchley Park in Britain, and through additional papers commissioned for an upcoming meeting in Williamsburg this fall, the importance of preserving both accountability and independence has been underscored and highlighted.

In this 50th anniversary year of the

Budget and Accounting Act, it is particularly timely to focus our attention on this apparent dilemma. While the subject is not exclusively one of Federal concern, the extent of delegation or contracting with external groups has gone further in the Federal Government than in State and local governments. It is also an area of interest to me as head of the U.S. General Accounting Office—a major concern of which is to assist the Congress in its legislative oversight responsibilities.

A listing and highlighting of the principal forms of delegation will help emphasize the importance and ramifications of the subject.

Federal Support of International Programs

Since World War II, the United States has been a major contributor to various international organizations, especially the United Nations and its specialized agencies, and the international financial institutions.

Let me cite a few statistics:

- U.S. subscriptions in the International Monetary Fund stand at \$6.7 billion.
- U.S. subscriptions to the World Bank now total \$6.3 billion.
- Over the last decade, U.S. contributions to other international lending institutions, such as the Inter-American Development Bank, the International Development Association, and the Asian Development Bank, totaled more than \$4 billion.
- During the same period direct contributions to the United Nations and its specialized agencies, and other international organizations totaled more than \$3.2 billion.

In recent years there has been a pronounced tendency toward transferring a

greater portion of U.S. foreign assistance funds to international organizations. Certain characteristics of these organizations, particularly the *fact* of their being international, create perplexing problems in devising adequate techniques to obtain accountability. We must start by recognizing that membership in international organizations presumes a willingness on the part of member nations to rely heavily upon the management of these organizations, an agreement which severely limits action that can be taken unilaterally.

For example, developmental assistance carried out through the specialized agencies of the United Nations involves the international sovereignty, so to speak, of these agencies. But this sovereignty must somehow be reconciled with the need to obtain sufficient financial, management, and program data to assure the contributing nations that the programs of these agencies are being carried out effectively. This information is needed, of course, for the United States to determine the type and level of support it should provide these agencies. The General Accounting Office has reviewed many of these programs and in many instances concluded that not enough information is available to the United States to make a valid assessment of their operations or results.

What is needed to overcome these inadequacies? We considered the possibility of audits by the United States and other member nations but discarded the idea as unwise and impractical. We concluded that the better course for providing accountability lies in pushing for better financial controls, program evaluation, and budgetary systems within these organizations. We recommended, and the Department of State is recommending, that the United States support the establishment of a single United Nations review body to make independent evalua-

tions of United Nations developmental activities.

Following the recent announcement by the President that the United States would seek increasingly to channel its development assistance through multilateral organizations, the Department of State reorganized its Bureau of International Organization Affairs to strengthen the Bureau's ability to monitor and evaluate the programs and activities of the United Nations and its specialized agencies. This reorganization followed closely a plan we recommended to the Department and to the House Foreign Affairs Committee. This reorganization will provide greater assurance to the Congress that channeling more aid through multilateral bodies will still afford reasonable oversight of expenditures channeled through these organizations.

With respect to the international lending institutions, GAO has similarly been concerned that there be a top level management review body in each international institution reporting to its governing board, as contrasted with the limited lower level audit activities reporting to the operating officials of the banks. This goal has already been accomplished at the Inter-American Development Bank.

Financial Assistance to State and Local Governments

The national debate now taking place on grants-in-aid and revenue sharing is of special interest to those interested in the subject of accountability. Grant-in-aid programs have increased in the past 20 years from \$2.3 billion in 1950 to \$29.8 billion in 1971. Grants-in-aid have increased over this period on an average of 12 percent a year. By comparison State and local revenues have increased about 9 percent a year. Approximately one-fifth of all State and local funds are now derived from Federal grants.

Human resource programs—education, manpower, health, and income maintenance—account for more than half of all Federal grant funds. The Department of Health, Education, and Welfare alone made Federal aid expenditures in the form of grants totaling over \$12 billion in 1970, \$14.7 billion in 1971 and expects to spend \$18.5 billion in 1972. This compares to total grant expenditures made for the entire Government as Federal aid to State and local governments during 1970 of nearly \$24 billion, and \$29.8 billion during 1971. It is expected that total Federal aid expenditures will increase to over \$39 billion during 1972.

For the future, the Federal budget for 1972 states that "this year promises to be a turning point in the history of our federal system." It notes that the President's proposals for financial assistance to State and local governments, includes a program for general sharing of Federal revenues for fiscal year 1972, estimated at about \$5 billion during the first year.

In the debate on grants-in-aid and revenue sharing the basic question focuses on the primary purpose of such assistance. Is the primary purpose to support programs for specific *national* needs, financed in substantial part with national revenues and accounted for to the national Government? Or is their prime purpose equalization of the tax burden under a system of federally collected, locally administered revenues?

The President in his February 4 message to the Congress on general revenue sharing, took note of the issue of accountability. He pointed out that many people believe that the best way to hold Government accountable to the people "is to be certain that the taxing authority and the spending authority coincide." He disagrees. His conclusion is that accountability really depends in the end

"on how easily a given official can be held responsible for his spending decisions . . . not where the money comes from, but whether the official who spends it can be made to answer to those who are affected by the choices he makes." In brief, the President concludes that the spending rather than the taxing is crucial in the accountability issue.

The dilemma is posed by the fact that the President recommended against allowing the application of the civil rights and equal employment laws to be determined by State and local governments. These would continue to be subject to Federal audit and Federal control.

"Special revenue sharing," essentially, is a program to consolidate categorical grants. The President's proposal, however, contemplates vastly increased local discretion to allow local determinations on program priorities within broad categories to replace judgments of Federal agencies and to provide for minimum accountability to the Federal Government as to how these funds are expended.

I doubt if there is any issue in our generation which has posed the issue of accountability more sharply.

Will the Congress, which must raise the revenues, be willing to settle for the discretion and delegation to State and local government which the President's proposals contemplate? Can we find alternative ways of achieving accountability short of the detailed and burdensome requirements which we have today in so many of our grant-in-aid programs? Will the special interests—concerned with, for example, child care, aid to the mentally retarded, or water pollution control—be satisfied to allow the need for these programs to be determined by the State and local governments? Will cities who adopt "neighborhood-level" governmental units be able to hold such units fiscally accountable?

Whichever way the issue turns, our attention has been focused sharply on the capability of State and local governments to audit programs and to evaluate their effectiveness.

The GAO is currently taking the leadership in an effort to develop auditing standards which will more clearly define the nature and quality of auditing of these programs needed to provide managers and policymakers, including legislators, with information and independent evaluations on what is done and what is accomplished with the funds expended. We also expect to develop a model state audit law. If revenue sharing, as proposed by the President, is adopted, the application of such standards may well become the major—perhaps the only—accountability tool remaining for the Federal Government.

Federal Contract Research Centers

Closely allied with the issues associated with grants-in-aid and revenue sharing is Federal Government assistance to scientific research. During the last 20 years, the Federal Government's assumption of expanded responsibility for scientific research has led to increased reliance on contracting with private nonprofit organizations. One of the first of these was the RAND Corporation, started in 1946 as an Army Air Corps project at Douglas Aircraft Company. Two years later, it was organized as a private nonprofit corporation, a model since followed in the establishment of other similar research organizations.

By the early 1960's, the number of similar nonprofit corporations created by the defense agencies had expanded greatly. The increased need for strategic analysis led to the formation in 1956 of the Institute of Defense Analyses, used by the Joint Chiefs of Staff. Other well

known nonprofit corporations sponsored by the defense agencies include:

- Analytic Services, Inc. (Air Force), 1958
- Logistics Management Institute (DOD), 1961
- Research Analysis Corporation (Army), 1961
- Center for Naval Analysis (Navy), 1962

During this period, the Air Force's need for systems engineering and technical management resulted in the creation of the MITRE Corporation in 1958 to serve in developing electronic and command control systems. The Aerospace Corporation was formed in 1960 to provide technical direction in missile and space programs. The System Development Corporation was spun-off from RAND in 1956 to provide operationally oriented training and other technical support for control information and processing systems. Finally, the Johns Hopkins University Applied Physics Laboratory, established in 1942, has been used by the Navy for technical advice on missile and space programs; the Laboratory is a Government-financed laboratory, operated as a division of the University. Nondefense agencies such as AEC, NASA, and the National Science Foundation also sponsor nonprofit research corporations.

One of the most recent nonprofit research corporations is the Urban Institute, established in 1968 to study urban problems.

In 1970 the National Area Development Institute was established by Spindletop Research, a nonprofit corporation in Lexington, Ky., with assistance from Ford Foundation, to serve a similar purpose with regard to small towns and rural areas. Recently announced are plans to create an Environmental Pro-

tection Institute to provide a similar role for the Environmental Protection Agency.

By 1967, the Office of Science and Technology and the Federal Council for Science and Technology had identified 68 Federal contract research centers, with varying degrees of autonomy and having highly differing purposes, including 17 sponsored by the Department of Defense. Funding of these centers increased from \$1.1 billion in 1962 to over \$1.5 billion in 1970.

Much has been written and said as to the merits of these centers sometimes referred to as "captive" organizations. The word "captive," at least in the early days, was appropriate since most were not permitted at that time to undertake work or receive funds from any organization other than the sponsoring agency. The policy has since changed for most of them.

Supporters of these centers argued in behalf of their establishment that they could be organized more quickly than a new unit in the governmental establishment; they frequently could borrow personnel and resources already available at a university location; and, most importantly it was argued, they would not be subject to the painstaking accountability and administrative requirements of the bureaucracy with respect to salaries, budgets, reporting, etc.—matters of long-standing concern to governmental in-house establishments.

But this very independence has also been the source of problems. How truly independent can an organization be, it is asked, if its life depends upon a year-to-year budget allowance from an agency or even a subordinate unit within an agency. Why should an organization fully or chiefly supported with Federal funds be permitted special privileges or advantages not given to those in the Fed-

eral establishment? One student of the subject summed up the dilemma of the Federal contract research centers in these ironic terms: the principal issue with them currently, he said, is how to preserve the strengths which caused these centers to be established in the first place; that is, how to preserve professionalism and independence when their future is tied up so closely with the funding of a particular sponsoring organization.

With increasing scrutiny and restrictions, especially from the House Appropriations Committee, these centers have been pushing for diversification of support and at least one has been cut loose from Government sponsorship and functions in the private sector.

And the end of the story may not have been told. The question is asked—if we have the ingenuity to create a special purpose Langley Research Center or a National Institute of Health, why cannot we likewise establish the necessary flexibility and autonomy within Government? Can the sponsored research center, in short, have it both ways—freedom from market-place competition on the one hand and relative freedom from accountability to Government on the other?

Research and Development in Colleges and Universities

Another significant measure of Federal support of science is the growth of grant and contract funds to universities. The National Science Foundation plays a major role in such support. Statistics compiled by this agency show that obligations for research and development conducted by colleges and universities more than doubled from \$800 million in 1962 to \$1.7 billion in 1970. The 1972 budget contemplates nearly \$2 billion. Its goal is very broad: to insure the

vitality of research efforts; to develop and support research efforts to increase our understanding of the problems of society and their solution; and to advance the Nation's economic growth and welfare.

This research also provides for the training of science and engineering graduate students through employment on the research projects and helps develop needed capabilities in academic institutions to undertake research on important national, regional, and local problems.

It is not possible in the limits of this paper to outline the full significance and implications of the Federal Government's relationship to colleges and universities as it provides funds to carry out specific projects and programs or to encourage research and training in areas of national interest. Essentially, the basic questions, however, are the same as with other organizations: What does society get from its investment? How can assurances be provided that the objectives sought with such funds are being achieved? How can assessments be made in a way which will not interfere with academic freedom or stifle initiative? Is there a choice, in other words, between the roads which lead to ever-increasing Government control of our universities and falling back to the level of support which can be provided them through endowments and private philanthropy which have been relatively free from such control?

Government-Owned, Contractor-Operated Plants

In obtaining the goods needed by the Government to carry out its programs, the question of whether to make or whether to buy is the first question that must be answered. When it decides to make, the Government often invests in

plants and equipment and then contracts with the private sector to operate the plants.

The Department of Defense and the Atomic Energy Commission both make extensive use of private contractors to operate Government-owned industrial plants. In fact, most of the work in achieving AEC goals is performed in Government-owned facilities under contracts with industrial and educational or other non-profit organizations. By the end of fiscal year 1970, these AEC contractors had approximately 106,000 employees engaged in operations and 9,000 in construction work. In comparison AEC itself had 7,548 full-time employees. Contracts with 350 prime industrial contractors in 1970 amounted to \$1.6 billion. In the same period, the Department of the Army had 28 active GOCO industrial plants whose operating expenses exceeded \$1.1 billion.

It can be seen that this technique is, essentially, that of procuring the management talents of the private sector. The Government exerts varying degrees of control over the activities of contractors that operate GOCO plants. These controls are intended to achieve a variety of objectives. They are not necessarily directed to increasing plant efficiency. For example, needed equipment modernization or replacement that can be justified by the economics involved may be rejected by the Government agency because of other demands for funds having higher priority.

The traditional incentive to efficiency—increased profit—is also absent since most GOCO contracts are cost-reimbursement contracts where the contractor's profit or fee is fixed at the outset and the contractor is not rewarded for reducing costs. The Government must therefore find the yardsticks to measure

the management effectiveness of these contractors.

Yardsticks used by the AEC include (1) developing standards for direct labor and direct material, where applicable, (2) developing financial and personnel plans on the basis of expected workload, (3) comparing actual performance with planned performance, and (4) conducting formal appraisals of individual plant operational segments. One of the most promising objective means of measuring management effectiveness that can be used at GOCO plants and which should receive more attention is the industrial management review or "should-cost" analysis.

Negotiated Procurement

The Federal Government is the private sector's biggest customer. Since 1949, when the Federal Property and Administrative Services Act centralized civilian procurement, the dollar value of all U.S. purchases of supplies and equipment has increased from \$9 billion to \$55 billion. This represents nearly one-fourth of the Federal Government's total budget. Nearly 90 percent of these purchases is in the form of negotiated rather than formally advertised bid procurement. About one-half is negotiated with a single supplier, known as sole-source procurement.

Where the Government can buy competitively in the market place, the normal market mechanisms can generally be relied upon to assure that the goods are procured at fair and reasonable prices. But negotiated procurement—especially *negotiated sole-source* procurement—requires other controls to insure reasonable prices to the Government.

Some have even raised the question as to whether the major defense contractors, whose entire business depends upon

Government consumption and whose sales to the Government are predominately negotiated, are losing their status as private corporations.

A great deal of interest has been stimulated in improving Government procurement procedures. For example, the Department of Defense is increasing its use of "fly-before-you-buy" procurement. GAO has recommended greater emphasis on "should-cost" analysis to find ways in which the Government and the contractors can reduce the cost of weapon systems by applying improved management and engineering techniques in carrying out the contracts.

The far-ranging studies of the Procurement Commission, established by the Congress in 1969, are expected to produce many significant recommendations for improving Government procedures for acquiring goods and services at fair prices.

Government Utilization of Private Enterprise for Social Purposes

A relatively new and different technique for attaining Federal objectives other than through grants and subsidies to private institutions is the chartering of separate and independent organizations which may or may not receive initial or continuing funding by the Federal Government. Many are intended to be self-supporting. Here are two illustrations of this technique.

Job Opportunities in the Business Sector— JOBS Program

The JOBS Program, initiated in 1968, represents a joint effort by the Government and the private sector to find meaningful employment for disadvantaged persons. The National Association of Businessmen was established as a private, independent, nonprofit corporation for

the purpose of stimulating private business firms to hire and train the disadvantaged. The goal of the JOBS Program is the employment of 614,000 hard-core unemployed in 125 cities by June 30, 1971. The National Association of Businessmen seeks to attain this objective by creating awareness, involvement, and commitment in the business community to stimulate them to provide jobs and training for such persons and advise the Secretary of Labor on how the Government can help meet this objective.

GAO recently reviewed the operation of the JOBS Program and concluded that, in spite of growing pains and many remaining problems, it has been effective in focusing the attention of businessmen on the employment problems of disadvantaged persons and in eliciting broad responses and commitments by many private employers to hire, train, and retain the disadvantaged. By the end of June 1970, more than 15,000 companies had hired persons under the JOBS Program and almost one-half million jobs had been pledged to be placed.

Medicare Program

The Medicare program was established in 1966 to provide persons over age 65 with hospital and physician care. Physicians' services and other medical and health care is provided through a voluntary Supplementary Medical Insurance Program. This program is administered by private carriers through contracts with the Secretary of HEW. The carriers' functions include:

- Determining the rates and amounts of payments on a reasonable charge basis;
- Determining the medical necessity of the payments; and
- Receiving, disbursing, and accounting for Medicare funds.

By the end of 1970, 19.2 million persons were enrolled in this program and 49 carriers had made benefit payments of about \$1.5 billion.

I think we can look forward to even further use of the private sector for a range of social-purpose programs. In his Health Message to the Congress earlier this year, the President called for the establishment of health maintenance organizations—known as HMO's—to upgrade the delivery of health services to U.S. citizens. The HMO's are intended to bring together a comprehensive range of medical services in a single organization so that a patient is assured of convenient access to all of them. These medical services are provided for a fixed contract fee which is paid in advance by all subscribers. There is thus a strong built-in incentive for greater efficiency.

An advantage of using private organizations for social-purpose programs is the ability to develop highly flexible relationships with the persons being served. But to the extent that delivery of services is decentralized, accountability problems become more acute. A "built-in" accountability discipline—such as the profit incentive of the proposed HMO's—thus becomes increasingly important.

Specially Chartered Quasi-Public Organizations

In addition to the utilization of private enterprise for social-purpose programs, a number of quasi-public organizations have been established to carry out functions which traditionally have been wholly committed to the private sector. These quasi-public organizations were created to fill the gap between what the private sector had been able to deliver and what the Government felt was required in the public interest. Here are three examples.

Corporation for Public Broadcasting

In 1967 Congress established the Corporation for Public Broadcasting to provide financial assistance for noncommercial educational television and radio broadcasting. This nonprofit corporation seeks to strengthen and improve educational radio and television by providing an independent source of funds. It also operates and interconnects its own stations. Although independent of the Government in its operations, it thus far depends upon appropriations by the Congress to finance its operations. Having no independent source of income, it remains subject to influence by the President and the Congress through the appropriation process beyond that contemplated when established.

Communications Satellite Corporation

At the dawn of the space age in the early 1960's, the Communications Satellite Corporation (COMSAT) was incorporated as a profit-making corporation with the goal of establishing, in cooperation with other countries, a commercial communications satellite system as part of an improved global communications network. Financially, this corporation is completely independent of the Government since it finances its operations through issuance of capital stock to the public.

Dual responsibility to its stockholders and the Government can cause a dichotomy in its operations—for example, the State Department can direct COMSAT to provide communications for areas of the world that are unprofitable and therefore not in the interest of its shareholders. COMSAT also must depend upon NASA for launching of its satellites, and its operations are regulated by the Federal Communications Commission.

National Railroad Passenger Corporation (AMTRAK)

A more recent quasi-public corporation—the National Railroad Passenger Corporation—was created by the Congress in 1970 to provide intercity railroad passenger service. This action was in response to the threat that railroad passenger service might disappear. By 1970, there were only 500 passenger trains in service in the United States compared to 20,000 in 1929. AMTRAK is chartered as a private, profit-making organization financed principally by common and preferred stock; is authorized to operate intercity trains and make contracts with railroads or other companies for use of facilities and equipment; and can rely on railroads to provide manpower.

Although the accountability problems associated with the quasi-public corporations are similar to those relating to private enterprise organizations established for social purpose programs—that is, preserving independence and the advantage of market mechanisms—an additional factor to consider is that they compete with other private sector corporations. Thus there is inevitably a danger that Federal support of this type of quasi-public corporation, if not carefully controlled, may tend to undermine the effect of private sector competition which may be the very reason for being of the quasi-public corporation. One way to avoid this danger is to insure that these quasi-public corporations are not too greatly dependent upon income from the Federal Government, at the same time recognizing that such assistance is clearly required to achieve the purposes of the corporations.

Expanding Role of Federally Sponsored Financing Agencies

A special type of quasi-public corporation is the federally sponsored financ-

ing agency. From their initiation in 1917, their role has grown to the extent that their operations play important roles in the allocation of monetary and fiscal resources. The five presently in existence are:

- Federal National Mortgage Association,
- Federal Home Loan Banks,
- Federal Intermediate Credit Banks,
- Federal Land Banks, and
- Bank for Cooperatives.

Each was, at one time, either wholly or partly Government-owned. Now they are entirely privately owned and are not included in the budget of the Federal Government. They were established by the Congress to meet national objectives in the area of agriculture and housing and, although now privately owned, are still under Government supervision.

The Federal National Mortgage Association is the largest in scope of the federally sponsored financing agencies, being involved mainly in the purchase and sale of FHA insured and VA guaranteed mortgages. In 1970, the outstanding debt of these agencies totaled \$35.8 billion. Over fiscal years 1970 and 1971, the estimated net increase in outstanding debt of these agencies amounted to more than \$18 billion.

Besides affecting the housing and agricultural programs they were designed to aid, the policies of these agencies are affecting overall economic stabilization policies of the Government. Some fear that these agencies, created to supplement the activities of the private sector, are becoming the dominant institutions in these areas. These people would prefer to have the operations of these institutions subject to Federal budgetary control.

Delegation Involves Mixed Public Purposes

The accountability issue is clouded and made more difficult by the fact that the Government, in the various forms of delegation or contracting outlined above, is seeking to accomplish, in most cases, more than one public purpose. In most if not all of these arrangements, the Government has the option of direct operations. Its decision not to do so may be influenced heavily by the fact that other—and frequently conflicting—objectives are sought by the use of external organizations:

- Strengthening private enterprise,
- Supporting educational institutions,
- Fostering international cooperation, and
- Encouraging private investment as a means of lessening public expenditure requirements.

I would not argue, as does Peter Drucker, that Government is inherently incapable of efficient management, and thus should limit itself to a policy role, but many thoughtful students of Government argue that pluralism in carrying out Government programs, like pluralism in the private sector, may in and of itself be an objective which should be encouraged. It would be difficult to conceive of a situation where we attempted to carry on all Federal activities through direct Federal operations.

There must be a balance between accountability and delegation. We now realize the Defense Department's total package procurement concept, for example, which resulted in Lockheed's problems with the C5A aircraft and the Cheyenne helicopter, is not a viable arrangement. We now recognize that the Government must have a continuing, intimate, day-to-day relationship in monitoring development and production

problems when a weapons system is being purchased which pushes the "state of the art."

The opposite extreme is the extent to which the National Science Foundation once insisted on overdetailed accountability by requiring "total effort" reporting for academic scientists who received grants from the National Science Foundation. Either extreme is to be avoided.

The Auditor's Role in Management and Program Evaluation

Perhaps some of you think of the auditor as the accountant whose role is limited to certifying as to the adequacy and completeness of financial statements. In such terms, his role is important but limited to making certain that there has been an adequate disclosure of financial data to the Congress, to the executive, and to the public.

This aspect of accountability, which I refer to as fiscal accountability, is only a part of the auditor's role. For example, the National Association for the Advancement of Colored People complained to our Office that a financial audit of grant-in-aid programs by State auditors was of little value if the auditor was unconcerned as to whether the program achieved the congressionally intended purpose. The stockholders of a major corporation not long ago sued a public accounting firm who certified as to the adequacy of the firm's financial statements shortly before the company went bankrupt. Their opinion was too limited, it was argued, in that it did not analyze basic management problems of the company.

Indeed, the Budget and Accounting Act of 1921 contemplated that the auditor would be concerned broadly with the "receipt, disbursement, and application of public funds * * *." Similarly, the

Legislative Reorganization Act of 1946 directs the Comptroller General to make expenditure analyses to "enable Congress to determine whether funds have been economically and efficiently administered and expended." More recently, the Legislative Reorganization Act of 1970 calls on the Comptroller General to review and analyze the results of Government programs and activities as well as to make studies of costs and benefits of such programs.

The responsibility of the auditor in the GAO embraces three aspects of accountability:

- Fiscal accountability, which includes fiscal integrity, disclosure, and compliance with applicable laws and regulations;
- Managerial accountability, which is concerned with the efficient and economical use of personnel and other resources; and
- Program accountability, which is concerned with the results or benefits being achieved and whether programs are achieving their intended objectives.

An accountability system should embrace all three elements. There must be public confidence as to fiscal integrity in the spending of public funds: there must be assurance that waste does not occur through mismanagement; and, there must be a way to assess whether programs are accomplishing their intended objectives with due regard to costs.

I do not intend to imply that the auditor has an exclusive, or even necessarily the primary, responsibility for management and program evaluation. Other analytical staffs and other systems of review are also available to the administrator.

Too frequently, however, such staffs

have been primarily concerned with budget formulation and program planning and not sufficiently with whether on-going programs are achieving their intended result. This is the area to which the auditor has a major and increasingly important contribution to make. He has a tradition of making his findings independent of the operating officials; he is increasingly equipped with special skills which go far beyond that required for financial audits alone; and, most importantly, he is increasingly looked to by the legislature and by the executive for studies and recommendations on all three aspects of accountability.

Accountability Within the Executive Branch

It should be emphasized that, in any accountability system, the legislative branch is concerned with how well the manager is informed with respect to his operations: whether he has the necessary staff to deal with operating problems; and whether he is adequately evaluating his program accomplishments. When the Congress, for example, uncovers vast irregularities in the post exchanges and commissaries of the Defense Department, its natural question is why the Defense Department had not identified and dealt with the situation. When the Congress is frustrated for lack of reliable information as to whether the economic opportunity and elementary education programs are working, a natural question is what evaluations have the agencies made and what resulted from them. When the Congress is called upon to increase funding for international organizations, the natural question is how much does the State Department or the Treasury Department know about the effectiveness of international loans and technical assistance.

It is important, therefore, that the legislative auditor carry out his responsibility in part by auditing the agency's system of accountability—finding out whether internal audit is on top of its job, whether management has the information it needs to prevent cost overruns, whether it has the analyses to justify additional funding, and so on. This concept is fundamental in that it places the emphasis on accountability at the point of primary responsibility: namely, the agency head or the President.

By What Test Shall We Judge Performance?

Unlike the market-place test of sales and profits, the Government auditor seldom can apply an equally concrete test of costs and benefits. Sometimes he can make cost-benefit studies in quantitative terms. Usually he must search the legislative history, the appropriations hearings, and the translation of sometimes broad statutory charters into statements of program objectives of the operating agency. He must examine evidences of program impact, of good or bad coordination, and alternately perhaps he must exercise subjective judgments based on his own experience as a trained analyst and on the conclusions reached by management or by the recipients of the benefits of the program. In short, there is frequently no established "par for the course" by which to judge performance.

The problem is even more sharply focused when Government operates through an external organization.

—How do we assess the impact of a model cities or a community action program designed in large part to promote citizen action and social change, complicated still further by the fact that funds may come from several agencies—public and pri-

vate—under differing statutory provisions?

—How do we isolate the impact of U.S. foreign economic assistance from the political climate and the economic development efforts within an underdeveloped nation?

—How does the auditor reach a conclusion on how well research grants are administered in a given university?

The form and extent of accountability, moreover, cannot be divorced from the legislative or the political climate at a particular point of time. All of a sudden people have discovered the meaning of the words "ecology" and "environment." These have not become household and schoolroom words. Ralph Nader has become something of a national ombudsman. Weapon systems, cost overruns, and efficiency have become frequent headline items and matters of concern to the entire Congress, not just to the Appropriations and Armed Services Committees.

Concluding Remarks

The conclusions for my remarks can be summed up briefly:

—The trend toward using external groups by Government will probably increase in the years ahead.

—Congressional and public concern with respect to accountability systems will grow as Government increases in size and complexity.

—As the concern for accountability increases, we must seek new ways to evaluate management and program effectiveness, keeping in mind that under our separation of powers the

executive branch will continue to have the primary task in the accountability system.

—Finally, as we recognize the need for, and as we can provide for, an

adequate and well-understood accountability system, we will also be serving the objective of a more responsive system of Government and a more democratic society.

Indispensable Information Aid

Throughout its long history, the GAO has supplied many facts on Government programs that would otherwise not have reached the Congress. No other source, as far as I know, provides this type of analytic, objective information to the Senate and House of Representatives. The GAO's task of auditing and reporting on activities, programs, and the use of public moneys by the executive agencies is, in reality, an indispensable informational aid to Congress and, consequently, of great significance to the success of our representative Government.

Senator Allen J. Ellender
Chairman, Senate Appropriations
Committee

Congressional Record

June 10, 1971



Judge Harold Leventhal
District of Columbia
Circuit Court, U.S.
Court of Appeals

Judge Leventhal received his A.B. degree in 1934 from Columbia College and his LL.B. degree from Columbia University Law School in 1936.

Though he is a native of New York City, his career has been centered in Washington, D.C. He started as law secretary to Supreme Court Justices Harlan F. Stone (1936-37) and Stanley F. Reed (1938). From 1937-39 he worked in the Office of the Solicitor General except for 6 months when he worked with Solicitor General Reed upon Reed's appointment as Supreme Court Justice.

Judge Leventhal was Chief of Litigation, Bituminous Coal Division, Department of the Interior, from 1939-40 and Assistant General Counsel, Office of Price Administration, from 1941-43. He served in the U.S. Coast Guard from 1943-46 and was discharged as a lieutenant commander. While in the Coast Guard, he was assigned, at Justice Jackson's request, to Jackson's staff at the Nuremberg Trials (1945). From the time of his discharge until 1965, Judge Leventhal was a partner in the law firm of Ginsburg and Leventhal.

In addition to his private law practice he was Executive Officer of the Hoover Commission Task Force on Independent Regulatory Commissions (1948), Chief Counsel of the Office of Price Stabilization (1951-52), and General Counsel of the Democratic National Committee (1952-March 1965).

Since April 1965 Judge Leventhal has served as U.S. Circuit Judge, U.S. Court of Appeals, District of Columbia Circuit.

The Lawyer in Government

The General Accounting Office and its predecessor organizations have been deeply concerned with the interpretation and application of law in Government programs and activities since the beginnings of our country. A major responsibility of GAO is to interpret Federal and other laws affecting Government operations and expenditures. Thus, this series of lectures would not be complete without a respected member of the legal profession. Judge Leventhal recently wrote that the agencies of Government and the courts constitute a partnership in furtherance of the public interest. In his lecture he notes that in our democracy the rule of law and equal justice under law is basic. Lawyers in Government, in their varying roles, serve this goal and in doing so contribute to efficiency and fairness in Government operations.

My sense of privilege is underscored in being invited to speak with you in the program commemorating the 50th anniversary of the General Accounting Office. I do regard the invitation as a privilege and also a surprise, for the main theme is "Improving Management for More Effective Government" and I ask, "how can I be invited to speak on the one hand on the role of the Government lawyer, and also in improving the managerial effectiveness of Government?"

I feel I may be likened to the Scottish professor who spoke to the Welsh miners on the final "E" in Chaucer. He was dusty enough to make them seek the real Scotch, and as he toiled on, the miners left the union hall in twos and threes until only a few remained. The professor was pleased that in particular there was one codger in the front row who did seem to be listening to everything he had to say. At the end of the

talk this man came up to the lectern and said, "Professor, you did your best and we want to thank you for coming, but I say, to heck with them that asked you."

Of course, you can't pursue that thread too far because Elmer Staats revealed it was he who asked me. And we have a relationship, a personal relationship, which can fairly be described as respectful congeniality, which had its origins in some stormy scenes 30 years ago.

I shall refer to those OPA (Office of Price Administration) days presently. But I want to say, before I forget it, that I at least am glad I was asked, because it provides the occasion for me to reflect back on my years of service as a Government lawyer. They are in the past. I hope I have some objectivity about them as a result of my 20 years in private practice opposing Government lawyers, and my 6 years on the bench, listening to both sides. But I do recall that in 1946,

after I came back from the service, I was asked to write, for the official OPA history, a section on the role of the price lawyers. I said approximately that those years were, for the lawyers involved, a high-water mark of commitment and satisfaction.¹ I do not recede now from that overall judgment.

But I am putting my cart before my horse. I have a little problem because I need a point of reference. Am I speaking mainly to lawyers? They know how significant their role is, and all I need provide is a little stroking. Or am I speaking to nonlawyers—who are “lukecool,” if not hostile, to lawyers—who might acknowledge their help on certain occasions reluctantly; and who have their most vivid recollections of one scene after another in which the lawyers involved were a pain in the neck?

I thought I might gain a point of reference by supposing that I was talking to a visitor from another country. He would not want comments that probe in excessive depth, but he would want some portrayal of the landscape, the peaks and valleys, the highlights and shadows.

The Lawyer in Society

I can begin by saying that, if we are going to talk about Government lawyers, we really ought to talk about lawyers in the society generally, at least briefly. Travelers from abroad have always been interested in that topic, at least ever since a young French lawyer named De Tocqueville came here 100 years ago and made some observations about lawyers in the United States. His comments reveal an ambivalence. I tell you something about them because he is a classic

¹ H. Leventhal, *The Role of Price Lawyers, Part I of Problems in Price Control: Legal Phases* (General Publication 11, OPA series of Historical Reports on War Administration, 1947), p. 1.

and therefore is never read. He commented, as many have done since, on the large number or large percentage of lawyers in the Government—in the Congress. He spoke of the tendency of Americans to turn what, in other countries, was a political question into a judicial question.² He had some very complimentary phrases. He glows over lawyers as “the American aristocracy” and speaks of “the high opinion entertained of the ability of the profession.”³

On the other hand, those were not the majority opinions of the time. A number of other quotations may be summoned in support of what might be called a postrevolutionary dislike of lawyers in America.⁴ In fact, there were mixed feelings about them even at the time of colonial days in the Constitutional Convention. Although there was a preponderance of lawyers at that Convention, that fact reflected individual popularity and a general sense of dependence on their influence and ability. But respect does not generate affection, and, even at the outset, respect was by no means universal.⁵

Indeed, lack of respect for lawyers resonates throughout the centuries.

The Gospel according to St. Luke says, “Woe unto you lawyers for you have taken away the key of knowledge. You entered not in yourselves and them that were entering in, ye hindered.”⁶ Plato has some phrases from Socrates in which he says of a lawyer that he is a slave

² A. de Tocqueville, *Democracy in America* (Vintage, 1958), p. 330.

³ *Ibid.*, pp. 287-290.

⁴ D. Melinkoff, *The Language of the Law* (Little, Brown and Company, 1963) n. 159, p. 225; C. Warren, *A History of the American Bar* (1911) pp. 222 and 512; Chroust, “The Dilemma of the American Lawyer in the Post-Revolutionary Era,” 35 *Notre Dame Law* 48-76, (1959).

⁵ Melinkoff, *supra*, n. 4, p. 102.

⁶ Luke 11:52.

before a master, keen and shrewd; has learned how to flatter his master in words and indulge him in deeds, but his soul is small and unrighteous; his slavish condition has deprived him of growth and uprightness and independence. Socrates is said to have said that Theodorus, the lawyer, thinks he is a master in wisdom, but there is no soundness in him.⁷

Returning to the United States, the 19th century writings of the old West recorded the complaints of the mining camp: "we needed no law until the lawyers came."⁸ And the historians have recorded how the people rose up against the vise of the lawyers—I was about to say vice; they tried to replace the common law by written code.⁹ That became very popular and contributed to the tradition of Jacksonian democracy. The people provided for the election of judges, rather than appointments, in what was then supposed to be an advance of the democratic spirit, but has likely been a major factor inhibiting the quality of justice in America.

How stands the matter today? It is my impression that, broadly speaking, the lawyer in American society stands at what is for him, a peak in American popular image, aided no doubt, in part, by television programs such as "Perry Mason" and "The Defenders." There is at least the broad conception of the lawyer as the defender of the right. That concept is supported by an honorable tradition in our country. John Adams established a considerable part of his reputation because he defended Captain Prescott and the British soldiers on charges of criminal homicide arising out of the Boston Massacre. Half the lawyers in Boston turned down the case. When

he took it, he made the point that, with him, law and justice stood higher than partisanship, tactical advantage, or fears of the then-patriot party.¹⁰

The problem with us today is not a simple one. There are crosscurrents; there is dissension certainly over some of the rulings of the Supreme Court in the last 15 years. But on net balance there has been a feeling in the society that the lawyer can play a useful and significant role in helping society to adapt, to evolve peacefully to changing conditions. The American Bar Association has supported some splendid programs for helping to insure legal services to the indigent and for helping lawyers to be, as they say nowadays, relevant.

A good index of a widespread favorable feeling, that the law is a profession in which one can lead an interesting career and yet fight the good fight, is reflected in the enrollment at the law schools. For those of you who are not lawyers, I may say that the law schools are still enjoying an enormous increase in enrollment and applications, which are increasing at the rate of 20 percent a year, at a time when other schools are losing ground and interest. And these applicants have increasingly higher grades on the legal aptitude tests. When I went to law school, the median grade was something like 500. Now it is 700, and I can assure you 700 is not easy to obtain. As I have often told my law clerks, I'm happy that I went to law school when I did and did not face the competition they have. The hundreds of applications that I receive each year and the dozens of interviews, from students seeking to be my law clerks, confirm that impression.¹¹

⁷ Plato, *Theaetetus*, trans. by Jowett (The Modern Library, Inc., 1956), pp. 125-126.

⁸ Shinn, *Mining Camps* (1948), p. 113.

⁹ P. Miller, *The Life of the Mind in America* (1956), pp. 105-109.

¹⁰ P. Smith, *John Adams* (Doubleday and Company, Inc., 1962), pp. 116-126.

¹¹ See generally M. Mayer, *The Lawyers* (Harper and Row, 1966).

The Government Lawyer

Finally, I reach the lawyer in Government. I think I can at least begin my comments by reporting the advice I give my law clerks every year when they leave me and they face alternative careers that are open to them. Each year I renew my thought that assignments in Government can provide the happiness that comes by combining excellence and the use of skills with a sense of devotion to the betterment of man. I have had 11 law clerks and can report that six are in government service—three with the Federal Government, one with a State government, and two in city government. The men, jobs, and ratios may shift from year to year, but I think that it is likely that there will always be some appreciable percentage of my law clerks serving in government, and that will reflect in some measure my thinking on the subject.

What kind of lawyers are in government? There are two broad divisions, those who have an adversary role and those who have an internal role. The adversary model is the litigator, particularly the criminal prosecutor. He serves the government as a party. Typically one thinks of litigation before the independent judiciary. The same principles hold for litigation before an objective "judge" like, say, a hearing examiner in a regulatory agency, or in a board of contract appeals.

Yesterday, the court released two opinions written by me. In the *Wheeler* opinion, I point out that "The GAO has established a corps of officials concerned with compliance by procurement rulings with provisions of applicable statutes and regulations. Its ruling provide review by an agency that is independent of the executive departments engaged in the procurement."¹²

¹² *Wheeler Corp. v. Chafec*, No. 24, 705 (D.C. Cir., Oct. 14, 1971), p. 15.

The *Steinthal* opinion says that ordinarily a court presented with a pre-procurement complaint by a bidder disappointed by a bid protest ruling should stay its hand until it can receive guidance from the GAO. This opinion points out—"The office headed by the Comptroller General provides unique experience in the area of government procurement and a tradition of care and objectivity, including a freedom from prior involvement in the matter at hand, that would have provided 'the court with additional guidance in resolving the issues before it.'"¹³

Lawyers With Adversary Roles

At trial, the activities of the prosecutor are not much different from those of the defense counsel, at least on the surface. He asks questions on direct examination, asks questions on cross examination, makes objections to evidence, replies to the objections of other counsel, sums up for the jury, and does all things lawyers do in a trial. He also tries to listen somewhat to the guidelines laid down by the judge.

A big difference is rooted in the prosecutor's heavy burden of proof. He must prove beyond a reasonable doubt. On the other hand, he has the advantages of far broader investigative resources. And he has the built-in advantage in that he appears to the jury to represent the Government in a very broad sense, without any personal interest in the case other than justice be done. In consequence, he is held to stricter standards to avoid arguments addressed to passion and prejudice, to avoid any statement of facts to the jury as to matters that have

¹³ *Steinthal & Co., Inc. v. Seamans*, No. 24595 (D.C. Cir., Oct. 14, 1971), p. 17 (hereinafter cited as *Steinthal*).

not been put in evidence,¹⁴ and, since he is an official of the state, it would be a denial of due process if he knowingly used perjured testimony¹⁵ or if he concealed material evidence.¹⁶

All of these rules carry forward the message on the wall in the rotunda outside the Office of the United States Attorney General. "The United States wins its point whenever justice is done its citizens in its courts."¹⁷ There is indeed a tradition that the Solicitor General confess error in the Supreme Court when a court below has reached a result that proves, on reflection, to be lacking in merit and justice. Sometimes he is more royalist than the king, and the judges will refuse to agree that the case is hopeless and will say that the Court is entitled to more advocacy from the Government.¹⁸ But the tradition is a great one.

It was perhaps very conspicuously illustrated a few years back when Solicitor General Thurgood Marshall filed a memorandum with the Court, after the Court had refused to review, on a writ of certiorari, a judgment affirming the income tax conviction of Fred Black. In that memorandum he revealed that the FBI had installed a listening device in Black's hotel on another matter. This is something he learned after the case had been ruled on by the Court, something that Black or his counsel could not possibly learn about, but he brought it forth in the highest traditions of Government counsel. He was rewarded for his candor

by an order of the Court remanding the case for a new trial.¹⁹

Distinctions Not Rigid

I have separated analytically the Government lawyer as the advocate from the internal Government lawyer. It is not a rigid distinction; there is not a complete separation. For example, some years ago I was on a panel that considered what we called the Parole Board cases.²⁰ There were some difficult questions concerning the administrative processes of the Board of Parole for dealing with the issue of a parolee who had been charged with violation of his parole. At oral argument we raised doubts about the informal procedures that were used by the Parole Board.

We went a step further and said that we would stay our consideration of the cases, if the Government lawyers would see whether they could work out appropriate procedures with the Board of Parole. In due course, the Parole Board did issue regulations prescribing procedures that seemed fair and reasonable. Instead of writing an opinion condemning the Board for past practices that had been abandoned by these regulations, we were able to remand the case so that the petitioners could pursue their new administrative remedies and handle the matter in a straight-forward way. And so a case that has come up in court can work backwards to cause the lawyers to serve as internal Government lawyers, to develop or improve Government procedures.

Now let me give you another illustration. There is a case involving Women's Strike for Peace, which is about to be reargued in our court, and therefore is

¹⁴ *Berger v. United States*, 295 U.S. 78, 88 (1935); *King v. United States*, 372 F.2d 383, 389-397 (D.C. Cir., 1966).

¹⁵ *Mooney v. Holohan*, 294 U.S. 301 (1935).

¹⁶ *Brady v. Maryland*, 373 U.S. 83 (1963).

¹⁷ This appeared in a brief filed in the Supreme Court by former Solicitor General Frederick William Lehmann, see Frankfurter, "The Government Lawyer," 18 *Fed. B.J.* 24 (1958), pp. 27-29.

¹⁸ P. Freund, *On Understanding the Supreme Court* (Little, Brown and Company, 1970), p. 114.

¹⁹ *Black v. United States*, 385 U.S. 26 (1966).

²⁰ *Shelton v. United States*, 128 U.S. App. D.C. 311, 388 F.2d 567 (1967). See particularly, *Ibid.*, *Smith v. Rivers*, p. 576.

on my mind.²¹ In 1969 this organization sought to hold an antiwar demonstration on the Ellipse and to use as part of it a floodlit display with a peace message. They were also going to hold a vigil. National Park Service regulations require a permit for any structure to be erected on Park land and the Service denied the permit. The organization claimed rights of free speech and also argued that the Service had provided a permit for a structure to be put up by another private organization, namely, the Christmas Pageant for Peace display.

Of course, distinctions can be drawn between those two matters, but our court thought it was not the court's place to draw these distinctions. It was the function of the Park Service to develop the criteria and to express the criteria or the guidelines and rules. Therefore, we said, the Park Service would have to take into account the questions raised by the women's peace organization. The opinion held that the Park Service must take a hard look at the questions and give them reflective consideration. We said that we did not think we ought to determine this matter on the basis of affidavits or a correspondence. We thought that what we ought to have for appropriate judicial disposition was a more complete and illuminating presentation of Park Service policies than was available on the record and remand the case.

Now judges are perfectly well aware that there is nothing, nothing, that so clears the mind of the Government official as the knowledge that he is going to be subject to cross examination and is going to have to explain in court what his policies are. If a lawsuit raises serious questions of validity, that is exactly what may happen. If this does happen, it is well that the administrator and his law-

²¹ *Women's Strike for Peace v. Hickel*, 137 U.S. App. D.C. 29, 420 F.2d 597 (1969).

yers have effective lines of communication and consultation—as to the requirements of law and the legal requirement of fair and coherent standards. The implementing of that aspect of rule of law is a number-one task or function of the Government lawyer.

Impact of Litigation

The impact of litigation on the internal workings of the Government is an elementary fact of life. What has happened in recent years is that the Court has been opening its doors at an increasing pace. Without getting into the technicalities of the matter, especially for those who are nonlawyers, I will simply say that the Supreme Court has now adopted enlarged principles of reviewability.²² A number of doctrines that were once advanced to say that a party could not obtain judicial review have been rejected,²³ and people who were once excluded now do come into court.²⁴ Welfare recipients were once excluded as being merely beneficiaries of a privilege, without legal rights. Now they are permitted to bring suit as persons with an appropriate interest in assuring that Government officials comply with their duty.²⁵ It is similar to the doctrine that says a firm has no right to a Government contract, but it has a right to be free of a blacklisting that lacked the protection of a fair procedure.²⁶

Recently I had occasion to rule on a suit by the poor people of Alabama, as a class, complaining about the way that

²² *Abbott Laboratories v. Gardner*, 387 U.S. 136 (1967).

²³ See *National Automatic Laundry & Cleaning Council v. Schultz*, 443 F.2d 689 (D.C. Cir., 1971).

²⁴ *As'n of Data Processing Service Org. v. Camp*, 397 U.S. 150 (1970); *Barlow v. Collins*, 397 U.S. 159 (1970).

²⁵ *Rosado v. Wyman*, 397 U.S. 397 (1970).

²⁶ *Gonzalez v. Freeman*, 118 U.S. App. D.C. 180, 334 F.2d 570 (1964).

the Department of Agriculture administers its Food Stamp Program.²⁷ This by now has become commonplace. But think of it, a class action by the poor people of Alabama, receiving free commodities, and they say the Secretary of Agriculture has administered the program in a way that is not in accordance with the statutory objectives. We take on that kind of case under the new doctrines that have been evolved.

Recently, the Supreme Court issued an important decision called *Citizens to Preserve Overton Park v. Volpe*.²⁸ The citizens' association did not want a highway running through a park. Not only did they get the Court to listen to their case, but the Supreme Court made it quite clear that Secretary Volpe would have to make a real showing of how he had arrived at his conclusions, and that there was no alternative way of handling the highway needs.

And, of course, now we have the Freedom of Information Act which gives a broad right to all members of the public, without any particular concern in the matter, to examine documents in the possession of the Government, unless it involves an exception like the confidentiality of internal memoranda, or interdepartmental or intradepartmental memoranda that are involved in decisional processes.²⁹

One outpost of this judicial march came when our court in the *Scanwell* case held that a disappointed bidder could bring a lawsuit to make sure that procurement officials followed procurement regulations.³⁰ We were not interested in the bidder—but we looked to

him as serving as what is called a private attorney general, in furtherance of the public interest. As the *Steinthal* opinion yesterday put it, "this was salutary, not only for the relatively few cases that might result in court intervention but also for the greater number of cases which would be handled with greater care and more diligence within the government because of the awareness and the availability of judicial scrutiny."³¹

Steinthal also pointed out that "the courts are properly concerned that the procurement functions not be permitted to deteriorate into actions reflecting personal predilections of administrative officials, whether liable to whim, misplaced zeal, or impermissible influence."³² That is strong language. But there is a but, fortunately. The court does recognize that the Government also has an interest in speedy procurement³³ and that although the court has the power to examine and overturn official action, the court must exercise its powers "with restraint."³⁴

Lawyer's Role Not Restricted

I have covered the course relating the importance of standards and the role of the Government lawyer in helping the administrator assure that he won't violate the compulsions of law. But even private lawyers do not restrict their role to that narrow conception. It was said of Louis Brandeis that "he was a devil on wheels to his opponents and an austere judge to his clients."³⁵ After guiding an employers' association to victory over a striking union, he converted the congratulatory meeting into a lecture to his clients on labor's claim to a greater share

²⁷ *Peoples v. Department of Agriculture*, 138 U.S. App. D.C. 291, 427 F.2d 561 (1970).

²⁸ 401 U.S. 402 (1971).

²⁹ *Soucie v. David*, 448 F.2d 1067 (D.C. Cir., 1971).

³⁰ *Scanwell Laboratories Inc. v. Shaffer*, 137 U.S. App. D.C. 371, 424 F.2d 859 (1970).

³¹ *Steinthal, supra*, n. 13, p. 22.

³² *Ibid.*, p. 31.

³³ *Ibid.*, pp. 31-32.

³⁴ *Ibid.*, p. 22.

³⁵ P. Freund, *supra*, n. 18, p. 48.

thinks that too often lawyers turn prose into jargon and adds, "not though our lawyers here in Bretton Woods, on the contrary they have turned our jargon into prose, and only too often they have had to do our thinking for us."

Precision With Words

If a lawyer is operating efficiently, he offers his training that provides or reinforces a sense of form with what is practicable precision with words and a sense of imagination that anticipates the kinds of changes that may take place and the kinds of provisions that may be possible for them. This function, if well served, is not a preoccupation with jargon although it is a preoccupation with words in the interest of precision. Of course, sometimes a lawyer's specialized use of words as contrasted with ordinary usage recalls Bernard Shaw's quip that Britain and America are divided by their common language. I recall to mind, when I was first in law school, how irritated my mother was when she was telling me about a friend of hers who had been in an accident. My rejoinder vexed her, for what I said was, "Mother, that was not an accident, that was a case of simple negligence."

The ability to foster a sense of order is a high calling and a creative one. The famous poet, Wallace Stephens, was a poet only on the weekends. During the week he was a vice president of an insurance company in Hartford, responsible for claims adjustments and overseeing a force of lawyers. He started as a lawyer himself. An inquirer once asked him, "how can you split yourself into two such contradictory work occupations?" He replied that they were not contradictory, but complementary, and that they were both creative in the fullest sense of the word. Of course that does not mean that lawyers' prose reads like literature.

Sometimes I find that my most felicitous phrases turn out to raise the most questions.

Some of the most impressive legal draftsmanship of modern times was done, in my view, by Benjamin V. Cohen in the three statutes administered by the SEC, concerning securities, exchanges, and utility lending companies, that were passed in 1933, 1934, and 1935. They may not endure for ages but they have certainly served usefully for almost 40 years. You can't read them as you run. They take patient study before you can observe the order, harmony, and careful interrelationship of the root concepts.³⁹

I think it is only appropriate if I offer a nod to your General Counsel, Paul Dembling. I had occasion in the course of working on these opinions issued yesterday, to look at some of the bid protest procedures of GAO and some of the provisions for revision of them.⁴⁰ I do not comment on whether they are going to be upheld in court or not, naturally. But I can at least say, from a quick reading of them, that they reveal a disposition to grapple with the hard questions of fairness and expedition, and in this case, interagency relationships, and reflect an effort to yield an effective combination of goals and exceptions, of standards and flexibility.

³⁹I had occasion to reflect on this subject recently, in the course of preparing a tribute to Mr. Cohen, and I commented:

"Cohen and Corcoran and associates, including men like William Douglas and Robert Jackson, later elevated to the highest Court, sparked what Arthur Schlesinger has dubbed the Second New Deal. Not the sweeping plans of the NRA and kindred measures, that opened the way to all the dangers of industrial self-government, but limited and realistic programs, brilliantly drafted so as to anticipate problems and think through remedies, programs that have stood the test of time."

115 *Cong. Rec.* 34200 (1969) (remarks entered by Rep. Sidney R. Yates).

⁴⁰See 4 C.F.R. 20 (1972).

in management responsibility. And years later he seized the occasion of a gathering of labor leaders to get their support for what was then the unpopular cause of scientific management. And the phrase that was coined for this concept of the private lawyer was that he was "counsel for the situation," not counsel for the particular party but for the situation, in an effort to arrive at a constructive approach to the situation and not limited to the minimum that could be defended in court.³⁶

The General Counsel of the Aluminum Company of America wrote an interesting article some 15 years ago in which he put it that he considered that his role at the nerve center of his big corporate enterprise could be likened to that of the chancellor of the king, concerned not only with enforceable rights and obligations but also with the conscience of the sovereign.³⁷ Anyone aware of what is going on in large corporations today, the number of "outside" comments they have to deal with, and the various forums in which those complaints are registered, will realize that time has not dulled, it has only bur-nished, that conception of a conscience for private enterprise.

Aiding the Administration

Now how do I think of a Government lawyer as not only keeping the administrator out of legal trouble but helping the administrator do his work better? It seems to me that one of the main functions that the Government lawyer can serve in this regard, one of the virtues of his experience and training, is that he

is typically useful or frequently useful in developing structures, establishing sound structures and procedures. I don't mean organization charts so much as what I might call charters for the organization to use in the completion of its work.

Dean Acheson's death a couple of days ago recalled to my mind a passage in his book *Present at the Creation* in which he discusses the Bretton Woods Agreement of 1944.³⁸ At a plenary session Lord Keynes referred to the charter of the International Monetary Fund—which was actually dictated by monetary experts and which he erroneously ascribed to the lawyers—by saying that he wished the lawyers had not covered so large a part of the birth certificate with such very detailed provisions for the burial service. Mr. Acheson goes on to say that Keynes did not like that he thought the United States was lawyer ridden and that he believed the Mayflower must have been entirely filled with lawyers.

However, Dean Acheson served on another committee which Keynes chaired, relating to the International Bank, as contrasted with the Monetary Fund and drafted a charter for the Bank which Keynes thought had the necessary qualities of flexibility and broad powers. Mr. Acheson was naturally proud of this, for he recounts from Roy Harrod's biography of Keynes, that Lord Keynes thought that the men who served on this aspect of Bretton Woods approached his ideal lawyer. I now quote from Lord Keynes, "I want a lawyer to tell me how to do what I think sensible and above all to devise means by which it will be lawful for me to go on being sensible in unforeseen conditions some years hence." In that quote he goes on to say that he

³⁶ See Brandeis, "The Employer and Trade Unions in Business—A Profession" (1933), p. 13; Brandeis, "Organized Labor and Efficiency in Business—A Profession" (1933), p. 37.

³⁷ Hickman, "The Emerging Role of Corporate Counsel," 12 Bus. Law 216 (1957).

³⁸ D. Acheson, *Present at the Creation* ch. 10 (1969); see particularly, pp. 83-84.

The Government lawyer has a continuing, constructive, creative role. That role goes on from drafting statutes to developing implementing regulations, developing standards, interpreting the statutes, interpreting the regulations drafted under statutes, and then back to the legislative process of amending the statutes and of resisting the amendments proposed by other and, of course, different lawyers. I speak of "the lawyer." No one person could do all these things and do them well. But at least they are a coordinated group of activities that offers some skill, or makes available to the administrator some skill, that helps his department or agency cope effectively with problems and also prepares effectively for changes in conditions.

Importance of Standards

I changed course awhile back when I reached the question of standards, and now I want to revert to that topic. I do not know that there is much more to say about standards than this. It is the agency's function to select policies that it deems in the public interest. I use the word agency because that happens most often to come to our court. (Please accept the word agency to include official or department.) The function of the agency is to select policies. The function of the court, the function of the lawyer, is to make sure that the agency has given a reasoned consideration to the matter, that it has articulated with reasonable clarity those reasons, has identified the significance of the crucial facts, and, in short, has shown that its policies effectuate the general standards that are applied without unreasonable discrimination.

In the Greater Boston TV opinion⁴¹

⁴¹ *Greater Boston Television Corp. v. FCC*, 444 F.2d 841 (D.C. Cir., 1971).

I spoke of the court as having a partnership relationship with the agency under review, and the opinion goes on to say that there are two functions, the supervisory function and the partnership function, which must be applied in balance with each other. The court will defer to an official or agency if it feels convinced that he has taken a hard look at the problem. I do not recall any case in which somebody has really shown that he has faced up to the problem and been reversed by a court, and while I cannot say categorically that this alone is sufficient, at least that is a very strong plus in the situation. *Per contra*, if the court becomes aware, especially from a combination of danger signals, that the agency has not taken a hard look at the salient problems, then it will intervene in the exercise of its supervisory function.

Further on in that opinion, having taken pains to articulate my philosophy of judicial review, I said: "Reasoned decisions promote results in the public interest by requiring the agency to focus on the values served by its decisions and hence release the clutch of unconscious preference and irrelevant prejudice. It furthers the broad public interest of enabling the public to repose confidence in the process as well as the judgments of its decision makers."

These conceptions of mine are not novel by any means, but they are deep-felt and hark back in considerable measure to my experience in the executive branch. I have served in the Justice Department and in the Interior Department. At the moment, I want to revert to my OPA experience, and to reiterate what I have already said in print in a portion of the history of OPA that I wrote at that time. I suppose what I should add is that I believe now that what I wrote at that time was right and stands up. In effect, I reviewed what the lawyers had done at OPA in terms of

their having worked with the administrators, in beginning with a very broad standard of the statutes—the standard that maximum prices be generally fair and equitable—and developing subsidiary standards.⁴²

In that history I relate an anecdote of a time when we had a meeting. The economists had proposed that the basic standard should be that the industry would absorb cost increases so long as their general profits were as good as they had been for the industry in a base period of 1936 to 1939, which was considered reasonably normal, and at least untouched by inflationary trends of preparing for war. The lawyers put forward the idea that, since we were now acting in 1941, it might be more useful if, instead of using 1936 through 1939 as the base period, it should be 1936 to 1940—sort of bringing it up-to-date.

The administrator called for an analysis of what this proposal would mean. I do not recall the details of it at the moment, but it was something in this order: if the base period were enlarged it might mean as much as a 10-percent increase in the maximum price levels. At a meeting, Mr. Henderson said, "Now is this trip necessary? Is this extension necessary?" A general counsel replied, "No, we could not say it was necessary, but rather that it would be very helpful, because from a legal point of view we were charting new ground." Mr. Henderson decided, "well if it's not legally compulsory we won't do it, we'll just stay with the tighter standards that the economists had proposed."⁴³

This incident exemplified perhaps the most effective way in which lawyers can act. We identified our problem, we identified legal consequences, and then we left it to the administrator to make the

decision, there being what we considered some reasonable basis for his discretion. Our judgment as lawyers was of course a prediction of what would be held by the court. And in due course the substance of our legal advice was approved by the Emergency Court of Appeals—which had been established by Congress as a special court to consider objections to the validity of OPA price regulations and orders.⁴⁴

In regard to the working of OPA, every regulation had what was called a Statement of Considerations, stating the reasoning process which reflected the standards relied on by the Administrator and how they were being applied. These Statements of Considerations were frequently drafted by the lawyers, using the material furnished by the economists and by businessmen. It was typically the thrust of the lawyers to put out as much information as possible to show that we had engaged in looking at our problems and that we were engaged in a reasoned process.

Some of the problems of the OPA came not with this kind of activity but with the numerous requests for exceptions and adjustments. You all know from the freeze that is going on today how hardships and inequities appear like mushrooms after a rain. I am sure you are all pleased to note an editorial in today's *Washington Post* which says they specifically take into account the inequity of the position of the Government personnel in the salary freeze and that the only reason why they had not written

⁴⁴ *Gillespie-Rogers Pyatt Co. v. Bowles*, 144 F.2d 361 (Emer. Ct. App., 1944). The principal rulings of this court are discussed in proceedings of its final session, Dec. 6, 1961, see 299 F. 2d 1 (1961). A more extended and probing discussion appears in N. Nathanson, *The Emergency Court of Appeals, Part II of Problems in Price Control: Legal Phases* (General Publication 11, OPA Series of Historical Reports on War Administration, 1947).

⁴² Leventhal, *supra*, n. 1, p. 77 *et seq.*

⁴³ *Ibid.*, pp. 82-83.

about it earlier was that they just had not gotten around to the point yet.

These inequities, and they are matched you know, are just inevitable. In this kind of pervasive program, there are going to be many inequities. There are always requests for exceptions and for adjustments. The OPA lawyers were very firm on this point. I don't say the same approach is necessary today, because that is a question that the courts will have to rule on, but under the statute that was then passed the lawyers said that there are not to be exceptions and there are not to be adjustments unless some principle is put forward. You are not to have the privilege of saying okay for you, not okay for him, you know, like King Louis of France under his oak tree, passing individual judgment like some feudal despot. Every adjustment has to be related to some principled basis.⁴⁵

Now it was this that led to a certain amount of tension between the lawyers and the businessmen and to some extent the economists. It is not easy to recreate the problem. But it came about something like this: The administrator says: "This situation doesn't seem right to me, I think we ought to do something about it." The lawyer says: "Well, you have to state in general terms why this isn't right so that anybody else in the same position will be able to get the same advantage of the ruling. It's much easier to know that something is not right, that

⁴⁵ See Leventhal, *supra*, n. 1, p. 100 *et seq.* Compare—the Emer. Ct. App. rulings in e.g., *Armour & Co. v. Bowles*, 137 F.2d 233 (1943) (general adjustment provision creates right to individuals governed thereby); *Booth Fisheries v. Bowles*, 153 F.2d 449 (1946) (regulations cannot lay unequal burdens on persons similarly situated, in the same calling and condition); *New Orleans Laundry v. Porter*, 157 F.2d 1013 (1946) (desirability "in the interest of uniformity of administration" of administrative standards implementing the generalized standards in the adjustment provision).

it doesn't seem right to you, and that something should be done about it, than it is to say why"—as I learn all the time when I write my judicial opinions.

This insistence of the lawyers on formulating a reason slows the process of making the adjustments. So you have a tension between these requirements and getting a job done fast. In addition to this, I do think lawyers find it more comfortable to disagree with each other and argue than do administrators or businessmen. It is one of the things you seem to get by going to law school. I think I observed in serving my clients when I was at the bar that, within a private business organization, it is hard to state a different opinion from that held by one of the people on the line. They feel threatened, that you are questioning their judgment. I do not say that is true of all Government administrators, but it does happen, and it is this kind of difference in approach—the arguing approach, the questioning approach—that does make for a certain amount of tension between lawyers and administrators.

It came to extremes, I think, at certain times in the OPA. There was probably bad judgment on both sides as to the way things were put. But at least the lawyers did their best to hold the line against any exceptions or adjustments unless a general principle was put forward or some reason was given, so that equal treatment could be maintained.

It is not for me to discourse on the merit or strength of that philosophy, or how far it should apply. Some years ago, when I first became a judge, I offered a thought, at a meeting of the American Bar Association's Public Contracts Division, that this idea of giving reasons might have application to actions taken on public contracts.⁴⁶ That was considered far out at the time. Of course

⁴⁶ H. Leventhal, "Public Contracts and Administrative Law," 52 A.B.A.J. 35 (1966).

now, very recently, we have had the *Scanwell* opinion⁴⁷ which establishes judicial review at the threshold, and inevitably leads to a refinement of reasoned action.

Need for Fairness

My observation is that, whenever a problem involves a large element of society, the importance of fairness brings this kind of standard matter or approach to a higher elevation. It is one thing to respond to complaints of unfairness by Government employees with the answer that Government employment is a privilege and not a right.⁴⁸ Justice Holmes once remarked about a policeman that he had a right to talk politics, but he did not have a right to be a policeman.⁴⁹ Well, that just doesn't wash at a time when we have 15 percent or perhaps more of our total population engaged in working for one branch or another of some government. They are citizens too and they are entitled to basic rights. I do not mean full civil service procedures necessarily, but some elementary conception of fairness and constitutional freedoms.⁵⁰

⁴⁷ *Scanwell Laboratories, Inc. v. Shaffer* 137 U.S. App. D.C. 321, 424 F.2d 859 (1970).

⁴⁸ See, e.g., *Bailey v. Richardson*, 86 U.S. App. D.C. 248, 182 F.2d 46 (1950), aff'd by an equally divided court, 341 U.S. 918 (1950).

⁴⁹ *McAuliffe v. New Bedford*, 155 Mass. 216, 220 (1892).

⁵⁰ Quite a different approach from that of Justice Holmes was voiced in *Pickering v. Board of Education*, 391 U.S. 563, (1967). The Supreme Court reversed a school board's dismissal of a teacher for writing a letter to a newspaper critical of the board's allocation of public funds. It said that where the fact of his public employment was not involved in his communication "it is necessary to regard the teacher as the member of the general public he seeks to be" and in the absence of false statements knowingly or recklessly made, his "right to speak on issues of public importance may not furnish the basis for his dismissal from public employment." *Ibid.*, p. 574. See also *National Ass'n of Gov't Employees v. White*, 135 U.S. App. D.C. 290, 418 F.2d 1126 (1969).

Similarly, at a time when public contracts account for the percentage of the total gross national product that they do today, you are going to have a very different attitude about the need for fairness than when public contracts were an incidental aspect of the entire industrial force and industrial productivity of the country.

I mentioned before that there are some opinions establishing rights of welfare recipients. It seems to me that this underlying principle is going to be extended in connection with Government grants. The law on this is not yet crystallized. But, when you have activities so substantial in their impact that they are not just incidental aspects of the total activity of Government, you are going to have an increase in insistence on fairness. That leads very quickly to some approach in terms of standards. And standards, the necessity for giving reasons, are what makes the difference between a democratic society and one that is tyrannical.

I think it is also true that the idea of the complaints desk has matured in our time—the ombudsman, the idea of some systematic way in which grievances can be presented and taken up. The Action Line column in the *Washington Star* is a very good ombudsman. Congressmen are of course ombudsmen, for they regard part of their work as being effective in preventing the injustice due to bureaucratic rigidities. On the other hand, whenever grievances are identified by a complaint desk approach, I think it will be requisite that there be a reasoned process for handling them. And I do believe it is well to have a complaint desk as part of total government, so that you do not shove problems under the rug, but you identify them and bring them up for consideration.

Concluding Remarks

Now for the two most important words of my remarks—and finally. And finally, I return to my foreign visitor, I said at the outset that he would give me a perspective. I can imagine him saying to me, "This is very interesting indeed, but what does it have to do with managerial effectiveness, which is the theme after all of the GAO series." I could make a case in the narrowest sense of the term "effectiveness," that if you work with standards you work faster than if you work without, that if you just handle each individual case as it comes, you will find yourself scratching around with so many contradictions and uncertainties that you will have lost time. Also, if you work with standards, you perhaps have some positions to put forward at annual grilling time. Annual grilling time comes when individual complaints are voiced by members of the Appropriations Committee and you are asked why didn't you do this and why did you do that. It is a comfort to be able to refer all of these individual matters to some sort of coherent standard.

But I do not rest on that rather narrow view of efficiency. I think of Chief Justice Burger's remarks a couple of weeks ago at the dedication of the Georgetown University Law Center,⁵¹ when he said: "Efficiency must never be the primary objective of a free people." He was referring to the separation-of-powers doctrine. Separation of powers is in the first instance a concept of inefficiency, since it divides responsibility. But it has the merit of providing a protection against despotism or overconcentration of power. In the last analysis, that assures greater ability in the society to adapt to changing conditions, with a free spirit

⁵¹ Remarks of Chief Justice Warren E. Burger at the Ceremonies Dedicating the new Law Center, Georgetown University, Sept. 17, 1971.

and interchange among the elements of the society.

The same fundamental holds true on a more lowly, day-to-day basis for the Government lawyer who is trying to work with the administrators—not in terms of preventing things from being done, or dictating what should be done, but in terms of assuring that whatever is done is done on the basis of some reasoned disposition.

Not all agencies have to make findings as the regulatory agencies do, but I think they have to be prepared to cope with problems and with inquiries directed to them by the Congress or sometimes by the courts—increasingly so, as I have indicated—by memoranda in the files that identify and justify their actions. In that sense of assuring reasoned dispositions and achieving higher values, this attitude does improve efficiency, not necessarily in the number of decisions made and processed, but in the quality of decisions. The social compact theory of government is meaningful for our democracy. And a basic part of our social compact is the rule of law and equal justice under law. The activity of the lawyers in Government serve those great goals not with the majesty of the rulings of the nine Justices of the Supreme Court of the United States, but at least in the same general direction.

Justice Holmes said: "Man may live greatly in the law as elsewhere, and wear his heart out in seeking the unattainable"⁵² I do not ask Government lawyers to break their hearts. But I do think that Government lawyers can live greatly, and do live greatly, in what are otherwise humdrum tasks, when they, working together with the administrative officials, each in their proper sphere,

⁵² O. W. Holmes, "Profession of the Law," in "Speeches" (1954), p. 23 (Lecture to Undergraduates of Harvard University, Feb. 17, 1886).

evolve an overall technique for helping Government run not merely for day-to-day service, but for the fundamental purpose of making this truly a Government of the people and by the people and for the people.

Discussion

In the course of our work we sometimes find legislative restraints and constraints which go against the grain of our legal training. What should be the role of the lawyers when confronted with these situations?

Judge Leventhal: It is true that, in the world of Government contracts, there are multiple objectives that are being pursued. I suppose that, if you include something like provisions against discrimination on account of race, you are doing something which doesn't increase the efficiency of Government contracting or the expedition of it.

I wouldn't want to get into a discussion about all that is involved in the Philadelphia Plan, but that's at least a good example of what I think the question involves. There is some purpose that is put forward by the Congress, which doesn't conform to the immediate objectives of the Government contract functions but is part of the overall function of the Government. Unless you are certain of exactly what the reasons are for the particular restraint and constraint, it is not easy to assume that merely because it contradicts sound procurement policies it is contrary to the overall interest of the Government.

At what point along the continuum does a lawyer put on his adversary hat?

Judge Leventhal: I think of responding with a quip that those that have two heads must wear two hats. The reason that's not purely frivolous is that obvi-

ously you are serving more than one function. So long as we have an adversary system, there is a function of being an advocate of that system. The adversary system puts it that the best inducement to obtaining a just result is to have two lawyers each putting forward his position as forcefully or as persuasively as possible and expecting that the person charged with making the decision will perceive from these conflicting presentations wherein the truth lies.

They say in admiralty proceedings that no member of the crew ever gives testimony against his own vessel. Never! It's just not done. This is, of course, expected on all sides. This is part of their game of collision at sea.

I am digressing, but I think of an interesting anecdote that I read in opinions of some Irish judges in Ireland. They frequently sent out lawyers from the Crown to serve as Crown agents. They have the system of the private lawyer, who is hired as the prosecuting attorney. One of them asked one question of the witness who was called by the defense in a prosecuting case and he said, "Are you the neighbor of the defendant?" The witness said, "I am," and he said, "I have no further questions."

The point of the story as related in the book was that this was perfectly fine if you were in England where it would just be expected that a neighbor not give testimony against his neighbor, but it had no relevance whatever in Ireland, where they just as cheerfully fight as consult with each other. You have to take into account from this standpoint really what the custom of the community is. You can't answer in absolutes a question such as you put—where the role of justice begins and where the role of adversary leaves off.

I suppose that the role to which I allude that Government counsel cannot

conceal—prosecution counsel cannot conceal—highly irrelevant information, or material information, should be qualified by saying that he cannot reasonably suppose that the other person can be expected to learn by use of ordinary advocate skills. When Solicitor General Thurgood Marshall put forward the business about the FBI wiretapping, he had information that the other person couldn't possibly be expected to have by himself or to acquire by the use of his own skills.

If, on the other hand, there's information that is in the public domain, so to speak, and the other lawyer could get it if he were more vigorous or more diligent, I don't think that the Government lawyers should be required to give it to them. To some extent, you have an assumption that each person is spending his resources in the way that he selects and that it becomes a matter of how capable each person is.

There is a question as to whether the adversary system is a good system. It is perfectly obvious that in particular cases records having omissions would lead to wrong judgments. This happens when the omissions represent the lack of one of the lawyers for whatever the reason that lack may exist.

The justification for the adversary system has to be that you get a very high percentage of just conclusions even though you get injustices in some cases. In other countries where different systems exist they don't seem to be getting more justice. Maybe there are reasons other than the differences in the system, but there are reasons why the adversary system seems to work pretty well.

For the straight answer to your question, I suppose it depends on the materiality as in the case of the prosecution—such as *Brady vs. Maryland*—where the prosecutor put a pair of stained shorts before the jury in such a way as to lead

them to the conclusion that they were bloodstained when, in fact, he knew from a chemical analysis that they were not. It was a clear case where you couldn't possibly condone such tactics if it was relevant to conviction of murder in that particular case.

It's not an easy question to answer; it can only be answered in terms of the custom of the community—including the leading community.

If I were to express a personal conviction, it would be that the less we relied on the adversary system and the more we relied on openness and completeness of presentation, the better off we would be. But, that's a personal view and there are many very responsible people, serious people, who think that the adversary system has general merits and that it should not be tossed aside. The matter has to be approached very carefully one step at a time.

Will you comment on the lawyer with respect to the Congress?

Judge Leventhal: I spoke on the lawyer in Government—in the executive branch—because I just assumed that this GAO lecture series was devoted to improving the executive branch. I also stuck with the lawyers in the executive branch because it's really the subject I know best. But, on occasion in my private years, in between my Government service and judicial service, I had occasion to deal with the legislative branch. I was very favorably impressed with the wide range of the committee staffs of the legislative branch, the workings of the Senators and Congressmen and their particular assistants, and how much of what they concern themselves with is really on the same general principles to which I referred.

There may be a particularly important contributor for whom a Congressman

may want to do something and he doesn't care what the reasons are. But, putting such matters aside, if you would get a Congressman or a Senator or his staff interested in your matter, it is usually because you have what seems to him to be a meritorious proposition or at least it is meritorious enough to warrant consideration. It is in this way that they serve the ombudsman function of referring matters to the executive in Government and pursuing them.

Certainly there have been cases where there has been improper intrusion and I think the executive agencies have wisely adopted provisions to guard themselves against that. The regulatory agencies have. By and large, when the executive works with standards, he is better able to channel the legislative submissions and the legislative inquiries fairly and really more expeditiously than if he works without them. I think that so far as the legislature is concerned with changing matters, I mean pure legislative policy obviously, that does depend on the wishes of every legislator as the person

elected by his constituents. That's democracy in its purest form. I assume that, by some sort of group thought and group consensus of these people, we get a result that is tolerable for the country as a whole.

Regarding lawyers who draft bills in the Congress, I well remember how the first draft was done for the Emergency Price Control Act of 1942 and the very careful consideration given to all the points of view that they could. They were really doing the same sort of things that we in the executive branch had done in the first place but doing it from their particular perspective and doing it very carefully and, it seems to me, very fairly.

I don't know offhand any reason why there should be any major difference between the approach of lawyers in the legislative branch and the lawyers in the executive branch toward seeing that whatever is done by the Government is done on the basis of equity, fairness, and effectiveness and, as much as possible, on some sort of generalized approach.



Alexander B. Trowbridge
President
The Conference Board

Alexander B. Trowbridge's career has been almost equally shared by private enterprise and Government service. He is, therefore, as well known in Washington circles as he is in the world of business.

Mr. Trowbridge was educated at Phillips Academy in Andover, Massachusetts, and at Princeton University, from which he graduated cum laude in 1951. Shortly thereafter, he began serving with the U.S. Marine Corps in the Korean conflict where he won the Bronze Star. Currently he holds the rank of major in the Marine Corps Reserve.

Following a successful business career, Mr. Trowbridge came to Washington in 1965 as Assistant Secretary of Commerce for Domestic and International Business. He served as Secretary of Commerce in 1967-68.

Leaving Government service, Mr. Trowbridge became President and Chief Executive Officer of the American Management Association in 1968 and served until September 1970 when he became President of The Conference Board.

Mr. Trowbridge also serves as a member of the board of directors of the following corporations: Allied Chemical Corporation; American Motors Corporation; The Bowery Savings Bank; Gannett Company, Inc.; General American Investors Company, Inc.; and Pet Incorporated.

He is also a member of numerous organizations in the business/government field including the Council on Foreign Relations, the National Industrial Pollution Control Council, the National Planning Association, and the International Executive Service Corps.

Mr. Trowbridge is the recipient of the Arthur S. Flemming Award, the President's "E" Certificate for Export Service, and honorary doctor of laws degrees from D'Youville College and Hofstra University.

Three Paths in Search of the National Interest

The Conference Board conducts research and conferences and issues numerous publications on economic and public affairs. It has a long history of service to business and industry, Government agencies, educational institutions, and labor organizations. Of particular interest to the General Accounting Office is its work on Government-business relations. In this lecture, the President of the Board notes that our deep national problems are so complex that their solution requires a massive effort by a combination of public and private resources. He suggests that what is needed is a unique, independent institute for research and education devoted exclusively to identifying, coordinating, assessing, and communicating alternative national goals, priorities, and policies.

Washington has always been a city of ceremony and pomp, as befits its status of the Nation's capital. Much of the memorializing and acclamation comes and goes, with little permanent residue except perhaps in scrapbooks and inflated egos. But I do think that Elmer Staats and all of you in the General Accounting Office are taking excellent advantage of your organization's 50th anniversary by this series of lectures spread through the year on "Improving Management for More Effective Government." From the scope of the topics, as well as the quality of the participants, it is evident that a permanent contribution to more effective government will be with us for years to come.

As for the timing of this particular item of your agenda, in which you asked me to reflect on business/Government relations during a period when all of the Capital's attention is geared to ascertain-

ing the best method of controlling prices and wages, I have to admire the foresight of those who originated the program structure. I cannot, however, admire my own foresight in accepting the assignment!

Perhaps I am fortunate, however, in that the President's action of mid-August does illustrate several elements which I will try to analyze in my remarks this morning. If nothing else, it dramatizes the rapidity of change which is so evident in modern America, and the need to be ready for surprises and sudden shifts.

It may be like the man I talked to about 3 weeks ago, just back from a trip to Alaska where he went fishing for salmon near Juneau. He was having excellent results, and at one point hooked a strong 40 pounder who gave him a good fight for easily 20 minutes. He had almost pulled the fish to the side of his

boat, when the salmon gave a mighty effort and sounded, extending the line out with a great heave. My friend began the hard process of pulling the salmon back in when suddenly the line went slack. He was desolate, believing all his struggle had been voided by a broken line. Then, about 20 feet away, he saw surface a large seal, staring right at him and holding the huge salmon in his mouth. The seal shook his head as if to say "This one is mine," and disappeared!

Just as the fisherman, one can no longer take things for granted, and the pace of new developments is steadily accelerating to a point where only by a far more coordinated effort at leadership through effective planning can we expect to manage change.

This city has always been the hub of the search for "the national interest." It has seen many honest attempts to identify and define that phrase, and it has seen many ingenious efforts to wrap one's own needs in the cloak of "the national interest." Indeed, it is not always easy to delineate between "personal" and "public" interest—as Congressman John Brademas said last week:

It is true I think for many of us on the Hill that business, labor and lobbyists for other groups tend to equate their own particular interest with the public interest. One could point to any number of instances of that in a very dramatic way in the current Congress.

Harry McPherson, now a Washington-based lawyer after serving as Special Counsel to President Johnson, put it this way:

Now that I am out of my purist position in government and am practicing law, I hear and frequently represent my client's position as one which I think is consistent with the public interest and is larger than merely a narrow business interest; and even as I say it I mistrust my own words, and I remember mistrusting them when I was

in government and heard it from industry, because I don't think I ever really heard a description by a businessman or his attorney of the public interest that didn't meet pretty well on all fours with the business interest. So just as a matter of clarification I believe in a good deal of distinction between different competing interests. I don't think it's one thing in which people, all men of good will, share one view of the public interest. I think there are strongly competing interests and the more they compete the more likely you are to get a tolerable resolution.

This historical competition for the right to define the public interest, and to translate the definitions into policy, has occupied our society since its political inception. Not surprisingly, it is at the heart of business/Government relationships, and has brought us to a point where we see taking place today, in my opinion, the confluence of three major paths. While all three have been evident for some time now, the emerging intersection of what were parallel and separate tracks has created an added demand for effective national leadership.

Government Intervention in the Economic System

The first of the three paths is exemplified by the imposition of mandatory controls over prices and wages—another milestone in the historical trend toward more governmental intervention into and control over the private economic system of the United States.

Our national history was initiated on a strong belief that the public interest would be best served by a maximum amount of *laissez-faire* economic policy, with full allowance for private interests to grow, to employ, and to develop. Railroads, canals, factories, and services all multiplied in an era of land grants and subsidies and tariff protection provided by the national Government. Foreign in-

vestment in the United States was welcomed and provided the initial stimulus for the great national industrial and market development which we now enjoy. Government entered the business arena only in those vital areas, like the postal system, where private operation was unprofitable.

As development came, so did abuses. The end of the *laissez-faire* era was forced by the excesses of an unregulated expansion which left too many scars in its path. The Interstate Commerce Act of 1887 brought Government regulation into railroad freight rates. The Sherman Antitrust Act of 1890 attempted to put boundaries around the unlimited concentration of economic power. The Clayton Act of 1914 and the Federal Trade Commission Act set up rules against price fixing and the allocation of markets. These laws, more than anything else, forced the retention of real competition in the private enterprise system.

A new wave of regulation came as a result of the 1929 stock market crash and the subsequent depression. The New Deal ushered in the Securities Act of 1933 and the Securities Exchange Act of 1934, followed by the creation of the National Labor Relations Board which brought the Federal Government to the support of organized labor. At no time in previous history had the governmental role as a regulator and an economic stimulator been as large as it was in the New Deal period. It ultimately led to an assumption by the Federal Government of the responsibility for creating conditions of full employment and economic stability, as illustrated by the Employment Act of 1946.

Through the postwar era, we have witnessed a steady trend toward greater governmental guidance, regulations, and sanctions in almost every area of economic activity—most recently in the problems of environmental quality,

safety, and consumer protection. Economic enterprise in America is still free in that it is predominantly privately owned, but there are few if any managers who are free to make a major decision without considering a vast panoply of governmental regulations or warnings. This will be especially the case if the "Phase II" controls now being debated result in a widespread, detailed, and prolonged panoply of regulations.

Hence we have a prime path, consisting of an historical trend line which has steadily moved from minimal intervention by Government to a point where governmental policy and practice have a direct influence on almost every business enterprise and decision. If indeed the "past is prologue," we can only expect a continuation and expansion of this trend line, and possibly an acceleration as well.

Distrust and Disillusionment in American Institutions

The second path has much in it which is related to the first, and, indeed, probably is a major causation factor of the trend toward accelerating governmental regulation and intervention. While parallel, it is of more recent vintage as a highly visible trend line. It is the widespread and vocal expression of distrust and disillusionment in the institutions of America, including the corporate business structure, and indeed in the entire economic system in which they operate. This criticism also encompasses the governmental, religious, educational, and social organizations of the United States, but it is the business sector which is probably the most vociferously and consistently attacked. Its values, its objectives, and its strategies are generally decried as being exclusively for the "private" interest of businessmen and organizations with insufficient willingness to sacrifice for the "national" interest.

The literature of today is replete with examples of this criticism, much of it coming from younger generations on school and college campuses. As an indication of the breadth of this type of sentiment among college and university students, consider a poll conducted by General Electric Co. during 1970 and 1971. Over 1,300 students were queried regarding how many companies the following statements apply to; the percentages under each year indicate a belief that *all or most* companies are characterized by the statement:

	1970	1971
	Percent	
1. Industry will not willingly spend money to clean up the environment and will have to be forced to.	47	47
2. Business will not do anything in the public interest if it reduces their profits.	34	37
3. Big companies exploit consumers by cheapening products and raising prices.	34	37
4. Business uses advertising to make people buy things they really don't need.	(not asked)	64

Daniel Yankelovich, in an extensive survey called "Youth and the Establishment," explains the "new values" as being

• • • widely held today by those young men and women who take for granted their education, their ability to make a living and to be successful, and their opportunity, if desired, to enjoy a secure niche in our society. Taking these benefits for granted, they discount them and emphasize other goals in life such as the importance of the individual, the reappraisal of our society, and the desirability of social change • • • an intrinsic part of the new values is the questioning of every aspect of our society,

its institutions and traditional American values.

In the same study, and on a hopeful note, Mr. Yankelovich found that a "vast majority of all college students (68 percent) • • • believe that the system is flexible enough to solve problems and overcome flaws without radical change." It was also evident that a vast majority of business leaders were deeply concerned with the same social dilemmas facing the country and willing to work with students in search of solutions.

These and other criticisms come from other sectors of society in addition to the voices of the young. They stem, in part, from the search for culprits in the major and overriding domestic problems of the Nation; the maldistribution of wealth, the maldistribution of the population, and the deterioration of the total environment. They also have risen in volume as the Nation has been faced with the frustration of increased affluence and decreased ability to use the affluence for personal and national improvement.

Part of this criticism comes too from Government leaders, who as career employees are interventors or as political leaders are critics. In part, the adversary relationship which governmental intervention has created will inevitably result in mutual recrimination, with business seen as too parochial and fascinated by profits alone, and Government seen as an inefficient entity inundated with a massive bias against those profitmakers who create the economic foundation—and the resulting jobs and taxes—to allow the Government to function.

There follows an example of business feeling on this question, from Najeeb Halaby, President of Pan American Airways, who said last week:

The primary purpose of business in the past has been to make enough money and enough jobs so as to enable us to continue

progress on many fronts in the whole society. It seems to me that that's still got to be his primary goal so long as he is a businessman and if he doesn't succeed then the whole economy and the whole business part of society is weakened. I don't think he should depart from setting an example of creativity and productivity through his company, to his directors and shareholders. Now, the more he gets regulated, the more regulators that there are sitting, watching, and listening, the more inhibited he gets. We happen to operate in 83 countries so we have 84 sets of regulators and every one of them is listening to what I, as chief executive, say and it's increasingly difficult to say anything bold and instantaneous and not have one of them or maybe all 84 of them knock the hell out of something my shareholders need.

Need for Combined Public and Private Effort

But there is much in the wind today which indicates the existence of the third path which I feel is running parallel to the first two, and is now coming to a point of intersection at which some major changes and decisions will result. This third trend line, also of relatively recent vintage, is the belief that our deep national problems are so complex that they require a massive effort by a *combination* of public and private resources. Rudolph Peterson was President of the Bank of America in 1968 when he said:

For the first time in history, government at all levels—national, state and local—have acknowledged they cannot cope unilaterally with such contemporary puzzles as air and water pollution, housing, urban development, mass transit and racial unrest • • • . Government is not only seeking the help and advice of private business but also hopes to bring the full resources of the private sector to bear on what we have heretofore thought of as public sector problems.

The same basic proposition was enunciated by Secretary of Commerce Maurice Stans not long ago:

If the last three decades have taught us anything, they have taught us that government alone cannot succeed in meeting the great social needs of our times • • • . Our problems are bigger and more acute now than ever before. I believe this is because government has neglected to create a productive partnership with private industry.

There are some clear examples of combined forces in the National Aeronautics and Space Administration story, or the National Alliance of Businessmen, or the Communications Satellite Corporation. But real examples of the "productive partnership" are still relatively few to contemplate. Perhaps this is because the respective roles of the public and private sectors are still to be delineated.

Defining the Public Interest

There is ample room for debate as to who should be responsible for what, as we see from the following comments. The first is from Leo Beebe, Vice President of Philco-Ford, and known to some of you from the year he spent in Washington as the first Executive Director of the National Alliance of Businessmen:

My position rather epitomizes the position the businessman is in today. I sit down here in my office and until a minute ago I was breaking my head trying to figure out how to make a profit and I think that is why we're not more articulate on the public scene. But, I accept the view that we've got to get into politics. I think as a practical matter, we're not gonna get it done if we don't get with the politicians and recognize that the political process has got to work for all of us to find our way. I think the businessman's got to step up to that, but by the same token the politician's got to realize he's done a lousy job pointing the way for us and giving us some leadership.

The same topic was addressed by George Cabot Lodge of the Harvard Business School, who said:

I think that notion that business has a function in defining the public interest is a dangerous one, potentially in any case. It seems to me that it's a principal task of political authority in a democracy to define public interest and it's business' task to conform once the definition has been made. Now political authority can call on business to advise it and to help it to define the public interest but it seems to me that that definition must rest with government. I think that one of the great difficulties is that government has been rather confused about its job in this respect and rather purposeless in pursuing it.

But there are those who worry about delegating too much authority to Government, such as William Carey of Arthur D. Little Inc. and formerly at the Bureau of the Budget. He replied:

George, there is much in what you say, but I am a little concerned that there is an impression that government as a governmental institution has a monopoly on defining the public interest. I don't really view it that way. It seems to me that the government tends to be a mirror of many, many interests which have public benefits and are formulated all through the system.

Guiding Principles for Business

Whatever the merits of the respective debating points, I think that there are a number of key principles which will guide the business approach to this emerging coalition of forces. They should be recognized by governmental leadership, and indeed will generate considerable support from those who recognize the need to capitalize on the best resources of both the public and private sectors. The business attitude will include insistence upon the following.

1. Any partnership between government and business should be structured so as to preserve the vitality and flexibility of the private sector. Private enterprise can get things done, but to do so at maximum effectiveness it must be able to function within a framework of recognized business methods, motivation, and general practice.

2. Business must be alert and ruthless in rooting out any corporate venality which might appear in any such combination of resources.

3. Government must minimize the destructive and paralyzing potential of corrupt practices in its ranks, and the heavy deterrent of excessively complex bureaucracies must not be allowed to mass and become overpowering.

4. Business must encourage interchange among executives of both sectors, and must educate shareholders, investors, and employees that business attempts to join an attack on national social problems are in reality sound long-term investments.

5. Business must be clear and honest as to its capabilities. It will best be able to work for solutions to national problems by using its own genius and not attempting to be something it really cannot be. When it talks of putting private enterprise to work on social problems, business should demand recognition that profit motivation is needed. Without it, only second priority effort and initiative will be forthcoming.

Any casual reading of the operating principles just enumerated will show adequate room for debate and challenge. But it is precisely because the stakes are so big, and the field of maneuver so very cloudy, that the growing interrelationship between private and public enterprise will be the most exciting and innovative of any facing the economic decisionmakers of this Nation.

New Mechanism Needed for Policy and Program Analysis

For the same reason, the ways those decisionmakers will operate and the criteria they bring to bear on their decisions will be subject to tremendous variation. We should move now to at least create the supporting elements which will make their decisions as well supported by fact and clear analysis as possible.

The variety and depth of the problems which the public/private coalition must solve is so great that many are overwhelmed by the difficulty of knowing how to choose among alternative solutions once identified. The "public interest" being claimed by each adherent is not really capable of clear measurement at present, and our analytical resources are so fractionated that a single overview is today essentially unavailable.

Joseph Charyk, President of Communications Satellite Corporation, puts the need this way:

Would it be appropriate to give consideration to establishing some sort of national program to define goals and objectives? We're living in a society where technology can have all kinds of profound effects, and yet there is no real direction being mapped out as to where we should try to head. Now this is something that requires the talents not only of people in government, in industry, in labor and so on, but in education and pretty much all walks of life. And would it be practical to think of a national program under which business could contribute by making people available for a certain period of time, removing them from their normal daily routine, permitting them to reflect and cogitate.

More than ever, Americans need improved analyses of both the immediate and the long-term consequences of all major policies and programs, in both the public and the private sectors. It be-

comes increasingly clear that piecemeal and short-term attempts to solve problems are often at cross-purposes, and frequently create new problems that in the long run are worse than those they tried to solve. We must have systematic, well-researched, thoughtful, and objective assessments of our progress and our prospects. On this basis we must then make comparisons of comprehensive policy choices before us.

This need is to create, therefore, *a unique, independent Institute devoted exclusively to the identification, coordination, assessment, and communication of alternative national goals, priorities, and comprehensive policies.*

The new Institute would conduct, sponsor, coordinate, and integrate both research and education on national policies and alternatives. It would be, in effect, a new management information system for decisionmakers who are concerned with basic alternative national directions and destinations—whether these decisionmakers are in the White House, Congress, State or local government, corporate management, labor, education, voluntary organizations, or in the general public. Thus it would make no "master plans," but would analyze alternatives and inform the democratic political process at all levels.

The Institute would duplicate no existing research on specialized economic, social, political, or technological problems. Instead, wherever possible, it will make full use of available studies and assessments, and draw upon existing research resources in order to build more comprehensive and long-term frameworks. It will identify gaps in existing studies and devote a significant share of its budget to commissioning new work by existing institutions as needed.

An essential feature of the Institute would be the involvement of key deci-

and \$5 million in each year thereafter. A funding program of 5 years, or about \$20 million, should be assured to make possible the desired staffing and preparation of some long-term projects at the outset. The Institute should be evaluated after 5 years, and if the results do not justify continuation, the Institute should be phased out rather than endure as "just one more research center." Funding should come from business, Government, foundations, labor, State and local governments, and private citizens. No one sector should gain, through budget impact, undue influence.

Conclusion

It is my belief that the intersection of the three paths I have described is bringing, in this decade, an overriding demand for new definitions of "national interest." To serve that demand we must be far better prepared to measure and calculate the costs and the benefits of the alternative "national interest" decisions available to us.

William Whyte, a Washington-based Vice President of the U.S. Steel Corporation, summed it up when he said:

Thinking back to the Eisenhower Commission on Goals, I remember certainly zero results. Superb people participated in it—leading thinkers, political men and others of our times. But I also think there's a factor here that we can't dismiss and that is the climate of public opinion at any given time. And it strikes me that today there's more of a demand and an unrest, more uncertainty, more yearning, almost, if I can use the word, throughout the society for some goals, for some directions, to try to straighten the disorder out and put it together as I expressed it a little while ago. And I think that this climate is a very important factor. The question is, are we going to take advantage of it? Are we going to let it run away from us? From that standpoint, I think even though we

tried in the past with little results, it's damn well worth trying again now.

Listening to Bill Whyte's comments makes me want to respond as a Pentagon master sergeant responded in March of 1968. Secretary McNamara had just been given a retirement parade on the Pentagon grounds and President Johnson had come to review the troops. As he did so, rain fell in buckets—and the President had no raincoat. As President Johnson spoke to the crowd, the loud-speaker system went out. The Presidential party went to Secretary McNamara's office, and en route the elevator got stuck between the floors.

The sergeant pushed buttons and flicked switches, and began to sweat profusely. At that moment a voice came through the intercom from outside and asked, "Have you got a big load aboard?" The sergeant looked to his left and saw the Secretary of Defense. To his right he saw the President of the United States. He answered, in a very quaking voice, "*AFFIRMATIVE, Buddy!*"

To Bill Whyte, when he says, "It's damn well worth trying again now," I say, "*Affirmative.*"

Discussion

As a former oil company official and as Secretary of Commerce, would you care to comment on a recent statement by Secretary of Commerce Maurice Stans in which he supported the building of a pipeline through Alaska for bringing oil from the north slope? In other words, do you agree with the building of the pipeline and do you agree that proper consideration has been given by both business and Government?

Mr. Trowbridge: Basically, it's clear that we have several things to consider. You've got the trade-off, if indeed there is one, between the economy of Alaska

sionmakers and citizens from all walks of life in many kinds of give-and-take discussions of what is entailed in fundamental policy alternatives. By putting stress on interaction and communication the Institute can avoid adding to the already excessive number of research and commission reports which are rarely read and may never be acted upon.

Thus, primarily, the Institute would analyze and clarify major alternative courses of action open to the Nation. It would assess, analyze, and make explicit the bases for choice among these—costs, benefits, tradeoffs, priorities, interactions, consistency, feasibility of implementation, and likelihood of success.

Special attention would be given to the information networks linking the center with other research and educational activities, in order to (1) obtain the best available talent, full or part-time, to work, at the Institute or elsewhere, on the Nation's most perplexing and crucial questions, (2) achieve objectivity through deliberately promoting examination of these questions from diverse points of view, including some strongly opposed to the mainstream opinion, and (3) maintain credibility with diverse elements of the society through open analysis of conflicting views.

As William Carey of Arthur D. Little Inc. advocates:

I'm not really advocating an elitist kind of group to deal with the question of national objectives and goals. It can't be elitist because that will not be trusted any more than the relationship of business and government is mutually trusted either. I think there have to be third parties. I think that there have to be bridging institutions. I think the function of the business community here is to help create them, to support the ones that do exist. I think that it means the investment of resources in these bridging institutions and, if necessary—and

I think we may be getting to the point where it is very necessary—the creation of some new kind of bridging institution in which all parts in the society will have a voice in which institution will have accountability. That's the critical question.

Since the Institute would be designed to serve as an integrative element in an existing nationwide policy research network, it would contribute to the overall product in three ways—by conducting analyses which otherwise would not find a sponsor or a research team elsewhere, by integrating results from other research facilities into more comprehensive syntheses, and by stimulating additional and needed research.

The Board of Trustees, the policy-making body, would consist of between 15 and 30 members. It should probably include representatives of the administration, majority and minority representation from both Houses of Congress, the National Science Foundation, and perhaps one or more Governors and Mayors. The majority representation should be of private sector leadership to keep operations of the Institute from being overridden by excessively political considerations.

Joint involvement of public, private, and voluntary sectors would be achieved through a mechanism called an Advisory Assembly which would provide a broad representational base of advisers and review authorities. It should undertake discussion and criticism of the Institute and its products to insure objectivity and credibility. It could have up to 50 members elected for 3 years and perhaps include 20 additional members who would be elected by the Advisory Assembly itself.

It is estimated that the minimum operating budget necessary to do a good job would be approximately \$2 million in the first year, \$3 million in the second,

and what such a project could mean to it, and we have the question of potential damage to the ecology of Alaska.

We know the dimension of that first problem in that the Governor and just about everybody else have cited an unemployment level of about 12 percent in the State. There is a tremendous hesitancy on the part of the business community—investors—everyone to take any kind of forward step until they get the impetus of this pipeline project. There's a real economic doldrum there—real economic problems of jobs, of earnings, and of the future of the State. Not too many people south of Alaska have been as worried about that part of the problem as have the Governor and the others in Alaska, naturally.

The second part of the problem is ecological. I have not been there, and I don't know precisely what progress has been made, but I have talked with people in the Atlantic Richfield Oil Company and with people in the Standard Oil Company of New Jersey about the technical progress made in the last 2 or 3 years. They have dealt with problems such as the damage to the permafrost which might come from crossing the permafrost with a heated-oil pipeline, and have developed an ability technically to move that product at tremendously cold temperatures and to build the structures to make this possible.

I think that most of those engineering questions have been solved, from what I'm told, in a way which will have minimal, and indeed some say no, damage to the ecology. The law says, as I understand it, that this really has to be proven to the satisfaction of the governmental authorities before the final permit can be given.

The oil companies obviously made a very serious mistake when, immediately after finding oil in the north slope, they

ordered something in the neighborhood of \$100 million worth of pipes and other equipment and thought that they could install it immediately. All of that equipment sits there, uninstalled, and I really don't know when the go-ahead will be given.

I gather that most of the problems which have blocked the pipeline either have been solved technically or have been solved to the satisfaction of those who are looking particularly at the ecological impact. Assuming that to be the case, I would strongly favor proceeding with the project. I think that we are looking at a very, very serious energy shortage in this country, which the Alaskan north slope oil deposits would be extremely important in helping to alleviate. I can only guess that it's a matter of 3 or 6 months before the decision is taken, and I think that the 3 or 4 years that this has been under study have provided a great deal of time for the technical and engineering factors to be worked out; and I think we ought to get on with the process.

Do you foresee the advent of a 4-day work week in the near future? If so, how do you expect that this would affect productivity of the national economy?

Mr. Trowbridge: I think that there are about 300 companies at the moment that have gone to the 4-day work week, some of them still experimentally. A 4-day work week is, basically, a 40-hour week with 10 hours at a clip. It is highly successful for certain types of operations. I gather that the majority of the companies that have experimented and found it useful have been relatively small manufacturing companies with fairly centralized productive facilities. How far it will spread, I don't know.

Chrysler Corporation and the United Auto Workers have announced that they are forming a joint study team to see

whether it's applicable to an industry as large as the automotive industry. Those people I've talked with in Detroit are "Doubting Thomases." They wonder whether there's any way of making it work there. Frankly, I don't see it becoming the pattern for the majority of American industry in the next 5 or 10 years. I think that there will be a growing small segment that will find many advantages from it, but I think that it's probably going to be the exception rather than the rule for 5 to 10 years at least.

In terms of its impact on productivity, the 4-day week obviously leaves a great deal more leisure time. To the extent that this leisure time is occupied in leisure, fine. To the extent that it frees people for second jobs, we are going to have some important trade-offs when we still have a sizable unemployment problem. If it releases a lot of high-skilled persons who will then move on a supplementary basis into a second job, they might be bumping or keeping out some people of lesser skills.

With respect to the productivity impact in the companies that have experimented with the 4-day, 40-hour week, the majority of reports that we get indicate that it has increased productivity, at least at the outset. The employees find it in many ways a happier combination of home life and factory or office life to have 3 days off instead of two, and therefore they work at a better clip in that 40-hour period.

What can the Government do to encourage banks and business to participate more in the development of minority enterprise?

Mr. Trowbridge: I think you've got several parts to that problem. The first is the attempt by private industry to build a locally owned or at least target a locally owned manufacturing facility in

the central city, to provide jobs for it. The Conference Board did a very intensive study of this problem. We conducted our study over about 2 years, during which we spoke to over 300 companies that had, at one point or another, attempted programs of this kind. We worked up a series of 30 very detailed case studies, and our findings are a mixed bag.

The factors of the general economy have a great deal to do with it. I recall that in 1967 and 1968 we saw a very real and high-pitched level of interest and dedication of many, many business people in moving to help ghetto residents and minority groups in the central cities to develop these companies, to become management personnel, and to develop their skills. There was a certain amount of euphoria, I think, at that point and a somewhat naive attitude of "let's get in there and solve the problem" without recognizing all dimensions of the problem. Then in 1969 and 1970 came the economic downturn, indeed a recession. Direct investment in the form of a company investing in a plant in the central city almost came to a halt in 1969.

The trend for company action then took the form of working as an advisory group, or aiding in purchasing skills, or developing supervisory training. This developed in 1967 and 1968 and is still going on at a fairly level pace. Government aid, so far, has been largely in the manpower training area, the Labor Department's Manpower Administration programs, and the Small Business Administration's (SBA) loan and loan guarantee programs and small business set-aside contract authority. SBA, I think, has been a little bit slow in this regard. But all of those programs have been helpful at one point or another.

I don't think that you can call the efforts to date a great success; and in-

deed there are a number of failures. Some of those failures occurred because expectations were too high at the beginning and didn't jibe with reality. Also some of them occurred because the economy just brought along too many resistance factors. For instance, we saw a heavy investment by the aerospace industry in nearby minority-owned businesses, and the aerospace industry as you know has taken a tumbling in this particular recession.

Business has not been as ready a customer or consumer of the products of these plants as was originally expected. There have been some serious mistakes where companies have rushed into hiring people and getting a plant going without knowing what they were going to do with the product once it was made—not very much market planning. On the other hand, the whole aspect of sound integration into the community of the project has worked pretty well. Most of the companies that have attempted these projects have gone to the communities, have consulted with them, and have found that, given prior consultation, the welcome mat was a genuine one. I think that the major problem was that of too many high and unrealistic expectations in the beginning. The net result, 3 years later, is a number of successes but with a number of pretty bad failures as well.

In terms of the banks, my own exposure to that effort is a limited one. I happened to be a director of a bank that's working in New York on housing rehabilitation, particularly in Harlem. It's a very exciting program. The core of the success has been a joint effort, involving some tremendously able people in the community who were willing to work on getting land cleared, getting tenants selected, getting them into training classes, and indoctrinating tenants who moved from a horribly substandard hous-

ing into this relatively new and affluent type of housing (even though at low cost).

There's an organization there called UPACA, which is the Upper Park Avenue Community Association. It has a couple of women working for it who are absolute movers of mountains. They are marvelous people and they've generated tremendous community support. The bank has come in with the funding and the State has cooperated with some guarantees. The bank gets the building built, sells it to the State, the State rents it at a comparatively low level, and the community has by its support and its tenant preparation programs made it a very, very exciting success. That kind of program has all the elements of good progress for the future. I know that the trustees of the bank look at it as not only something they want to do, but are terribly proud of as far as results are concerned.

In your statement you proposed establishing a new institution comprised of representatives of all sectors of society to conduct long-range analysis of alternate goals for governmental programs. Since any recommendations would affect changes in appropriations, why couldn't a congressional committee or university research group accomplish the same thing?

Mr. Trowbridge: It seems to me that there are two major problems. One, you don't want to have the organization start out with an excessively political orientation in that those who may be of opposite political persuasion wouldn't give it much credence. Secondly, if you tie in entirely to the executive branch of the Federal Government, you are forced to deal in 4-year timespans.

What you really want to provide is something that has the prospect of continuity and the prospect of credibility in

all sectors of society. And that's why it seems to me sensible to think of a multi-supported institution involving business, Government, foundation, citizens, labor, etc. We need an institution which would use our existing resources, such as existing research organizations, and which would try to pull divergent work together for a presentation to those who have to make the decisions regarding cost and the benefits of the alternatives.

What are your views on the proposal submitted by the Department of Commerce for conversion to the metric system over a 10-year period?

Mr. Trowbridge: I think it's necessary, and I think that it's going to come. We are the only major exception to a worldwide pattern of metric measurement. I think that it will come a lot easier than most people feel. There's recognition in the business community that we're behind now and we might as well get on the bandwagon. It's going to have its rough edges in implementation across a country as large as ours; but the British changed from sterling to the decimal currency, and it didn't seem to ruin their economy. I think that we can do this and I would very much like to see it go ahead full steam.

Will the economy come out of the doldrums in the next 6 to 12 months?

Mr. Trowbridge: Well, the cloudy crystal ball department is active these days. The economists who have been consulting with us at the Conference Board—most of whom are business economists, bank economists, and such—do see an acceleration of the recovery pace, which, they say, is already under way. I think that you've got a leadtime factor which is hard to gauge because the economic indicators show you one thing but the confidence factor doesn't show you the same thing among business leadership.

The Economic Forum of the Conference Board—about 12 business economists—had projected the fourth quarter Gross National Product at a rate of about 1,070 before August 15th. These economists were polled as to their impact estimate (post Nixon Economic Plan) for the fourth quarter of 1971, and their consensus figure—and it was not a unanimous one—was about 1,081. In other words one trillion and 81 billion GNP at an annual rate (in the fourth quarter), with a total 1972 GNP estimate for the year at 1,150 (one trillion, 150 billion) more or less, contrasted with an estimated 1,050 GNP (one trillion, 50 billion) in the current year.

There's still a certain amount of hesitancy in the business community to believe these relatively quite bullish figures. The people I talk with, including many chief executive officers, say "that's all very well but I'm waiting to see what happens to Phase Two and to see what other guys in my industry do."

We are operating with an underutilization of productive capacity which is quite serious; 73 percent more or less. We're operating under a series of unknowns for the near and distant future as far as governmental policy goes. There's a "wait and see" attitude still in existence even though there was a noticeable rebound in confidence and self assurance after the President's August 15th message. What was judged to be a vacuum was filled by a decision. There was a feeling that leadership had been exercised, that a plan had been proposed, and that we could move to the next stage. The next stage is still undefined, and I know that there are lingering questions and doubts as a result.

With only 73 percent of production capacity operating now, what effect do you think the 7-percent investment tax credit will have?

Mr. Trowbridge: The 7-percent investment tax credit would, as the House committee has now worked it out, apply to everything delivered since April 1 of this year and presumably would be permanent. One of the problems of that particular policy is that it's been in and out again like a Yo-Yo. When I was here in Washington, Secretary of Commerce Connor and Secretary of the Treasury Fowler and others said that it should be dropped to slow down inflation, but then it was put back in again, taken out again, and so forth. I hope that, whatever happens, this time it's judged to be a permanent factor so that people can plan on it.

There's a time lag in the impact of that particular policy because there aren't that many shelf items which people can go and buy and put to work and get people in the jobs to operate. You don't just go out and buy a Boeing 747, or a major power plant, or a lot of rolling rock for railroads which can be available in a month or two. There's a certain amount of crankup time needed. The immediate impact obviously would be to improve the bottom line of many companies for the year 1971. But, I think, the long-term impact would be beneficial, and it would very much go toward restoring the confidence factor, which is very hard to define but very major. By and large I think it's a good move.

What can the Government do to encourage industry to expand in economically distressed rural areas to provide employment opportunities for the unemployed?

Mr. Trowbridge: I think that, frankly, the program that has the greatest amount of logic to it, but probably the least amount of results so far, is the originally conceived Economic Development Administration (EDA) program

in the Commerce Department. This program was based on a very simple theory; that there was such a tremendous rural migration of population to big cities because life down on the farm and in the small villages was dull and rather dreary. Many people came to the cities in search of jobs, or to join their families, or to find some sort of excitement that they had not had previously.

The theory behind the Economic Development Administration was to set up a series of alternative growth centers outside the big cities. Governmental assistance would be provided through industrial park areas and infrastructure investments, such as systems of roads and water, sewerage, and power and the addition of cultural, educational, and medical facilities. All of these were to provide towns and small cities of 50,000 to 200,000 population with enough attractiveness so that instead of heading for the megalopolis, a person would be tempted to head for the alternatives. Jobs would be available for these people coming from the farms and the small village communities.

I can only assume that they would still be leaving them as great mechanization took over the agricultural sector, and as television brought the so-called "joys of city living" to their knowledge. The availability of an alternative would lead the rural population to go instead to these areas where growth through governmental assistance and through industrial development could provide the necessary support for them. I think that makes a lot of sense. It's probably going on at a slow pace. Many of you probably are up to date on EDA's progress far more than I am, but the concept still provides a logical alternative to greater central urbanization.

Keeping Pace

The 67th Congress, which enacted the Budget and Accounting Act of 1921, deserves a vote of thanks for its wisdom and foresight in recognizing the need for, and in creating, the General Accounting Office and the Office of the Comptroller General.

Over the years since establishment of the General Accounting Office, we have added new responsibilities to that Office, and have given it additional authority to carry them out, through enactment of such legislation as the Government Corporation Control Act of 1945, the Accounting and Auditing Act of 1950, and the Legislative Reorganization Act of 1970, to mention a few. The General Accounting Office has kept pace with the challenge of the increased responsibilities through internal reorganizations and the expansion and upgrading of its professional staff.

Congressman F. Edward Hébert
Chairman, House Armed Services
Committee

Congressional Record

June 9, 1971



H. M. Boettinger
Director of Management
Sciences, American Telephone
and Telegraph Company

Of all the leaders in the field of management sciences, one name always comes to the forefront, that of H. M. Boettinger. As Director of Management Sciences for the American Telephone and Telegraph Company in New York, he directs one of the new and vital functions which lends support to the managers of one of the world's most complex organizations and certainly one of the Nation's most successful enterprises.

His career with the Bell System began in 1948 after graduation from Johns Hopkins University with a degree in engineering. He has served with various divisions of the Bell System in Maryland, New York, and Michigan. During this period he has taken graduate work in physics at the University of Michigan and in economics at New York University.

He has had a very productive writing career including numerous magazine and professional journal articles. His books include: Moving Mountains, or the Art and Craft of Letting Others See Things Your Way and Some Aspects of Management and Technology, British Institute of Management Lectures, June 1970.

He is a member of the Planning Council of the American Management Association, the Advisory Council of the American Foundation for Management Research, the Institute of Electrical and Electronic Engineers, and the New York University Advisory Committee on Educational Policy, among others.

What Is New in Management Sciences

As the General Accounting Office considers its substantial and growing management review and systems development responsibilities, the possible contribution of management sciences becomes more and more meaningful to GAO staff members. Proper application of management science techniques has great potential for the GAO in view of its broad statutory mandate to review and analyze the results of Federal programs. Mr. Boettinger, one of the ablest proponents of the field of management sciences, makes the telling point that without ideas, leaders are merely caretakers and without a leader to champion them, ideas are no more than intellectual toys. Thus, a key role for management science, and its greatest opportunity, is to be a source and focal point of ideas for leaders to use.

Introduction

Establishment of the Office of the Comptroller General connotes awareness of a deep insight into the nature of human affairs. As a decision leaves the abstract realm of words and enters the harsh world of realities, realization of the decision's objective requires continual tracking of the deployment of the men and resources allocated to the program of improvement. The GAO "closes the loop" between the intent of the people (as articulated by Congress) and the actual results achieved by the executive arms. It is an ancient office whose function is described by the name itself: "Comptroller" derives from the "Counter-roll" kept in medieval times on which were written the resources disbursed in operating a feudal manor, so that they could be tracked and "accounted" for on a daily basis.

John Locke in his essay on education (1692) advises: "training in accomptes is necessary for any gentleman aspiring to

public duties in later life." We are gathered here to celebrate a milestone in the history of Government management and its quest for efficiency. "Management," says Servan-Schreiber, "is the art of arts, because it is the organizer of talent," and the management systems of greatest scope are found in the realm of government.

Of what does management consist? One answer, based on the dynamics of the process, might be:

- Selection of a preferred course
- Formulation of plans and methods
- Organization of the human resources required
- Daily attention to deviations from the course and appraisal of unexpected developments
- Correction to reestablish and maintain course

Exploration of any one of these tasks in depth could occupy a lifetime. This

paper will not attempt that, but instead will assess the relevance to these tasks of that comparatively new adjunct to management known as the management sciences.

What are they? The management sciences consist of many traditional disciplines *organized in a special way* so as to be applied directly to managerial concerns. In our management sciences organization you will find experts in the following disciplines: statistics, physical sciences, engineering, cost analysis, computer sciences, accounting, mathematics, sociology, psychology, biology, economics, and political science. Why? Simply because the diversity and novelty of current management questions demand a new depth and broadened scope of analysis which these disciplines can contribute. Management Science is an *applied science*, striving to add more dimensions of insight to aid the manager who must make those choices characterized by conditions of uncertainty which we call decisions.

Now what is *new* in management science? We could, of course, discuss new techniques, but most practitioners are well up on those and men of affairs do not find that type of novelty congenial. Of closer interest is the emergence of new *concepts*, chief of which is the growing realization, both in management and in management science that real progress lies in understanding the nature of *systems* rather than in further elaboration of our knowledge of components of these systems. When a large number of variables interact and mutually influence one another, the "whole becomes more than the sum of the parts." This insight is as old as Gestalt psychology, but how to manage such interactive systems has become the central problem for leaders in every area of modern life, in education, churches, business, medicine, social welfare, ecology, and government.

Progress is hard to achieve, but enough is known of the behavior of such systems to suggest that intuitive interventions to correct symptoms of disequilibrium are nearly always counterproductive. This explains many of the failures and disappointments of well-intentioned leaders. But constructive work demands that management science provide the necessary analytical frameworks to help guide the will, passion, and intuition of managers who must cope with those symptoms of instability which now plague most activity in our world. To do this requires realization of what I believe to be the most exciting development in management science: a new perception of its role and interactions with decision-makers, and methods to allow that role to be played with enhanced effectiveness of both.

Command, Leadership, and Intelligence

Successful leaders throughout history have carried out their tasks by combining two aspects of man: thought and action. The results of their command of others appear as *interventions*, but antecedent personal cerebration has always made use of *intelligence* to suggest and refine their strategic and tactical conceptions. Moses used Joshua and Caleb to guide his march to Canaan; Alexander, Hannibal, and Mithridates relied on advance intelligence far more than their less successful contemporaries; and Sir Francis Walsingham's information services were of inestimable value in the policy development of Elizabeth I.

The worth of foreknowledge and analysis accounts for the scouting function, which exists because a sensible commander wants to digest, use, and appraise all relevant facts before he irrevocably commits the resources in his care by issuing commands of action.

Modern management is no exception, and while their concerns are of more limited scope, the complexity of interactions often transcends the power of simple analysis. This fact constitutes the latent demand for management science; the body of specialized disciplines constitutes the potential supply.

Many current management science practitioners express disappointment at the gap between their original expectations and their accomplishments. To me, this disappointment has two roots: *First*, the success of management science in attacking military problems was misleading in that such problems have fewer dimensions, data on variables involved are usually available, and the measures of improvement are clear and agreed on by the commanders who assign the problem in the first place. *Second*, those who undertake to use these techniques in non-military management have not realized, to the extent necessary, that their potential contribution is a function of how well they link their efforts to the central concerns of top management.

They have often produced solutions in search of problems, a procedure suitable for securing eminence in technical publication, but not for influencing policy decisions involving the entire array of dimensions of corporate responsibility. Such behavior does not match supply and demand in management science and is akin to inventors who develop an ingenious device in ignorance of the market for its use. Success then becomes a random, chancy business of discovered relevance rather than a directed effort where relevance is planned from the start.

A side effect of the failures is often found in the language barrier involved when specialists refuse, from various motives, to translate their vocabularies into expressions and concepts congenial to managers. This sort of pedantry is inexcusable to a manager, and a sign to him

that the management scientist is more interested in displaying his own expertise than he is in bringing expert help to the manager with a specific problem.

The engines of history are leaders *plus* ideas. Without ideas, leaders are merely caretakers; without a leader to champion them, ideas are no more than intellectual toys. Management science can become a source and focal point of ideas for leaders to use. Perception of this key role constitutes the newest and greatest opportunity to management science. The impact of external forces, changing social goals, more stringent public interest criteria, and advancing technologies have created an extraordinary management hunger for new ideas, but it will be fed only when management scientists develop new forms of discourse with organizations and their leaders. Since ideas inject power into affairs and alter power relations, staff specialists must become sensitive to methods usual to politics, where tradeoffs between various and equally good courses of action in complex situations dictate the actual course embraced by a particular leader at a particular time.

The "Futures" of an Organization

Persons in an organization often speak of its future. This is sometimes too simple a view because any institution or organization has many different *futures*. Its *possible* futures are limited only by artistic imagination, but its *probable* futures are subject to scientific, or at least rational, analyses of strengths, weaknesses, skills, experience, markets, and technology. However, its *preferable* future is a matter of politics, internal and external, and represents the resolution of diverse personalities and the system of values they hold.

In periods of relative tranquility, managements often pose this question:

"What is our business?" This is actually an easy question to answer because it requires only the skills of a reporter. The more difficult question is: "What should our business become?" because that is the only business the manager can influence. Every healthy organization should have that question constantly before it, and a blending of management art and science is required for sensible answers. Like technology and science, one influences the other both by setting boundaries to what is possible and by acquainting each other of new possibilities to enlarge the boundaries of previous thought. When done well, the interaction combines the insights of analysis with the holistic viewpoints of experience. My personal experience during World War II may illustrate what happens when one of these viewpoints is stretched too far.

Back in those days I was put into an Army program in which officer candidates were trained in meteorology. The bunch I was with was comprised mostly of hornrimmed technical types from Cal Tech, M.I.T., and so on. But we were also supposed to be soldiers; so one day an old cavalry sergeant, complete with campaign hat and chewing tobacco, assembled us all on a drill field.

"Now you men are supposed to become officers in this here Army," he said scornfully, "and anybody that's going to be an officer in this here Army has got to learn to use this here saber." (This worried us. We were out to win the war, not with sabers, but with clean stuff from the laboratories.)

"Can any of you smart guys tell me," he continued, "why this here saber is curved?"

"Yes, sir," shouted a brainy kid named Kieffer from M.I.T.

"Don't call me *sir*, sonny," the sergeant shot back (which is a viewpoint in itself).

"Due to the rotary motion of the human arm," Kieffer began, "it is necessary to bring the maximum shearing force at an angle less than the perpendicular * * *." And on he went in an incredibly erudite lecture that included everything from Saracen tactics and the metallurgical techniques of Toledo to the rise of Western civilization itself. He held us all spellbound—that is, all but the old sergeant who kept spitting tobacco into the dust throughout the whole oration.

As Kieffer concluded and stepped back into the ranks, I thought I almost saw a halo form around his head. The old sergeant stopped spitting and looked up.

"You're wrong, sonny!" And this kid had never been called wrong in his life. "This here saber is curved so it'll fit in this here scabbard."

Bemused by tools themselves, we often forget that a tool's value lies only in what it helps produce. Management science is a kit of tools. Deciding *what* to put that kit to work on is the essential step. No amount of recondite sophistication in technique can overcome the lack of good deployment decisions. How can one improve the quality of deployment? We use several different methods, and each has its strengths and weaknesses. All are geared to one objective: to discern the central concerns of top management and to structure and communicate those concerns in ways that others can then contribute their specialist knowledge toward production of good decisions.

The Quest for Convergence

How can managers and staff specialists be encouraged to look at the same things even if from different points of vantage?

First, human conversation of the kind used in depth interviews, where anxieties can surface. When these anxieties are articulated, rather than left as floating fears, they can then be structured into problems and partitioned into areas of work.

We also keep an up-to-date inventory of work done—and being done—on studies throughout the entire organization which has a bearing on corporate policy considerations. Such an inventory is a library of the corporate culture and represents those past and present concerns of top management. If one is not aware of such work, redundancy and “re-invention of the wheel” is the price of negligence. We use our large inventory so much that we have placed its contents under computer and micro-fiche retrieval. The incentive for other arms of the organization to place their work in file is the additional opportunity for recognition and use by higher management and the collateral knowledge available from other departments’ work. It represents a central capability to evaluate and pattern such study information from the point of view of top management.

We have also developed a “situation room” where the corporate problem areas are listed on the walls, status charts and personnel assignments of various projects are displayed, and audiovisual communications and retrieval apparatus from computers, hard copy, slides, and video tapes are arranged for convenient use. The room has been designed to enhance shirt-sleeve interactions between managers and management scientists. Such a room soon becomes a “communication center” for the infrastructure of policy studies and their development, thus offsetting that centrifugal tendency of specialists which often makes their work teeter on the edge of irrelevancy.

One way to approach a management problem is rooted in the practice of med-

icine. Early in his career, a good physician learns this sequence of procedure:

History + Symptoms → Diagnosis
→ Treatment

We call a “quack” someone who jumps immediately from symptoms to treatment, yet the exigencies of management can lure its practitioners into short cuts dangerously akin to such unprofessional conduct. In medicine these short cuts often result in what are known as “iatrogenic illness”; i.e., illnesses *caused* by the doctor. In management, they can cause an originally difficult problem to become impossible. Management science, rightly conceived, can assist the manager in following the sound procedure calling for correlation of symptoms with history and by suggesting several diagnoses before those “treatments” known as decisions. Highly complex systems require appreciation of their interactions if unwanted side effects are to be avoided.

The physician enjoys one advantage over the manager: he knows the objective of his intervention, viz., restoral of good health to the patient. It is essentially an objective of return to a known equilibrium before the disease. The objective in management is more elusive and requires that the manager become explicit about something the doctor takes for granted almost unconsciously. Before any program or intervention takes place, the measure of performance effectiveness must be articulated.

The most fruitful collaboration between management science and management art takes place at the initiation of the task. Until the manager can state how he will judge the attainment or failure of a particular program, i.e., what quantitative or qualitative indicators he is willing to use to test the effects of his decision, management science has little to contribute.

There is one exception: when the manager asks management science for suggestions on what such a measure should be. Once the "figure of merit" of performance is agreed on, then research into the controllable and uncontrollable variables affecting that performance measure can begin, relative sensitivities of the measure to changes in the variables can be tested, and various suggested interventions can be appraised—but not before.

In this process, both art and science reinforce each other and the management scientist moves from conflict toward alliance with his management as they converge their very different talents to the same problem. It is sometimes stated that more sophisticated analysis will make management intuition and judgment less necessary. In my experience, the opposite is true: the greater the understanding achieved by analysis, the greater the need for the intuition, "feel," and judgment for intangibles involved. A faster, powerful racing car requires better coordination and reflexes than a run-down jalopy. Likewise, more sophisticated techniques are too dangerous to put in the hands of inept management, simply because they are too powerful for them to control. They either try to use them where inappropriate or become captured by the analysis, unable to transmute its insights into workable programs for human beings. Management science deals with cause and effect; managers deal with means and ends. Both have a place, but the higher realm is that of ends—the ultimate reason for any organization's existence.

Some Aspects of Planning

Planning is top management's most demanding task and cannot be delegated without making their job meaningless.

However, they *can* be assisted in powerful ways in carrying out this prime responsibility and such assistance constitutes the prime opportunity for management science to make its contributions.

Planning means selecting from among alternatives for the future and guiding the organization to achieve that "future" preferred by the top management. It is thinking ahead with a view toward action, or as Robert A. Nisbet states in his *Degradation of the Academic Dogma*: "The sole objective of planning should be the highest possible combination of the desirable and the feasible." Here the interplay of experience and imagination reaches the heights and depths of an organization's life. Alfred North Whitehead once remarked that: "The tragedy of the world is that those who are imaginative have but slight experience, and those who are experienced have feeble imaginations. Fools act on imagination without knowledge; pedants act on knowledge without imagination."

Top managements of successful organizations must be particularly on guard against the enfeeblement of their imagination, because the dynamic momentum of their success is difficult to alter in new directions. They cannot allow the momentum alone do the planning by omission, since such momentum will merely carry the organization along a projection of past performance. All good things *do* come to an end, and a management that has allowed its planning muscles to atrophy will be hard pressed when they must wrestle with new, unanticipated forces.

Alert managements constantly reexamine their premises, testing whether or not they are still geared to their operating environment. After all, every existing organization structure is a memorial to some problem of the *past*; if that problem is not a valid one for the *present*, such structures are subjected to con-

stantly increasing stresses which may prevent solution of current problems they were not *designed* for. A problem is an erstwhile anxiety which has been transformed into answers to these two questions:

What do you *have*?

What do you *want*?

Until such answers are forthcoming, one does not have a workable problem. The clash of the images of the unsatisfactory present and a future desired state allows alternative tracks between these two points to be planned and one chosen for action. Pure dissatisfaction with the present allows *any* action at all, since there are an infinity of directions *away* from one point. A management which says that "*Anything* is better than what we have now" sends signals of desperation which dissipate energy. But articulation of a desired future state concentrates resources in ways that amplify the chances of its achievement.

Yet even well-articulated problems of a *systems* character can cause a trauma of decision where functional division of labor prevails. This arises because of the nature of systems, where one can strive for either maximum efficiency in the small (components) or in the large (overall system effectiveness). There are probably no systems where one can find *both* simultaneously. The jargon for maximizing efficiency in the components is "suboptimization." This is found in organizations where each function is judged solely on its *own* use of resources *without regard to the effect on other functions*. Jurisdictional disputes, internal competition for resources, and laying off blame to others for *overall* system breakdowns are the symptoms characteristic of this disease. "If everybody did his job as well as I did mine, this wouldn't have happened" are the words of the dirges accompanying postmortems.

Top management, however, is concerned about the effectiveness of the *overall* job, and gets little comfort from detailed subsidiary indictments. Its concern with efficiency is also an overall one—does the system use the least level of *overall* resources for a given level of performance effectiveness?

Trade-offs in one or two components' efficiency may be necessary for every other component to operate efficiently. Finding such linkages is difficult, but some of the present techniques of management science allow understanding of the behavior of such systems—a necessary condition for intelligent setting of objectives for all components' efficiency contributions. The king who lost his kingdom for want of a horseshoe nail during one battle was probably the victim of some blacksmith who had been overly needled about his wastefully high inventory.

Another growing concern for top managements of all large business and Government entities is the need to justify their decisions to hostile parties. After initial reactions of outrage, this has stimulated search for better methods of evaluation *prior* to decision. The allowed variation in the ranges of component acceptability has generally been narrowed in technical structures but widened in human structures, with all the uncertainties amplified as each component's probability of failure is chained to the next. This has led to intense interest in the understanding of the *motivational* forces in order to insure system success in an overall sense. Management science includes psychology for just this reason. No longer are neat mathematical formulae enough. *Feasibility* of a total package, not elegance alone, is the hallmark of good management science work today. It may not win Nobel prizes, but it *does* influence men and affairs—its central test.

There is need for increased emphasis

on detection of the emergence of a policy question. Increased leadtime between initial realization of a problem area and the need to act can help eliminate the unfortunate behavior of a management careening from crisis to crisis. The more complex the question, the worse such improvisation becomes. In this connection, policy analysis—thinking through the ramifications of a change—can give both *a priori* appraisals for proposed changes and *a posteriori* evaluations of past decisions. This kind of knowledge is invaluable in future guidance for management interventions since it constitutes the accretion of *corporate* experience.

Time horizons for planning are lengthening because of the complexities of system management. This adds uncertainty to an already uncertain world, but it is the only way to avoid disastrous surprises and learn from past success and failure.

One illustration of short-time horizon was found on the vacation trip of two economists. As they approached the cabin which was to be the base for their bear-hunting vacation, one economist said to his partner, "We're approaching this trip incorrectly."

"What do you mean?"

"We teach our students about the efficiency of division of labor, and yet here we are both planning to do the same large set of functions. If we were to specialize, our bear output-per-week would go up, our labor inputs would be brought in line with investment, and so on."

"What do you suggest?"

"That one of us specialize in shooting the bears and the other specialize in the skinning and preparing for transport back."

"O.K. Let's flip for it." The first econ-

omist won the toss and elected to shoot. After settling in, the second economist arranged his knives, equipment, and got a fire going, while the first went out to find the first bear. A few hundred yards from the cabin a huge bear reared before the first economist who briskly shouldered his rifle for the shot. He took aim, pulled the trigger, and heard a loud "click," which did not deter the bear who began to close in. The economist then flung the rifle end-over-end but missed the now-running bear. Finally, he turned and ran at top speed toward the cabin, with the bear in hot pursuit. Crashing through the cabin door, he shouted to his colleague who was casually sharpening a knife.

"Here's the first bear! Take care of him while I go out for another."

In this sort of situation, one is wise to secure the correct division of labor, but organizations sometimes "plan" for the unexpected in just this way. In today's world the only thing one *should* expect is the unexpected, yet rigid structures continue to be rattled by any deviations from routine. The greater distance-in-time between "demand" and "supply" in advanced societies adds its complexity to the management task. If operational lag is not to be excessive, forecasts of demand in space and time are required in order to have orders for supply *lead* emergence of demand, and the additional uncertainty calls for more flexible and rapid *controls* to adjust the inevitable discrepancies between forecast and actual volumes.

Once one enters the world of resource allocation he enters the world of costs, and when he then searches for the "optimum" allocation, he must enter the world of analysis, usually the realms of higher mathematics. Simple optimization requires only elementary calculus, but the real management game is *optimiza-*

tion under constraints—and requires the methods of Lagrange—methods usually available in any good management sciences group.

Here one should point out the subtle, but crucial, difference between *objectives* and constraints. Many lower level—and some high level—managers unwittingly embrace *avoidance of a constraint* as their overriding objective, thus missing the overall objective of their superiors. Management science techniques are particularly good at disentangling these perversities with which normal managements usually encounter great difficulty. The management science emphasis on selection of proper performance criteria is the most powerful solvent in these cases.

How To Use—and Abuse—Experts

Niels Bohr and Werner Heisenberg once discussed the proper definition of an expert. Heisenberg said that an expert was someone who knew a great deal about a subject. Bohr replied that no one could know a great deal about any subject because every advance in knowledge opened up a greater area of ignorance. After an hour, they agreed on this two-part definition:

An expert is someone who:

1. Knows the worst mistakes you can make in some subject, and
2. Knows how to avoid them in a specific situation.

When experts are used by top-line managers, the entire organization enters a *learning* mode. No longer can crisp orders flow, triggering immediate and habitual responses. In the best educational methods, teacher and student carry on a dialogue, each interchanging roles of hammer and anvil as they shape the material of their common subject. The

worst kind of educational dialogue consists of declarative and imperative sentences pronounced by the teacher, to which only assent is expected or safe; the best requires the interrogatory mode, served from both sides. *But the questions must be framed with the greatest care and skill.*

Research men of excellence in any field know that the most difficult step in their work is to ask the right question. Only the Almighty knows how much human effort and resources have been wasted because enthusiasts (with more energy than brains) refuse to pause in their rush to use new gadgets and to take time to frame their research questions properly. "Research for research's sake" is the mindless motto on their standards.

Their results can be invariably and fairly characterized as: "an answer in search of a question"—usually a question no one of sense would ever raise.

Unthinking managers can send their staffs on far-ranging—and expensive—wild-goose chases when they casually toss the trivial fallout of a casual lunch to men who have to take *all* the boss's questions seriously.

Yet, since they must pay attention to his questions, when he puts the *right* questions in the right *form*, he catalyzes the entire organization into productive reaction. It is the most creative use I know of hierarchic relations, and when done well, thoroughly justifies the compensation and power of those at the top because they are teaching their people to teach themselves.

Even in stable periods, the method is healthy; when faced with drastic alterations in previous, shared assumptions, it may be a matter of corporate life and death.

Now to the form of questions managers should use and avoid.

First, all questions beginning with "Why" are forbidden. Of all the interrogatory prefaces, this one causes the worst havoc in a hierarchical human system—including families. (There is a flippant variant, viz., "Don't ask 'Why?'; ask, 'Why not?';" but my feelings toward it are the same.)

The reason a "why" question is dangerous in management lies in two aspects of its nature and effects. It provokes an immediate emotional reaction of defensiveness, which implies, of course, aggression on the part of the questioner. This defensiveness thus forces—and allows—the man on the spot to employ the rich variety of possible ways to answer a "why" question. A clever man can slither about in all permutations, wearing down his boss in the process, and realizing the additional objective of imparting the *least* amount of information to him.

A subordinate placed on the defensive by his superior believes that all's fair in war—especially in one he did not start. An answer to a "why" question can be based on any one or more of the following:¹

cause	motive	reason
description	process	purpose
justification		

Each of these, in human situations, furnish a wealth of subjective evidence and far less of information useful to decisions.

Most answers will strike the questioner as excuses, triggering escalation of an already deteriorating dialogue. Shrewd barristers cross-examining hostile witnesses often shoot "why" questions, when the judge is careless, for just this reason. Their goal is to destroy credibility of testimony, but this is the last

thing a manager wants to do to colleagues and associates whose help he needs in developing new responses to changed conditions.

Sometimes a quick-witted subordinate will twist his answer to a "why" question into a statement such as, "because that's what your last instruction told us to do." When that happens, planning suffers a setback and question time is best adjourned.

Let me illustrate the different effects produced by the form of a leader's question from the life of a very great man—one who occupies the pinnacle of Americans' admiration. His reputed method of forming questions has been remarked on by several writers who knew him, and all agree that it kept everyone on their toes, night and day, every day of the war.

Churchill's questions were known as "prayers" because they usually began, "Pray, tell me why . . ." going on to add phrases such as ". . . the seaman's food is so deficient in nutrition?" or ". . . our tanks in Italy have insufficient fuel?" or ". . . we cannot advance the date for this amphibious operation?" Sir Winston was said to be impatient with excuses, but such forms have the unfortunate tendency to breed them. His subordinates were astonished at the detailed knowledge and interest disclosed by the "prayers"—an invaluable gift in a leader—but consider how a change in the *form* of question could produce activity leading to entirely different answers:

"How can we improve the diet on board our ships?"

"Where can we secure fuel to augment our reserves for tanks in Italy?"

"What must we do to advance the date for this amphibious operation?"

These are sufficient for the point. Churchill was an unparalleled war

¹ David Hackett Fischer, *Historians' Fallacies* (Harper & Row) p. 14.

leader, and had little need to alter his assumptions once he had formed the strategic plans. In fact, one can conclude that with his unique experience and intelligence, he consciously chose this form of question merely to maintain discipline and adherence to his plan once it was decided and promulgated.

A manager trying to *develop* a plan, to redirect his people, and to solicit their suggestions, is better advised to substitute questions beginning with: "How," "When," "What," "Where," or "Who."

These, unlike "Why?," produce specific answers, often with factual content useful to reducing uncertainty, easing choice, and eliciting alternative courses of action. A man's answer to them need carry no burden of defense and he usually feels complimented that his superior expected him to know and be helpful.

This latter effect is the most subtle and powerful for the planning process, and works in two ways.

First, a question (except "why?") is an admission of ignorance, and connotes a desire to learn. When received by subordinates, either line or staff, they sense that their superior views their individual abilities with respect.

Deep wellsprings of motivation are tapped, and the increment of personal security produced allows them to take greater risks. Since the question does not put them on the defensive, the staff and line men potentially involved will not fear a shift of blame between themselves. They will be willing—indeed feel a compulsion—to produce a joint, well-rounded, practical, and thought-through answer. When this happens, the leader who formed the question receives a bonus of cooperative planning effort he can get in no other way. In fact, some ask such questions with Socratic irony just to achieve this invaluable effect.

Second, persons in a hierarchy spend a great deal of time and thought in trying to discern the motives and interests of the management above them. These drives determine the effectiveness criteria of everyone in the organization, and everyone knows it. Some managements keep their real concerns hidden from their subordinates (usually unconsciously) and thereby cause confusion. But when the upper management sends down well-formed questions, they also send clear signals as to what their interests and those of the organization as a whole currently are and are going to be.

This property of management questions make them the best of communications media.

One of the ways we use to augment the communications between management science experts and top management is the White Paper. These documents, usually less than 20 pages in length, address a specific corporate issue or question set for investigation. They are written in clear English, free of jargon, to bring those faced with decision to a common understanding of the background factors, chronology of significant events, departmental views (including dissent and references to previously extant documents), and the probable consequences of various alternative responses to the issue. They sometimes include recommendations for additional investigation or studies where gaps in information have been discerned in production of the White Paper itself. They have proven useful in stimulating the dialectical process so necessary in model construction where the controllable and uncontrollable factors affecting performance are arranged in the logic of their interaction. Those factors which accelerate or retard a program of implementation are important to know, because it is on those that intense management attention should be focussed. We use

critical path diagrams on important programs primarily to gain this concentration effect.

Models and Patterns of Perception

Management science models are of many kinds, but all are intended as "Maps for the Mind" of managers. Some types of models we have produced are: verbal, mathematical, simulation, analytical, accounting, and financial. They have all been useful in adding to our understanding of complex affairs.

Our operational definition of "to understand" is that it means "to be able to explain to critical intellects what is happening, what causes what, and the relative importance of the various forces involved." Until we can do that, our understanding is deficient. In dialogue with the manager, the expert must assume the burden of translation.

Management scientists who undertake to bring their work to bear on important human affairs must master those arts of persuasion built on the tripartite foundation of reason, commonsense, and emotion. An analytical breakthrough must be recast into commonsense form if a manager (who must implement its guidance through dissemination to an organization's personnel) is to find it congenial. Recondite packaging of an idea does not meet this test, and in my experience, such ideas are never coupled to the will and leadership which can give them a chance to show their intrinsic merit. The old advice, "When in Rome, speak Latin" has its counterpart maxim for the expert who journeys to the habitat of a manager willing to listen to him.

On Planning, Budgets, and Data

One result of lengthening the time horizon of top management can be a heightened interest in mechanisms for

appraising longer run effects. One class of such mechanisms are long-term planning models, where logical interactions among crucial variables, together with the methods of statistics, are used to produce answers to various "What if . . . ?" questions. The construction of these models subjects an organization to an exhilarating learning experience, as the different functions of an organization perceive their interaction with sharpened vision. Such models of complex systems force attention to common and ultimate goals, attention which is hard to get amidst the demands of daily operations.

These models represent a planning tool for management, an analytical technology, which can help assess what Peter Drucker has called "the futurity of present decisions." Some people feel that they have such a planning tool in budgets for a few years out, but I think this a misapprehension. A budget is the authorized implementation of *one* plan, already agreed on and approved by top management. It represents crystallized assumptions about future operations which they have selected from among many alternative assumptions which were considered, modified, accepted or rejected during the planning process which *precedes* the budget-making process.

The budget is a document where discussion has been transformed into commands, and it tells everyone who contributes to one of its lines what overall monetary constraints he must avoid in delivering the functional output expected of the resources in his charge. When budgeting is the *only* planning activity, one should expect a concentration on tactical operations at the expense of strategic thought. In stable conditions there is little danger, but when the organization is buffeted by internal and external environmental changes, the minds

of managers must expand to accommodate new knowledge and its application. That is the realm of strategic decision.

Another emerging role for management science comes from the need to structure *new* data requirements to fill gaps opened by the earthquakes of change. A model without data is not necessarily a vice, but data without a model is no virtue. A *pattern* of possible relationships suggests what information people should be set to gather, but raw data stripped of its meaning for action merely adds to information overload. One often hears the complaint when a new problem arises that "no data exists on this subject." That this surprises a management scientist marks him as still in the immature stage.

Why does any data exist at all? Because someone in the past asked a question or expected someone (usually in hierarchies above him) to ask one. Truly new questions are almost always confronted by a lack of data for their answer. When such a question arises, the first subsidiary question to be addressed is: What information is worth developing with limited funds?

New information is *not* free, and the choice of methods to be used to get it is not a trivial question. All of the methods of statistics, sampling, surveys, inference, induction, and analysis are most valuable when they can assist this crucial search. Accounting data represent routinized compilations of data in response to well-accepted questions which need continuing and current answers. They are a rich source of material for beginning the quest for answers to new questions, but usually need to be refined and sifted by the newer forms of analytical technology. This is a fertile field for the seeds of management science contribution.

Some Notes on Organization and Performance Criteria

Perhaps a word or two on how we have evolved an organization structure for management science geared to corporate needs may be appropriate here. We have one-fifth of our force deployed in a problem formulation and corporate liaison function and four-fifths in a corporate analysis group.

The liaison and formulation group take an original issue and, after initial investigation, structure it for more thorough analysis. They try to answer two questions: (1) What is required to be done? and (2) How best to do it?

One of our favorite aphorisms states: "Anything not worth doing is not worth doing well." We try in this way to allocate our scarce resources to the most important issues and not allow the analysis groups to be perturbed by random, un-evaluated requests. These can keep them very busy but they will almost surely produce wasteful deployment.

The corporate analysis groups carry out ongoing investigations on various aspects of our business; e.g., demand, supply and investment, finance, economics, and social sciences. Their projects develop the core expertise and maintain contacts with experts throughout the Bell System which is coupled to specific corporate issues, under guidance from the "perturbable" formulation group from initiation to final presentation to management. In this way we have tried to achieve a balance between speed of response and thorough, soundly-based research.

If all time is spent on fighting fires, no one has time to build better fire-fighting apparatus; but if men who presume to design the apparatus have never seen a fire fought, their well-intentioned artifacts will probably never be practical or

used by firemen. We believe management science work must be firmly rooted in the reality of the manager's world, conducted in ways that allow intense involvement in that world, but which also allow the withdrawal necessary for concentrated reflection and analysis which produce worthwhile innovations for use by managers of complex systems.

Our criteria of success for a piece of management science work are these:

- Did it help the manager avoid an error or obstacle to his objectives?
- Did it help the manager make a better decision than one possible without the work?
- Did it help the manager seize an opportunity he may have missed by deepening his operational understanding of his own task?

These are harshly practical tests for specialist knowledge to pass. But enthusiastic acceptance of such tests by these newest of auxiliaries to one of the oldest of arts furnishes my answer to what is truly new in the practice of management science.

Discussion

Does the Government compare favorably with private industry in the effective use of management sciences? If not, how can it be improved?

Mr. Boettinger: I'm going to avoid the direct response to the value judgment involved because I don't have enough information for a definitive answer. Let me shift the question. If you asked me: Does the Government have a greater opportunity than business? I'd say "undoubtedly," because you are dealing with a very rich mixture of human motivations, and your clientele is the entire population within the national bounda-

ries. It seems to me that you would have to know much about your "customers," if I may use a commercial phrase for our fellow citizens. You are delivering some sort of service or preventing certain undesirable things from happening and it seems to me that the behavioral side of it is extremely important: i.e., the idea of knowing what their performance criteria are.

The other side of it is the linkage of various departments with the various mission-oriented activities. How those are to be brought together in some overall efficient sense is the great problem of our country. Whether it's in transportation, in education, or in welfare, and all the rest of our national problems, people making small gains in some subsections are not going to do the job. There has to be some look at the interactions of all parts and contributors to these systems.

To me the really great challenge of the next two decades is finding ways to integrate components toward effective performance criteria. As far as I know, a great deal of the Government work in the management sciences has been in the military sphere. There are various enclaves of work all through the Government which appear in the journals, but I do not know exactly how to evaluate that against your opportunities. In our case I'd say if 100 is an index of where we can go, in business, we are probably around 25.

In the Department of Defense, I think they might say that they are somewhere around 50, but they had a little controversy recently about professional standards of operations research on certain public questions. I have no views on that particular area.

In the civilian sectors, the index might be about 15. My own view is that this type of investigation of multidisciplinary dimensions on highly complex structures

is preferable because we want to avoid simplistic solutions of one dimension to problems which have many dimensions. This is the reason for the interdisciplinary approach.

I believe that the opportunity in this area for management science is even greater in the Government than in private business, even though it's of great potential in private business. Compared with our opportunity, we probably have gone a little further than the people in Government have. That would be my personal judgment, but I think that only because your opportunity is greater than ours.

How can interaction between management science and the top decisionmakers be improved?

Mr. Boettlinger: We believe that's the central political question of connecting staff expertise to the top management. It is essential that the top manager be able to trust these people. You give them great potential for influence. You don't give them power to give orders to people. The management scientist has to discover interest in what appears at first to be mundane concerns.

If the management scientists cannot get managers to articulate their largest problems and concerns, they will turn to solving the problems they know how to. It will be sheer opportunism, of the sort you sometimes see in physical science. They will do what they can do.

I believe that any management scientist who interacts with management has to use the vocabulary of management. That is, he has to translate his methods and results into understandable language. He should not try to win the battle for his point of view on the basis of a foreign language. You wouldn't allow that in a court of law. You have to translate it into a language understandable to

the jury. Top management is the jury, and any expert who is foolish enough to go into court and use high-flown language in order to influence a decision is not very smart.

We have made it very clear to our people that they are judged on three elements. Expertise, which is a matter of capacity and ability. Contribution, which is a yearly appraisal where we ask: What specific contribution did your line of activity contribute to the management of this enterprise? This is a very big incentive to find out what will be judged as a contribution. The third element is their leadership, which means their ability to mobilize men of diverse disciplines in an attack on the assigned problem and all the aspects of it that emerge.

These are the three dimensions of appraisal for our management science people. A man may be a tremendous expert, but if he has very low leadership potential and can work only by himself, this is a minus. We value skill in interaction with managers. We put that burden on the management scientist, not on the manager.

Some people fresh out of school in management science think that when they come into the business the problems are sitting on a shelf, that the whole set of top-management concerns are all neatly structured ready for application of analytical techniques, like linear programming, inventory theory, queueing theory and all the rest. They don't realize that nobody has those problems sitting on a shelf that way. You get those problems by dredging around. You have to interact with people in order to find out, almost by depth interviewing, about processes inside the organization so that you can precipitate the range of choices which represents a managerial concern.

I know it's an overused word today, in

many contexts, but management science which is not relevant to the top management's concern is useless. We start with that. Every now and then, of course, we take management to new fields of inquiry. On excursions of that sort, you open up your horizons. After all, we are allowed to be professional heretics, which means that we continually reexamine the premises of our enterprise.

Managers are sometimes like lawyers. They are always on the alert for an original idea which has stood the test of time. If you get one of those, it is clear sailing, but most men of affairs have a tendency to look for some precedent. I am for precedents and prudence. If we found out something similar was done in the time of Justinian over in Constantinople, that generally satisfies the lawyer. But people are cautious because they know how many things can go wrong. The manager wants to get through each day with things held together.

The idea of longer term planning horizon comes very hard, too, because the number of things that can go wrong is expressed by a simple mathematical formula: If you have "n" levels of decisions or events, 2^n is the number of things that can go wrong. So if you have five contingent decisions, the possible outcomes are 32, or 2^5 . Well, no manager in his right mind thinks that way, but he does say, "If I can get through step one, I'll worry about step two, and then I'll worry about step three." But in large interactive systems, we need some appraisal put on those chains of contingent outcomes a lot sooner than we have been accustomed to in the past.

It is difficult to find clear evidence of the effect on legislative or executive policy of even the best of studies based upon management science. How can the benefits of such studies be determined as a better guide for the allocation of resources to such studies?

Mr. Boettinger: This is a central, profound question. If someone says at the end of the studies, "So what?," then the whole thing is futile. It seems to me that the only possible way to answer this is in the policy analysis area, and I don't know if you have experienced this in your mission agencies. If someone is going to propose an intervention in the political process, i.e., he wants to pass a law or initiate a program, there has to be some stage where one discerns a purpose to it, if it is a rational proposal. The purpose of the intervention is to alter the course of human affairs or to prevent something from happening.

What is often missing, from the point of view of the management scientist, is the specification, at the initiation, of what the measure of performance ought to be. How will you know if things improved or not? This is not a trivial question. One of our most difficult tasks in dealing with managers is determining answers to: How would you judge? You've got a problem here, granted. By what measures will you be willing to judge its solution?

I don't mean numbers necessarily—they are easiest—but also qualitative judgments. Before we are going to start, you've got to tell me how you are going to be willing to judge the failure or success of this program. I've no real expertise in the political area but it seems that a lot of failure in human action is caused by not thinking through how to judge either success or failure, improvement or retrogression. When the men who are charged with implementing programs—or approving them or proposing them—start asking those kinds of questions, then I think you'll begin to see the advantage of the management science approach, because the man who has to go and testify for resources should have thought this through. To me, the process

of intervention has not been closed until you specify the measure of performance.

We start on a management science project by striving to make some measures of performance explicit. When you do not care about that, there's really no great room for doing anything with management science. It's only when you start to specify how you will judge progress—or lack of it—that you can start to apply these techniques. Once you do that you can begin to study what factors will bear on improvement and what factors will not. Until this is done, you don't have a real demand for management science approaches. The specification of the performance measure is the *sine qua non* of all management science applications. If I were a legislator I would query people who are testifying before me almost entirely with those types of questions. How will we judge the performance of this particular program which you are asking of me?

In view of evidence that adequate criteria and data are not available for measuring quantitatively the results of Federal grant programs, do you have any suggestion as to what is needed and how to obtain it?

Mr. Boettinger: It's a subclass question to my previous answer. First, for a corrective program we can use the same data as the initiating measure, because we want the numbers we are getting to look better in the future. That is what I will call an equilibrium program. But a new question or program will, by its nature, be deficient or totally lacking in data for an answer.

Our procedure is this: before any new program is established in our enterprise, we specify the data collection methods, the data itself, and the collection methods in a reporting structure for that program before it is promulgated. To develop the data system by which we

will know what is happening, we visualize at the start the "aims of the program." "Implementation" follows, but then something called "error" happens, because we know that any time people take an aim and try to implement it, things go awry, sometimes worse, sometimes better than expected. If more right than you thought, you should exploit it. The "error" correction is itself a process. But if you don't know things went wrong, you don't know exactly what to do. This process of correction may mean that you have to correct the "aims" side or you have to correct the "implementation" side. And that's not a trivial decision. There are some men who believe that the aims from on high can never be wrong and that all fault lies in themselves or in their people, generally the latter. Other men believe that their implementation can never be wrong and that the trouble lies in the aim they were given to carry out.

You have to specify the measurement system if you are serious about corrective action for keeping a program on course or altering course. It need not be very elaborate, but it has to be something, because, if you have an aim and then an implementation and no measurement or detection system, then you have totalitarian planning, which means that nobody dares report that anything has gone wrong at all. With this kind of planning, you end up with all sorts of pathological systems of trying to keep things hidden from the man who gave you the aim in the first place. But if you are serious about managerial improvement, you must specify the data collection system and the data itself. If it is a new program, it will require new data to be furnished as to whether this system is working according to plan. That is the only solution we have.

We do not allow a program to be started in our operation without specify-

ing, even if it is a very trivial program, what is going to be the reporting-back system by which we know whether we are achieving our goal, whether we are wasting resources, or whether the whole thing was a bad idea in the first place? If you start an idea which is really silly, but is not transparently silly, and if you don't have a detection device as to what it's to accomplish, that program will go on forever because you don't know what to do about it. You have no criteria of its effectiveness.

I'm not narrowing this idea to profit or loss, or anything like that, which is inappropriate for Government. I mean, did it meet the criterion of success? Did it feed more people? Did it raise the incomes? Did it raise the IQ scores in schools? You can pick any kind of data at all that you want, but you have to pick *some* kind. We know we can't start the process until you specify the data. The man who initiates the program or is charged with implementing it ought to be charged with designing the data requirements before he is allowed to start.

Do you see any possibility for development of effective human-asset accounting systems?

Mr. Boettinger: I think, as I hear that concept discussed, it means to augment the balance sheet, which is usually a stockholder-oriented report. In other words, in the accounting system of an organization the numbers are all related to value of the artifacts assembled or the cash that flowed through the enterprise, and nowhere on the balance sheet are shown the enormous human resources which constitute the real strength of an organization.

Let me try a verbal model of this process. If the company should stand stable on its balance sheet, but had developed the skills of its people or had in-

vested a great deal in educating its people, or the Nation, we, in effect, would have produced a human profit, but we would not have produced one, say, in a monetary sense. We had made an investment in human potential. Pensions then would be considered a depreciation account of some sort, provision for the superannuation of the human assets, and so on. My own view is that the chance of doing that in any organizational context would be somewhat fruitless for this reason: Any human being in any organization, any hierarchy, has a dual nature. He belongs to both a hierarchical system and an associative system throughout his service and life. You are members of a neighborhood; you have families; you are members of churches, lodges and professional groups, etc., and even inside the hierarchies you have associative groupings that you belong to. The measure of success in the associative grouping is your personal reputation. The measure of success in the hierarchy is how much your particular contribution contributes to the aims of the hierarchy—the organization.

Human-asset accounting, it seems to me, would have to come in on strictly limited dimensions of hierarchical relevance. So here you are a human being, with maybe a hundred dimensions to your personality, but for the asset accounting, we can consider only a few. We would measure you, in effect, strictly on the basis of those relevant aspects of your personality. The old manufacturers used to call their people "hands." Well, that was not a slip of the tongue. The only dimension of the human beings that they were interested in at work in one of their mills was their hands. They didn't care about their feet, their head, or any other part, much less their aspirations and other abilities. Hands—that was what they hired. In fact, the Navy still uses that expression, and if everyone took the order "All hands on deck!" lit-

erally, a ship's company would look like a bunch of Moslems at prayer.

But the human assets in which you should be truly interested are a function of the *total* dimensions of the people in it. What we count on is something like a random process. Everyone has much more capacity than he has turned into ability, and what we try to do—since the business is randomly hit by requirements for expertise of all kinds—is keep track of a man's professional skills, his amateur skills, his dilettante skills, even his hobbies and his avocations.

Every now and then we'll assign a man to a job for which we do not have professional skill on the basis of his avocation. Or he might simply say "I've never worked in that area. I would like to have a shot at it." Now that horrifies professional personnel men, but some of our civilization's greatest contributions have come from marginal people who are very competent in one field but who are at a dead end—a sort of *cul-de-sac*—or tired, and who enter or are put into another field.

Accelerated-depreciation questions are very important in our kind of capital-intensive business. We assigned that problem—after engineers and accountants argued for a long time—to a mathematical physicist. He approached that whole problem in his dealing with the accountants and the engineers, as one of handling asynchronous delays in decay rates, which is similar to radioactive processes, and so on. In doing the mathematics of this, he made some unusual discoveries: for instance, the original feeling that if you could grow fast enough, the accelerated depreciation turnaround would never catch up with you. He proved analytically that it *always* caught up with you, and occurred at half the mean life of the plant. Some original, genuine discovery of high relevance came out of this.

The idea that different analytical techniques applied to what appear to be old problems can be very helpful. We have put literary people on product tests and product development because they understand something about human nature of a normal type. The psychologists often concentrate on the abnormal. Men who study literature know how normal human beings are motivated and resolve conflicts. Biologists can work on certain technical engineering problems, because, after you build certain artifacts up into collections of tremendous complexities, things start to behave more like biological organisms than erector sets. There are ways of studying biological problems that are different from those of studying assemblies of components. Interesting suggestions on the measures of performance of a biological-oriented system can be used for systems made up of hardware. "The system doesn't malfunction," says the biologist, "it becomes ill." Well, that's a very startling thing to an engineer—the idea that a system is ill. Questions like: "Can you test it for vital variables like temperature and blood pressure?" initially baffle the engineers, but start interesting new approaches for measuring systems which have become very complicated.

We don't overdo that sort of thing, but the important contribution is a way to get a new angle of view on old problems. It is a very fruitful source of discovery. As for developing the measuring of human assets, just as soon as we've figured one out, I believe the marvelous ingenuity of man would frustrate us. We have a saying about that: "No tariff can anticipate the ingenuity of customers." The one corresponding to that is, "No personnel policy can anticipate the ingenuity of people." So I hope that we continue to think of personnel as an enormous, untapped resource. That sounds like a geologist's attitude to oil

reserves. But we should constantly appreciate the capacity of our people and help turn it into abilities in the dimensions in which we are interested and which augment a person's overall growth. I am not eager to push for quantification of such a rich and precious

thing as human potential. That's admittedly a personal bias, but false quantification in human affairs is sometimes worse than no quantification at all, because it can mislead decisionmakers into thinking that more is known than truly is.

Serving the Congress

We are fortunate indeed in having available to us a service organization of the caliber of the General Accounting Office to furnish us expert, independent, and professional appraisals of the manner in which Government departments and agencies are discharging their responsibilities in the management of the programs we authorize and in the use of the funds we appropriate. The Office not only anticipates our needs for such information but stands ready to respond quickly to our requests for any specific information we may need in our deliberations on the authorization and funding of new programs and the continuation of existing programs.

Congressman Frank Horton

Congressional Record

June 10, 1971

Reviewing Effectiveness of Government Programs

In addition to continuing its quest for economy and efficiency, however, it is another "E"—effectiveness—with which the General Accounting Office has become increasingly concerned in recent years. This significant development is one in which I like to feel I have had some part. As my colleagues will recall, an amendment to the Economic Opportunity Act which I offered on the floor of the Senate in 1967 directed the Comptroller General to undertake a study of the antipoverty programs and activities financed under that act.

The GAO was asked to make an investigation not only of the efficiency with which these programs and activities were being administered but, more importantly, the extent to which they were achieving the objectives that the Congress had set for them. In other words, the GAO was to look at these programs and activities and judge how effective they had been.

This was no small task because the methods of evaluating social problems such as these and the yardsticks to measure their progress or accomplishments were not well developed or understood. The GAO responded to this extremely complex and difficult task with the most factful and in-depth study ever made of antipoverty programs and activities. The results of its review and the recommendations it made for revisions in antipoverty programs and organizations were considered by the Congress during the hearings that led to enactment of the Economic Opportunity Amendments of 1969.

Senator Winston L. Prouty

Congressional Record

June 10, 1971



William Gorham
President
The Urban Institute

William Gorham's career in Government and Government-related organizations began in 1953 when he joined the research staff of the RAND Corporation. His progress has been rapid as shown by the following milestones in his career.

In 1962 he served as Deputy Assistant Secretary of Defense for Manpower. He became Assistant Secretary of the Department of Health, Education, and Welfare in 1965, and in 1967 he was appointed Chairman of the President's Task Force on Child Development and Cochairman of the First Federal Panel on Social Indicators.

Mr. Gorham became the first President of the Urban Institute in 1968. The Urban Institute, an independent, nonpartisan, nonprofit research organization, was established to study the Nation's urban problems. It responds to current needs for disinterested analyses and basic information and attempts to facilitate the application of this knowledge. As part of this effort it cooperates with Federal agencies, States, cities, associations of public officials, the academic community, and other sectors of the general public.

Mr. Gorham was educated in New York City public schools, the Massachusetts Institute of Technology, and Stanford University. He received his B.A. degree at Stanford University in 1952.

Ignorance in Government Is Not Bliss

The nature and quality of information made available to Federal policy-making officials, including the Congress and program managers, are matters of great interest and concern to the General Accounting Office in its evaluations of Federal programs and activities. These matters are also of interest and concern to Mr. Gorham, a former Government executive and now president of a nonprofit research organization devoted to the study of problems of the Nation's urban communities. In his lecture, he refers to weaknesses in our decisionmaking process which have led to ineffective programs, waste of money, and a squandering of public confidence and he points out that although wasted motion and wasted money are bad, wasted confidence in a system such as ours can be a disaster.

This opportunity to share with you some of my observations about the functioning of government is a great honor and a great pleasure.

My text is adapted from De Beau-marchais. Two centuries ago he said: "It is by no means necessary to understand things to speak confidently about them." Experience suggests that for our purposes the following paraphrase would be more appropriate: It is by no means necessary to understand things to enact laws and appropriate money.

My concern today is about certain weaknesses in the decisionmaking process which have led to ineffective programs, waste of money, and a squandering of public confidence. Wasted motion and wasted money are bad; wasted confidence in a system such as ours can be a disaster.

Signs of the decline in confidence are increasingly apparent. Recently, I came

upon one such small but striking indicator in connection with work The Urban Institute is doing on financing public education. From 1963 to 1970 the percentage of school bond issues approved by the voters fell drastically—from 72 percent to 53 percent. Moreover, the voter's inclination to turn thumbs down had gained momentum steadily despite the fact that school officials, trying to counter the trend, were becoming far more cautious in going to the electorate—putting only 1,216 issues on the ballot in 1970 as compared with 2,048 in 1963.

The voter's quiet message, expressed as a rejection of what bureaucrats and elected officials propose, is loudly reinforced in the media by other segments of the population. The left calls for power to the people; the right, for law and order. Perhaps the most insidious variation of the message comes from a substantial number of the young. They ask neither what they can do for their

country nor what their country can do for them: the greening of America is to take place in spite of government. None of the signs are persuasive, if taken singly. But, taking them together, I am persuaded that if we had a Dow Jones average reflecting the public's confidence in their governments, its direction these past 10 years would be down.

I think this is bad news. Bad because a disaffected public will not give its government the go-ahead to do things that need doing and I personally am convinced that more, not less, does need doing.

If confidence is so crucial, why has it been dropping?

Let me first dismiss several explanations frequently used to explain the failures of government:

1. Our leaders know what to do but lack the courage to do it.
2. The bad guys are in power and do not want to do the right things.
3. The good guys are in power but the bad outside are blocking or sabotaging their good efforts.

At any given moment one is likely to find examples that give credence to these explanations. But as universal explanations for the failures of government, the variations of the villain theory are painfully naive. Surprisingly few fools or knaves have occupied the key offices of government in our times. Blaming our troubles on the cupidity or stupidity of our leaders is as diletantish as it is predictable.

Admirable Goals

The trouble is deeper: the weaknesses are in the system. The rapidly expanding agenda of the past 15 years has strained the system to the point where those weaknesses have led to poor legislation

and the poor legislation to disappointing programs. Let me remind you of some of the national agenda items that, in rapid succession, have been set forth over the past two decades as goals that could and would be attained.

We declared our intent to achieve full employment, stimulate small business and minority enterprise, provide every American with a decent home in a suitable environment, eliminate poverty, wipe out hunger and malnutrition, end racial discrimination in public places and in housing, protect the voting rights of all citizens, assure quality education and equality of education for all children, revitalize cities, crack organized crime, guarantee safe streets, enable the aged and indigents to afford high levels of medical care, protect consumers, save wilderness areas, conserve the environment by halting and curing the ravages of pollution, pump new economic life into depressed areas, and more.

In each case, the public dialogue preceding the acceptance of the goal and its programs implied that the Government knew what the goal should be and had the means to attain it. The means, of course, varied—massive expenditures, new regulations and enforcement powers, rewards for good behavior and penalties for bad, direct Federal action, transfer of funds and powers to State and local government, creation of new departments, agencies, and other instrumentalities, subsidies, loans at favorable rates, and so forth.

Almost every agenda item offered a reasonable area for Government action, but effective modes of intervention generally were not—and still are not—known. Hence the prescriptions adopted ranged from counterproductive—that is, worse than if nothing had been done—to fair.

Let me give several supporting exam-

ples and on that basis offer some general reasons why we seem susceptible to legislating weak or dangerous medicine for our social ills. Finally, out on thinner ice, I will offer some suggestions for improvement.

Compensatory Education:

A Futile Try

For several decades, friends of public education have been working toward a tap on the Federal fisc. Through 1957 only one small Federal support program was on the book. Known as "impacted aid," it authorized funds for local school districts based on the number of children whose parents lived or worked on Federal installations in the area. Since those installations paid no property tax, the school aid was considered as a kind of in-lieu-of-taxes plan. But apart from this limited program there had been no breakthrough to provide Federal operating support to elementary and secondary schools. The church-state barrier against aid to parochial schools, plus fiscal conservatism and the tradition of local school sovereignty, had presented too formidable a set of obstacles.

With the launching of Sputnik in October 1957, Federal funding of education received support from a novel and potent ally. Vis-a-vis the Soviet scientific achievement, the improvement of education might be critically needed for national defense. It was, accordingly, under the banner of the National Defense Education Act of 1958 (NDEA) that Federal funds were voted for, primarily, the improvement of teaching in science, mathematics, and foreign languages. During the years immediately following, the existing programs were not only maintained but were further expanded. This was particularly true in 1964 with the extension of NDEA support to such areas as history, geography,

civics, and English; with a separate bill covering support for library construction and services; and with selective aid, under the Civil Rights Act, for school systems having problems with desegregation.

With the ground thus prepared, by 1968 it seemed time for education to have an act of its own. Intensive political horse trading finally brought together three interested groups: those who cared about the poor, business and civic leaders concerned about preserving the local tax base for other purposes, and the education establishment that wished to initiate Federal operating aid for local schools. The result was passage of the Elementary and Secondary Education Act (ESEA) for both public and parochial schools. The funds, \$1.255 billion in the first year and about the same level since then, were to be passed on to 16,000 local school districts according to a formula based on their poor population.

The legislation was passed and the billion dollars were appropriated, on the twin premises that there was an educational handicap associated with poverty and the local school systems knew how to overcome it. Practically no evidence supported the second premise. On the contrary, the few competent studies and pilot efforts aimed at upgrading the effectiveness of the school system with low income children provided grounds only for pessimism.

The Title I money has permitted a few talented educators to test ideas on how to advance the cause of compensatory education. But the great bulk of school systems did not have the foggiest notion of how to make good educational use of Department of Health, Education, and Welfare (HEW) funds. Some systems simply substituted Federal dollars for local funds: some spent the funds on

non-poor children; some school districts used the funds for breakfast or equipment they had been waiting to buy anyway. Most did just a little more of the same—with the same outcome. In short, 16,000 flowers did not bloom. And it has been hard to find buds.

Perhaps the excitement of first opening the Federal till for education still sustains those who participated in the victory. Certainly neither the conception of the program nor its outcome did.

What was in the minds of those who passed this legislation and funded this program? Were they aware of the difficulty of generating more education by simply providing existing systems more money per pupil? If they were not aware, why not? If they were, did they support the program only after considering the alternatives and after rejecting them as even less likely to achieve the goal?

Apparently, the key actors in the process did not ask whether local schools could do what the legislation was giving them funds to do. Although the Nation's schools were seen to be wanting in many respects—people had asked why Johnny could not read and how Ivan had outsmarted us with Sputnik—most of the actors in the Administration and the Congress simply either had enough faith in the existing delivery systems or behaved as if they did. If more money were spent for poor pupils, why, of course, these children would become better educated.

For his part, Lyndon Johnson was anxious to make his mark as "the education President." Taking on man-sized goals and making large spending starts was (from his perspective) an achievement in itself, one that could be placed on the scorecard at once. Knowledge throughout the executive branch that this kind of commitment existed at the top was not conducive to substantive

questioning. In the heady air of a legislative assault of the magnitude of 1965, such questioning would have been regarded as "hair splitting." There is evidence of an abortive try by the Budget Bureau to tighten the Title I guidelines by tying future allocations of funds to educational attainment.

Congress appeared more interested in sharing in the glory by passing the program than in asking hard questions about it. Further, the strong continuing distrust of Federal involvement in local schooling helped to discourage detailed debate on the measure, since such a debate might re-ignite fears of more general Federal interference with local prerogatives. Moreover, Congress labored under its perennial handicap of having to rely heavily on the executive branch for facts and research. The House Education and Labor Committee, with only a small full-time professional staff, took up over a dozen major bills during the same legislative session.

Finally, besides Government spokesmen, the public hearings as usual attracted chiefly those who had vested interests in the legislation. They were not about to raise questions which weakened the case for passage. Only rarely are the public hearings designed to fully inform the legislators. At best they are a device for ventilating vested views. ESEA was no exception. In the end, those who knew didn't talk, and those who talked didn't know enough.

Spending on Title I continues now at about the same rate as at passage, despite the poor performance of the program. Outlays most likely would have been expanded were it not for budget tightening due to Vietnam.

In spite of discouraging substantive results, Title I has had three positive results. First, it did get the educational nose under the Federal funding tent

where, in my judgment, it belongs. Second, the questions raised about the ability of schools to serve disadvantaged children led many more people to see that, for the sake of all children, the educational system needs close and continuing attention. Third, a precedent has been set for focusing a national effort on substantial educational gains for the poor. These are not mean accomplishments, but they are simply stage settings. It is difficult for me to believe that our system requires such an expensive revêlle.

The same year that Title I was passed the Social Security Act was being changed in a number of ways which affected not only the aged but also those covered by the welfare provisions of the act. Our next example is one of these provisions, Title XIX—commonly called Medicaid.

Medicaid: A Paper Solution

Medicaid covers medical care costs for specific groups of low income people and involves Federal and State participation. The Federal Government sets minimum standards of service and pays between 50 and 83 percent of the total costs for States with approved programs. Two basic types of coverage are provided: coverage for all persons on categorical public assistance and coverage for the medically indigent. The latter are typically people who have too much income to qualify for categorical assistance but not enough for suitable health care. Benefits and eligibility requirements vary widely among the States.

The legislation allows for no help at all for those above the qualifying income; almost full medical coverage is provided for those below that level.

The bill provides only for the payment of medical care, not for increasing its availability.

The 1970 cost of the program was \$5 billion and it provided payments for 6 million individuals.

A really satisfactory evaluation of Medicaid has not been conducted but several things about it are clear.

1. Before Medicaid the services to the indigent were provided at below customary charges. Now, a substantial amount of Medicaid funds is being used to cover the full fees of the medical establishment. In effect this has amounted to a transfer payment to physicians and hospitals. Between 1965 and 1968 physicians' median income increased from \$28,960 in 1965 to \$37,620 in 1968.

2. The all-or-nothing characteristic of the program is recognized as absurd and inequitable.

3. The weaknesses of the existing system for delivering medical care to low income families were brought into sharp focus by the substantial rise in demand for service with little or no increase in the supply of providers.

4. Finally (and this conclusion is based on the least empirical information), there is little evidence that those covered by the program have received a higher quality of care than before, or that their level of health has significantly improved.

The American Public Health Association in a 1969 assessment concluded:

The Social Security Amendments of 1965 were a beginning response to the public demand for improved health services. Unfortunately the programs have not fulfilled the high expectations and purposes toward which they were originally directed.

Medicaid has been particularly inadequate in this respect. It has not only failed to correct existing deficiencies in the provision of medical

care to the needy but has perpetuated and accented many of the most glaring inequities and indignities.

It was as clear in 1965 as it is now that the answer to the most serious medical care problems of the poor would not be solved by providing a Medicaid card to indigents and full reimbursement to providers of service. If the greater availability of funds for services resulted in more medical personnel, then one could argue that Medicaid could ultimately, though indirectly, do the job expected of it. But medical services were and are extremely inelastic, particularly in places with a high concentration of low income families. More demand simply puts pressure on prices.

Since all of these conclusions could have been foretold at the time Title XIX was added to the Social Security bill, why weren't they?

I don't know all the reasons. Based on an extensive reading of the record and conversations with some of the key actors, I conclude that we have a poorly conceived, expensive answer to a real problem. Some of the reasons are:

First, administration officials and the congressional leaders involved in the legislation are trained, experienced, and interested very largely in income transfer and social insurance matters. Framing the medical care problem of the poor as a payment problem and not a delivery problem is an outgrowth of the personalities involved.

Second, for several years the main issue occupying both the key administration officials and the Ways and Means Committee was Medicare, not Medicaid. Medicaid was a version of the American Medical Association's (AMA) answer to Medicare. It was offered as a substitute for Medicare at the eleventh hour, and in an adroit

political maneuver the two were made into one package. This decision was made literally overnight.

Third, at the time of passage (indeed even now) there was very little systematic thinking on ways and means of improving the medical services available to the poor. The literature was lean and the experts were few.

Fourth, as with ESEA, there was very great pressure to get legislation—especially Medicare. The crush of the agenda did not make the deliberate consideration of the consequences of the legislation. (Incidentally, in 848 pages of House hearings testimony, Medicaid was discussed in only three. Not much for a \$5 billion program. It was estimated \$400 million a year when it reached its maximum.)

With both Title I and Medicaid, the legislative process failed to churn up the information which would have made for better legislation. A major cause in each case was the suddenness with which the issue was moved to high priority on the national agenda. Hasty political deadlines, insufficient information and analyses, boomeranging budgets, and mounting expectations from the public—all conspired to produce these distressing social panaceas.

Housing: The Old Order Changeth Too Little

Let us turn now to another Federal agenda item which has a much longer history. Insofar as they exist, failures of Federal housing programs do not stem from hasty consideration. The evolution of housing policy in this country is complex. I will draw just enough strands of the story to suggest some different problems in our decisionmaking system.

During World War II, home construc-

tion was virtually nonexistent except to provide shelter near war effort activities. Following World War II there was a widely recognized housing shortage in this country. Over 40 percent of Americans lived in housing which was structurally dilapidated or did not have plumbing—the definition of substandard. Housing was obviously a major problem to a large proportion of Americans.

One response was greatly expanded use of Federal Housing Administration-insured mortgage loans, a concept which was an outgrowth of the Depression. GI loans with no downpayment and Government guarantees were invented to make it easier for veterans to finance housing. The programs successfully facilitated the housing construction boom of the postwar years. Middle class Americans needed help and they got it.

The needs of low income families, who benefited not at all from the easing of mortgage credit, were the target of the Housing Act of 1949. This act proclaimed the goal of "a decent home and suitable living environment for every American family." With over 35 percent of American families still living in substandard housing, those who framed the act quite naturally thought of programs which would add housing units. A greatly expanded public housing program—800,000 units—was authorized during the next 6 years. The housing needs of the poor were to be met by this program and by the trickling down of units abandoned by the new-home-buying middle class. However, the public housing authorization was never translated into units, due largely to the Korean War and the Eisenhower Administration's lack of enthusiasm for public housing. (In fact, the 1949 6-year goal has been achieved only this year—22 years later!)

By 1968 about 20 percent of low in-

come families lived in substandard housing, about 70 percent lived in "standard" old housing, and about 5 percent in public housing.

In the Housing Act of 1968, attention was still focused on building or on major rehabilitation of older housing. A specific 10-year housing construction goal was set, including subtargets for low and moderate (subsidized) housing. If the goal were achieved by 1978, no American would be living in substandard housing. The battle against substandardness was being won. Public housing—and the trickling down process—was working as a strategy.

But the outlook in 1968 was encouraging only if measured against the housing standard set in the 1930's, when a standard unit was defined as one which had interior plumbing and was structurally sound—was not falling apart.

A large fraction of the so-called "standard" housing in which the poor of today live would simply not meet any American definition of the 1949 act goal of "a decent home." The structure provides only the first attributes of a decent home—windproof, dry, and floors that will not collapse. Other attributes of decent housing probably include such features as safety, heat when needed, reasonable quiet at night, adequate trash collection, a decent neighborhood, and so forth. Certainly by 1968 the structural standard was an anachronism.

However, the 1968 act did not attempt a finer definition of a decent home. Rather, it stayed with the earlier definition and, quite naturally, therefore, focused exclusively on adding new or rehabilitated standard units to the housing stock.

In 1949 when 35 percent of housing was structurally unsound, focusing national programs on building new units

made sense. A more refined standard probably would have been impractical for preferred program strategy.

However, by 1968 with only a fraction (about 5 percent) of housing units in need of replacement but with many more Americans clearly not housed *decently*, a finer assessment of the problem would seem to have been required.

The "standard" stock into which the poor have been moving during the past decade is depreciating at an extremely high rate, mainly because there isn't enough money in the budget of low income families for housing to be properly maintained. The result is that a great deal of basically good stock ceases to deliver adequate housing services. In many of our largest cities structurally sound housing stock is being abandoned—30,000 to 50,000 units yearly in New York; 20,000 in Philadelphia (in spite of extensive rehabilitation).

The individual abandonments are only the tip of the iceberg, for two reasons. First, before actual abandonment took place, those units were probably already delivering unsatisfactory housing to their residents. And, of course, on the verge of abandonment there may be 20 or a hundred times the number actually abandoned each year. Second, abandonments are caused by, and in turn contribute to, the downfall of a neighborhood, which leads to further deterioration in housing services and further abandonments.

By 1968, this process—the abandonment of structures capable of providing decent housing—was becoming evident to a number of housing experts. Substandard housing as such was not the major problem anymore and new construction not the only answer. We have now come to the point where a wide variety of alternative program strategies

needs further testing and exploration. These include the possibility of housing subsidies to low income families, new arrangements of ownership and tenancy providing an incentive structure more conducive to improving the housing, more efficient techniques to maintain the stock, and so forth.

To achieve an efficient balance between housing strategies, the cost and benefits of the construction strategy should be compared with programs which affect the existing stock, such as those suggested above. The outcome of such comparisons is by no means clear; their desirability seems to be beyond doubt.

Two mutually reinforcing reasons have caused our thinking about housing to be singularly unimaginative and anachronistic. First, tired blood on the official side. The prime movers simply have not had their thinking challenged in years. There is no history of analytical challenge in the old housing agencies of Government. Second, lazy thinking was reinforced by a powerful set of interest groups who saw their own advantage related exclusively to a housing policy which emphasized new construction.

These two factors combined to snuff out periodic reassessments of what the problem was and how it was changing.

There are signs that a fresh breeze is flowing through some corridors of the housing establishments. A recent report by a subcommittee of the House Committee on Banking and Currency raises many of these questions and puts forth some alternative housing strategies. It is too soon to say for sure, but on the face of it, this congressional initiative could usher in an era when today's programs will be designed around today's problems.

Environment: The Newest Priority

The education, health, and housing examples are primarily from the past. But the old pattern of Federal behavior is continuing. Major items for the national agenda are still accepted before we adequately consider what we realistically can accomplish with available resources and knowledge. Consider, for example, the Federal programs dealing with the environment, although many of the general points I shall make apply equally well to our recent efforts to reduce crime.

Without question the public is widely and genuinely concerned about environment. And with reason. Our increased population, industrial activity, and life style are placing increasing burdens on nature. The Federal Government has been eager to respond to the public outcry. Recalling the pattern of the other cases I have been discussing, it is the nature of this response that worries me.

The Government proclaimed the goal of a clean environment. To achieve it, a new Cabinet-level agency, the Environmental Protection Agency (EPA), and a large number of policymaking groups, such as the President's Environmental Council, have been established. Federal funding for all environmental activities has been increased enormously: The EPA outlay rose 96 percent, from \$695 million in fiscal 1971 to \$1.359 billion in the 1972 budget. Pollution control and abatement expenditures increased from \$751 million in fiscal 1970 to over \$2 billion in fiscal 1972, with the largest share of the increase designed for grants for municipal waste treatment facilities and local pollution control.

With such outlays, the public, including citizen conservation groups, will expect concrete, visible improvement in environmental quality. But can even the present massive Federal, State, and local

programs at best do much more during the next few years than merely prevent still further environmental deterioration? Probably not, primarily because major sources of pollution, such as automobiles and power plants, will increase fast enough to offset the beneficial effects of control measures. In my judgment, therefore, the public's expectation is not consistent with the ability of the Government to perform. The public has not been given a realistic evaluation of what is likely to be achieved. The August 1971 report by the President's Environmental Council displayed a refreshing degree of candor on this score.

I fear that many actions in pollution abatement have been precipitous. Is mercury more dangerous than lead, or SO₂ more dangerous than photochemical oxides? In some instances I believe we are proceeding with unsure knowledge on courses that will prove ineffective and costly.

Some of these costs stem from the establishment of standards. Society pays for them, not through public outlays as line items in the Federal budget, but through higher prices to cover increased production costs. The public should be prepared to bear the costs, but only if there is scientific and economic evidence that the standards will help protect the environment. If we are ignorant and uncertain today, instead of setting standards, we should explore a policy of taxing the polluters. Producers might even be given an option of adopting control measures or bearing the tax. This should tend to retard the rate of pollution increase by harnessing market incentives without committing the Nation prematurely to single—and often mistaken—views of which types of pollution are more serious.

Present ignorance about the environment and the efficacy of possible control

programs need not be prolonged if research is given its important role to play. However, developing a sensible research strategy will be blocked—denied support—unless we admit ignorance openly. Less than 10 percent of the current EPA budget is devoted to research and development. It seems to me that given our state of knowledge that percentage is too low.

Steps To Change the System

Through these examples I have tried to convey that we have not done well in formulating the approach to some of the problems on our national agenda. I have tried to suggest that somehow the system used for reaching these legislative judgments moved inexorably forward without the right questions being asked or the right information being brought to bear on the issues in question. Frequently the information was not even there. And often it wasn't there because we didn't try to get it. The resulting weakness in performance is costly not only in wasted resources and in unrealized goods, but, perhaps more importantly, in the loss of public confidence which remains crucial for continuing collective action.

If the future will demand more rather than less collective action, we must consider what can be done to make the machinery of Government work better.

I have no universal answer to the problems I have outlined, and I distrust those who think they do. But I do have some suggestions which would alleviate some of the weaknesses in the process.

There are insufficient links between the key decisionmaking points and the facts that should bear on the decision.

In each subject area there are several places where it is crucial to have what I

like to call bridging persons—persons who know what is known or how to find out and have access to those who are crossing the t's and dotting the i's of legislative or budgetary enactment. The checks and balances in the system help but they have not been sufficient.

Many such individuals now exist. They are absolutely invaluable. Without them, random events determine whether or not the light of truth finds its way into the law of the land.

They are as needed in the executive as in the legislative branches. Their number must be increased to cover each new area of intervention. If one of them had been on hand when Medicaid was being considered within the administration or in Congress, Title XIX would have turned out better; Title I of ESEA could have been much more productive than it has been; housing problems would have been looked at through a wider scope.

Our system is too closed for comfort.

Monumental decisions are made without sufficient airing, without adequate opportunity for diverse, much less iconoclastic, views getting a proper hearing.

John Kennedy's description of Senator Magnuson's style and impact gets the point across as well as anything I know:

He speaks in the Senate so quietly that few can hear him. He looks down at his desk—he comes into the Senate late in the afternoon—he is very hesitant about interrupting other members of the Senate—when he rises to speak, most members of the Senate have left—he sends his messages up to the Senate and everyone says, "What is it?" And Senator Magnuson says, "It's nothing important." And Grand Coulee Dam is built.

The practice on the part of some committees, and particularly the Appropriations Committees, of holding closed hear-

ings is inconsistent with bringing a full, penetrating light to legislative and budgetary review.

Only slightly better is the frequent holding of hearings which are little more than rituals for anointing decisions already made. They are one-sided presentations at which administration witnesses and committee members (perhaps under the thumb of a forceful chairman) seem intent only on avoiding questions that could raise legitimate doubts about the proposals at hand.

At times, however, a congressional committee conducts a hearing that truly airs a controversy. The best minds on the topic, in and out of Government, have their say. Committee members play devil's advocates to clarify difficult points. Illuminating facts as well as ideas are brought into the discussion by good committee staff work. To resolve difficult points, new witnesses are called. This is what hearings in the Senate and House generally could and should be. During the past decades many of the legislative fiascos that slipped through in the dead of night or in pro forma hearings could have stopped right at this juncture.

Where were those who felt the school system did not have the necessary abilities when Title I passed? Where were the authorities on health delivery system when the AMA answer to Medicare became a supplement to it?

Further ventilation has its price—it can slow things down. It can decrease the possibility of political compromise. And it will be hard to achieve because few in the system really want it.

How can it be encouraged?

The press, radio, and television have often helped—particularly the press, with its combination of immediacy and in-depth reporting. It is a powerful instrument for reaching the attention of

legislators and administrators. In my judgment it has not been used as effectively as it might in improving the legislative process.

Each newspaper's geographical region of influence and each magazine's clientele has its own experts and critics whose views should be given a full airing. The advocacy posture taken by editorial writers and columnists is most useful, not only for the positions argued, but for its help in stimulating a full-scale public debate. Outside of Washington and New York, journalists generally appear less sensitive to the impact of their local newspapers on elected officials. They thus miss the opportunity to affect new laws and change old ones through the kind of comprehensive treatment of particular issues that I have been urging.

The greatest potential for changing the system rests with concerned citizens. Ralph Nader led the way in the early sixties in organizing citizens to make their views known to the Congress and other appropriate organizations on consumer problems. Common Cause has followed Mr. Nader's initiative in forming a citizens' lobby on a variety of issues. Early returns suggest a productive role for lobbies committed to the public interest.

But Congress also needs its own research backup. Without it, Members and their committees are overly dependent on administrative agencies for information and analysis. The lack of it helps to explain the shallowness of many hearings, and also to explain why so many Federal programs, such as those in housing or health care for indigents, have results that utterly surprise those who supported the original legislation. The unhappy surprises leave the public increasingly disenchanted with Government and the democratic process. Even

selfishly, Congress needs to restore public faith by acquiring for itself a strong, permanent investigative and knowledge-building capability.

The feedback system works poorly.

The improvement of legislation and administration depends on how sensitively the legislative and executive branches adjust to the known strengths and weaknesses in a program. Good new legislation is based on a grasp of what is actually going on under current programs.

Executive branch evaluation is barely getting off the ground; it needs nurturing and good central quality control, which it is not getting. It still relates too poorly to central decisions and is frequently misplaced in the organizational structure.

Congress, in addition to research back-up, should also have its own independent program assessment capability. The start given GAO in this regard is promising.

Gathering knowledge to understand our present problems and immediate opportunities is not enough in itself; also critically needed is the further investment for converting knowledge into successful programs and for maintaining a broad research base to insure the success of these and other programs.

We are deluding ourselves if we think that we can remedy our social problems without investing in the answers. We did not expect that in defense or in space efforts. But in the social arena—except for major funding in the battle against disease being carried out by the National Institutes of Health—the research budgets are puny. Some have taken this as evidence that the Nation does not want to solve the domestic ills. My own opinion is that this underfunding reflects a popular but mistaken view that research

is best suited to technical rather than human problems. In fact, most of our domestic problems require a combination of technological, behavioral, economic, and political research efforts.

Domestic research, then, should be funded at a substantial level. The pattern of research and development in defense need not be followed, but the portion of defense spending set aside for research—a whopping 10 percent—is instructive.

The flow of this money to scholarly pursuits should be steady, and the tendency of purse-string holders to limit studies only to "what really counts" must be avoided. Most certainly some trivial, frivolous, ill-conceived projects will be undertaken. But if "what really counts" were known in advance, research would not be necessary. To increase the state of knowledge significantly requires a wide range of efforts sustained by funding commitments for many years.

Most problems jump across traditional discipline lines. Research that is to become directly useful to program formulation simply must follow the problem wherever it leads.

The National Science Foundation (NSF) Research Applied to National Needs Program is a promising beginning. The new thrust of the Office of Economic Opportunity toward social experimentation is another.

Promises of performance continue to outstrip capabilities.

It is time to take show business out of public discussions of existing or proposed programs. More candor will have benefits.

We need a restoration of reality to the national debate. We must discover mechanisms that assure the simultaneous public discussion of ways of achieving

goals along with the establishment of the goal. Our error has been to permit Federal performance to fall short of the expectations formed during the process of setting the goal. If we can achieve a better balance between goal setting and goal fulfillment, I think we will have gone a long way toward overcoming the feeling of malaise about Government.

Conclusion

In summary, we have a very demanding national agenda which is bound to make great demands for collective action. The demands will be placed on all levels of government.

In acquiring the agenda we have oversimplified our problems and oversold the prospect of quick solutions—and we have paid the price. Since we have not delivered in area after area, the people have increasingly come to distrust the substitution of new agendas and new solutions for the old ones. It has become and will continue to be more difficult to bring together the consensus we need to do the things we will have to do. If those of us who care don't get busy in improving Government performance, we will have less and less chance to perform at all.

Let me end with what another Frenchman said—this time about us.

They [the Americans] have all a lively faith in the perfectability of man; they judge that the diffusion of knowledge must necessarily be advantageous and the consequences of ignorance fatal; they all consider society as a body in a state of improvement, humanity as a changing scene, in which nothing is, or ought to be, permanent; and they admit that what appears to them today to be good, may be superseded by something better tomorrow.

That was De Tocqueville in 1848. There is enough truth remaining in his

observation to sustain my confidence that we will have something better tomorrow.

Discussion

Am I correct in my conclusion that at least in your book there isn't a whole lot of change between 1965 and the present time as far as forward planning in connection with the legislation of programs? Do you see any big improvement in techniques, or do we still have a long way to go?

Mr. Gorham: I don't see great improvement. I think in the early 1960's there were some very good starts that spluttered and didn't get full backing. Those starts have not been picked up again. For example, the concepts behind Planning-Programming-Budgeting (PPB) are absolutely essential and there's just no substitute for them. I think they have had only limited support and consequently produced limited results.

Another thought that came through to me in connection with your remarks was that you were somewhat critical of Congress, the way they hold their hearings, and their failure to really go into proposals. Would you say that an equal share of that blame belongs to the executive branch or the sponsor of the programs for not thinking them through before they are proposed to Congress?

Mr. Gorham: I certainly think a share of the blame does go to the executive branch; however, Congress responds to what it is presented. What Congress wishes, Congress will get. If Congress will not consider proposals that are not thought out, it will not get proposals that are not thought out.

Going back to PPB for just a minute. I think there was an important tactical

error made in introducing PPB. PPB should have been sold to the Congress. If it had been sold to the Congress and Congress set new standards for the kind of information that was acceptable to it, then the executive agencies would develop that information. In the absence of such standards, inadequate support of existing and proposed programs was presented.

Some of the mayors of the big cities, as well as medium size cities, have said frequently that one of the troubles of trying to solve social problems on the national level is that the solutions come fragmented. These mayors said they brought these problems—integrated housing, education, Federal care, etc.—to Congress but the Congress would not respond on revenue sharing and other sorts of integrated solutions. Do you agree with these mayors that perhaps we could cure our problems a lot better if we listen more to some of our mayors?

Mr. Gorham: The mayors have a point. Certainly the problems all come together in a city. That's where they all are—that's where housing and environment and health and education all come together. However, even their ability to perceive those problems as a whole does not impress me. Although the problems do come together in cities, the way that cities manage their affairs is, in a sense, in the same compartmentalized, functional way that the Federal Government perceives them. The Model Cities Program, when it was invented, was an attempt to provide at a neighborhood level a bringing together of programs in a rational way. That was a Federal attempt.

Virtually all cities function very much like the Federal Government does—in a very compartmentalized way. The communication between functional areas is very limited. In many cities, it's harder

to get messages between the health and housing agencies than between the Departments of Health, Education, and Welfare (HEW) and Housing and Urban Development (HUD) here. So that whereas the problems do come together in cities, their ability to implement programs on an integrated basis is very, very weak. Their ability to know what to do is fully as weak as the Federal Government's.

In this matter of Medicaid you said that it increased something like 10-fold. Who was responsible for that increase? Is it poor planning and poor thinking out of the difficulties by HEW?

Mr. Gorham: Medicaid was costed in the middle of the night—I mean, the middle of the night. The package was delivered to HEW at 5 o'clock one afternoon and at 9 o'clock in the morning there was a vote on that bill. The estimates were very difficult to make. This is a State-Federal program, and HEW had to guess which States would take it, what kinds of programs they would have, who they would define as medically indigent, etc., etc., etc. The parameters of the problems were not very well understood. They assumed that the States would pick it up pretty much the way they picked up the Kerr-Mills bill which was its predecessor. At that time, only 17 States were into Kerr-Mills, and they had defined it in a very limited way. HEW assumed that the same thing would be true in Medicaid. They assumed wrong. So the estimates of program participation and content were way off.

That's the first thing. The second thing is that medical prices between then and now have gone up about twice the rate of the overall Consumer Price Index since 1965.

Even if all information resources could

be put in place, do you think the legislation would be better?

Mr. Gorham: Yes. There are only two kinds of answers to that question. The one answer is "Yes" and the other answer is "No" and lasts about a half hour. I'll try an intermediate one.

There's a large price that society pays for being a democracy and having a political process which works in the way it does. We have a lot of "irrationality" built into our system. That's the price we have to pay for having the kind of system we have. But over and over that price which we chose to pay, we're paying even more for the way in which we go about living with our political system. I think that we could do a lot better within the political system if we just knew more. I think we can know more.

You mentioned the Model Cities Program—a forerunner of revenue sharing. I'd like you to share your views of the success or the lack of success you see in the Model Cities Program.

Mr. Gorham: A short answer is not fair to too many people, but I'll try it. I think the original concept of Model Cities was a very attractive one. It was never tried. The original concept, then called the Demonstration Cities Program was going to pump a very large amount of money into several neighborhoods in the country to see what could happen through integrated planning on a neighborhood basis. It never happened because political forces took hold of it and forced its immediate introduction into first 75 cities and then to 150 cities. They didn't add much money. In the end, each was dusted with a modest amount of cash.

The level of resources is so different from what was originally contemplated that you can't really comment on whether the original idea was right or

wrong. So far, I would say it has had very limited success.

The good thing about revenue sharing is that the cities—many of them—are in trouble. I see revenue sharing as a financial bailout. I don't think it is going to solve any other problems.

In assessing evaluation activities to date, have the returns been commensurate with the investment?

Mr. Gorham: I can't provide a full assessment because I haven't seen all the evaluation activities to date. I think that in many fields, e.g., biomedical research, in the beginning one pumps in a lot more money than you have talent. It starts the engine. Jim Shannon who ran the National Institutes of Health had that philosophy. He said, "There are no tissue researchers." Put a lot of money in grants for tissue research and pretty soon you get tissue researchers. After a while they begin sorting each other out. Some of them get good.

We've begun to pump some money into evaluation. That was a necessary first step. Evaluation is going to get better with more and better people in it. Up to now its success has been very limited. Evaluation is very difficult. It involves building on a very fragile base of understanding of social interactions. I think some of the beginnings have been promising. I admire some agencies who have not spent money when they couldn't get a promising group to do the evaluation. I think we're in the beginning of the evaluation era and it's too soon to judge it.

I was intrigued by your statement to the effect that Congress gets what Congress wishes. Obviously Congress has wished a very large strategic defense program and a space program. Why don't you believe that Congress has

wished a large research and development program on social programs?

Mr. Gorham: I think if they had wished it, they would have gotten it. They've been getting a little bit in the past: some funds for research in HUD, some technology funding in NSF. I don't think these programs really came forward because Congress wished it. I think those were executive branch suggestions. I would say that generally Congress has not wished it, but they have been willing to go along when the executive branch proposed it. As far as research itself is concerned, they have moved very, very hesitantly in terms of developing capabilities which are responsive and responsible directly to Congress.

In view of your statement that part of the problem with our lack of solutions is that we don't know what to do, how can the General Accounting Office help in controlling the amount of resources that are being wasted? How can we supply answers where there are none?

Mr. Gorham: I think the traditional mode of GAO does provide limited relevance in the context of my talk. However, the mode that was begun by the request to evaluate the Economic Opportunity Act seems to me was the door opener for the Office to provide Congress with a great deal of information which is relevant to the context that I'm talking about. Existing program performance against congressional intent is a very fine way of understanding what the next steps ought to be. If we are doing

well and you can find that we are, the Congress can be encouraged to do more of the same. If we are doing badly, Congress can urge or require the executive branch to look elsewhere for solutions.

Robert F. Keller, Deputy Comptroller General: I think your remarks were particularly appropriate for those of us in GAO because, as you know, in the last 3 or 4 years we have put a great deal more emphasis on evaluation and taking a look at programs results, as distinguished from purely looking at the legality and properly accounting for the funds. I think it's something that GAO can play a very important part in. It's been recognized by the Congress and by the Legislative Reorganization Act of 1970 which gave us specific tasks in looking at the results of ongoing programs. I think that's where the real need is today—at least in my experience and in working with Members of Congress. It is the type of information they're looking for. They're seriously concerned about it, because when they establish certain programs, set up certain objectives, they want this feedback. Is it working out?

I don't think you necessarily have to know or have a recommended cure. A sure-fire one is pretty hard to come by. I think that by disclosure that this program is not working, is not achieving the results (if it's possible to measure them), then at that time, the Congress and the administration both can examine what they have and what have been the results. Perhaps collectively, some changes can be brought about for improvement.

The Need of the Congress for Assistance

Congress is in a period—perhaps unparalleled in our history—when it must sit in judgment on the merits of admirable programs which are far too numerous and far too complex to be digested and comprehended in the time available to us. We are presented with much learned and persuasive testimony on the vital need of the numerous proposed programs and the great benefits that will ensue from them. We are also often presented with equally learned and persuasive testimony against these same programs.

In more placid years, we were able to moderate these adversary positions, extract from the crucible of ideas of the substantive issues, and discard the specious and self-serving ones. Today we are often nearly overwhelmed by the volume and complexity of the matters we must consider, and we feel the need for expert, professional judgment from an independent and objective source.

In enacting the Legislative Reorganization Act of 1970, Congress gave emphasis to this need and recognized the Comptroller General and the General Accounting Office as a means of fulfilling it.

Senator Robert J. Dole

Congressional Record

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John W. Kendrick
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Dr. John W. Kendrick is a Professor of Economics at The George Washington University. He is also a member of the senior research staff of the National Bureau of Economic Research and a consultant to industry and Government.

He is no stranger to the Federal Government, having served as an economist with the National Resources Planning Board, 1941-43. After 3 years in statistical control in the Air Force, he was a business economist with the Department of Commerce, 1946-53. While at the National Bureau of Economic Research in New York, he wrote Productivity Trends in the United States which established him as "Mr. Productivity" both nationally and internationally. He is widely known in the United States and overseas for his work in this field. Dr. Kendrick lectured on productivity in the U.S.S.R. at the invitation of the Soviet Academy of Sciences.

Since 1956, he has been a professor at The George Washington University and has continued to be active as a consultant to Government agencies, including being on advisory committees to the Bureau of the Census and the Office of Science and Technology. In the early 1960's, Dr. Kendrick headed a task group to study the feasibility of establishing productivity measures in five Federal agencies. The resulting report, published by the Bureau of the Budget in 1964 entitled Measuring Productivity of Federal Government Organizations, was widely distributed.

The Construction and Use of Productivity Measures for Federal Agencies

In 1970, the Joint Economic Committee urged GAO to assess the possibilities for extending the use of productivity measurement in the Federal Government. In response, arrangements were made to conduct such a study jointly with the Office of Management and Budget and the Civil Service Commission under the Joint Financial Management Improvement Program. This study is now in process. Dr. Kendrick points out that productivity measures for governmental organizations are desirable, needed, and beneficial, and they are not costly to develop and maintain.

Before becoming a professor I had worked in the bracing breezes of bureaucracy for some years. So I know something at first hand about the difficulties of, and the needs for, continuing management efforts to improve the operating efficiency of Federal agencies. This does not mean that I am one of those critics who habitually carp about Government waste and inefficiency. In my observation, Government workers are just as intelligent and industrious, on average, as those in private industry. But the critics do have a point when they note that Government operations are not subject to the disciplines of the market, especially the need to control costs so that the bottom line of the profit and loss statement may be written in black ink instead of red. Consequently, public administrators have had to develop a variety of techniques for promoting efficiency and technological advance.

The more significant contributions by Federal administrators to management science and practice have been detailed

in a recent collection of essays edited by my colleague at George Washington University, Professor David S. Brown, entitled *Federal Contributions to Management*.¹ It is to one of those areas I am addressing myself today, the measurement and analysis of productivity—that is, the relationship of output to associated inputs, in real terms, through time.

As I shall develop later, changes in productivity ratios reflect primarily technological and organizational improvements, and thus provide a measure of the success of management in its most distinctive function—innovation. As such, productivity measures can be quite useful in stimulating investments designed to reduce unit costs and providing a means for evaluating their results. Further, historical and current productivity estimates provide a useful background

¹ For complete citations of this and other works referred to in this letter, see the Selected Bibliography on pp. 184-85.

for projecting input requirements and costs, both in budget making and in longer term projections.

Significant progress in measuring productivity has been made by a few Federal agencies—but I believe that productivity measurement systems could profitably be extended to many additional agencies and/or to some of their organizational components.

Historical Perspective

By way of historical perspective, Federal statistical agencies pioneered in developing productivity estimates for private industries, particularly during the 1930's when there was concern with alleged "technological unemployment." Productivity estimation was made a regular part of the program of the Bureau of Labor Statistics in 1940. In the late 1940's the Bureau began a program of plant-level productivity measurement and comparative analysis. Since then, many private firms have inaugurated productivity measurement systems and found the estimates of value in management evaluations and projections. (See J. Kendrick and D. Creamer, *Measuring Company Productivity: Handbook with Case Studies*.)

Although there had been a few attempts at productivity measurement in Federal Government agencies themselves—notably in the Social Security Administration—it was first in 1962 that a concerted effort was commenced, under the leadership of the then Bureau of the Budget. Bureau officials, in collaboration with technicians from five agencies, carried out pilot studies for the agencies, or selected organizational components, developing historical series for a succession of postwar years, ending with 1962. The studies were published in 1964, under the title *Measuring Productivity of Federal Government Organiza-*

tions. I shall refer to the methodology and findings of that landmark study later.

The study was important in demonstrating the feasibility and usefulness of adding productivity data to the management information systems of many governmental organizations. It has been estimated roughly that probably three-fourths or more of the activities of Federal Government civilian agencies are amenable to this type of measurement. After publication of the 1964 report, measurement programs were begun in a number of additional agencies. But in 1965 the sharp step-up in national security expenditures, and the diversion of qualified personnel into the burgeoning planning-programming-budgeting (PPB) system development, aborted the further expansion of productivity measurement systems at the Federal level—although some progress has been made in State and local governments, spurred in part by the Budget Bureau report.

The present time seems auspicious for resumption and extension of productivity measurement systems. I am indeed pleased that the GAO, in concert with the Office of Management and Budget (OMB) and the Civil Service Commission, plans to proceed towards this objective during coming months. My purposes today are to explain the significance of productivity advance in the private and public sectors, and the nature and meaning of productivity measures; to review some of the major aspects of measurement methodology, illustrated by case studies; and then to discuss some of the major practical and important uses to which productivity measures may be put.

The Concepts of the Production Function and Productivity

In any organization the volume of production of goods and/or services is a

function of the volume of inputs, or cost elements, employed, and of the level of technological and organization efficiency of the producing unit. Thus, $O = f(L, K, T)$, where O =outputs, L =labor inputs, K =capital and other nonlabor inputs, and T =level of technological and organizational efficiency. This formulation immediately suggests that changes in technological and organizational efficiency may be measured by changes in the ratio of the physical volume of production to the physical volume of inputs.

As illustrated in chart 1 (p. 188), the values of output, input, and the productivity ratio are expressed in terms of index numbers, set at 100 for the base period, year I. Note that when output is heterogeneous, as indicated here, the physical units of each type are multiplied (weighted) by their average prices (or costs) per unit in the base period, in order to get quantity aggregates in the base and given-year(s). The same is true of inputs; that is, man-hours would be weighted by average hourly pay, and the other input units by their prices, in the base period in order to get real input aggregates in constant prices for successive periods.

Now, productivity may be said to have increased when more output may be obtained for the same tangible inputs, the same output for fewer inputs, or more generally, when output increases in relation to input. In the chart, we show that between periods I and II, output increases 20 percent with 20 percent fewer inputs, so that productivity rises by 50 percent.

As managers, you are well aware of the sources of productivity advance. Most important over the longer run is technological progress, as a result of innovations, which involve investments in improved machinery, equipment, and structures,

improved labor skills, and improvements in organization. In the short run, changes in rates of utilization of facilities and of labor potential may be significant. In the longer run, in addition to innovation, there may be economies of scale as an organization or sector grows, as a result of increasing specialization of men, equipment, and organizational units, and, as certain overhead functions may be spread over increasing numbers of units of output.

Distinctions Between Productivity and Related Measures

It is desirable at the outset to distinguish productivity from certain related types of management measures. In the first place, note that productivity measurement starts where the market system of the private sector and planning-programming-budgeting systems of the public sector leave off. That is, productivity measures take, as given, the output and input mixes of the producing organization, industry, or sector in successive periods, and focus on changes in efficiency in producing that which managements have decided to produce.

In the private sector, market prices determine the allocation of resources among competing uses, with each firm of an industry producing particular outputs up to the point where the added costs equal the additional sales receipts—which results in production in conformity with the community's preferences (given workable competition).

In the public sector, a more complex system of cost-benefit analysis is required. As in productivity measurements, estimates are needed of the outputs required to perform the functions assigned to various agencies by the political authorities who interpret public demands for governmental services. Estimates of costs

per unit are also needed, so that in each period unit costs can be compared with expected benefits to the community in order to determine the composition of programs, program elements, and specific outputs that will maximize the total benefits obtained from the available resources or inputs.

In both the private and the public sectors, input prices are known, which enables managers to select from among available technologies that combination of inputs which minimize costs of producing the units of the various types of outputs.

Thus, in both productivity and PPB systems, it is necessary to measure the numbers of units of the various types of outputs, and their unit costs, and the number of units of the various types of inputs, and their prices. But in productivity measurement, it is not necessary to estimate benefits since results of the decisions of the politicians and public administrators in choosing the output mix is accepted. Likewise, the input mix is accepted as given.

It should also be noted that in productivity analysis, unit costs and input prices need be determined only in the base period for weighting purposes (since the movements of aggregate output and input reflect changes in physical volumes, not in prices), whereas in PPB changes in unit costs and input prices must be known from year-to-year as inputs into the decisionmaking process.

Next we must distinguish between productivity and work measurement. Work measurement indicates the relationship between the time actually required by individuals or groups to produce units of work, and "standard" time that should be required, based on engineering studies or statistical norms. With given technology and equipment, it is usual for the efficiency of individuals and groups to im-

prove in relation to the norms during the earlier phases of the learning experience; and then gradually to level off in later states. Each time technology and equipment are changed significantly, new norms are established, and new work measures are compiled.

In contrast, productivity measures reflect not only improvements in efficiency with given technology, but more importantly in longer time periods they reflect the effects of technological changes themselves on output-input relationships. Note also that work measurement is a more specific management tool, that may be applied to various component groups within an organization; whereas productivity estimates indicate the efficiency of the management of the organization as a whole. Further, the basic units in work measures may relate not only to final outputs of an organization, but also to the internal intermediate outputs that facilitate the production of its "final" outputs whose clients are other organizations or the public.

It may also be useful to distinguish between estimates of productivity and unit costs. In real terms, unit costs are merely the reciprocal of the corresponding productivity ratios. With reference to chart 1, for example, instead of showing productivity increasing 50 percent, we could show unit real costs decreasing by one-third, to 66.7 in period II (that is, in index numbers, $100 \div 150 = 66.7$; the same result is obtained by dividing input by output: $80 \div 120 = 66.7$). If we are interested in unit costs in current dollars, we must multiply the unit real costs by an index of the prices of the inputs.

In our example, if input prices rose by 50 percent between periods I and II, then the 50 percent productivity advance would be exactly offset, and unit costs in period II would remain at the 100 level of period I ($66.7 \times 150 = 100.0$). This points

up an important consequence of productivity advance—that it at least helps to offset inflationary pressures from the cost side.

Finally, let me make clear the distinction between measures of “total productivity,” which we have been discussing, and “partial productivity” ratios obtained by relating output to only one category of inputs, such as labor. The familiar “output-per-man-hour” variety of productivity measure is useful, but it must be understood that in addition to reflecting changes in unit-labor requirements it also reflects substitutions of other factors, such as capital equipment, for labor. Input substitutions also affect the other partial productivity ratios. Only by relating output to *all* associated inputs can the *net* saving of real-cost elements per unit of output be measured and thus the change in productive efficiency generally. Nevertheless, in private and public services, in which labor is frequently by far the most important cost element, output-per-man-hour measures are good proxies for total productivity. Even when total productivity measures can be constructed, it is desirable also to estimate the partial productivity ratios, so that the areas in which cost savings have been achieved can be pinpointed.

Productivity Trends in the Private Economy

Before considering measurement methodology, with particular respect to the public sector, you may be interested in a quick summary of productivity trends in the private economy, based on a new study I have just completed for the National Bureau of Economic Research. As shown in chart 2A (p. 189), real private gross national product (GNP) since the late 19th century has grown at an average annual rate of almost 4 percent (if one leaves out the stagnation period

of the 1930's). Labor and capital inputs together grew at a rate of close to 3 percent a year up to World War I, but thereafter at a slower rate of around 1½ percent. Thus, total factor productivity, shown in chart 2B (p. 190), grew at an average annual rate of a bit over 1 percent up to World War I, accounting for less than one-third of overall economic growth. After World War I, the rate of productivity advance accelerated sharply to about 2.3 percent a year, accounting for more than half of economic growth, and for almost *all* the increase in planes of living as measured by real product per capita. That is, since inputs increased but little more than population, which grew at an average rate of 1½ percent a year, the growth of real product per capita of about 2½ percent a year was only slightly above the growth in total factor productivity.

The numbers for the period 1948–69 are shown in table 1 (p. 193), first column. The second figure indicates a continued trend-rate of growth in total factor productivity of 2.3 percent a year. Note that due to a continued substitution of capital for labor at 2.4 percent a year, output per man-hour rose at the average rate of 3.2 percent a year—the famous non-inflationary wage-guidepost number of yesteryear.

Before going on to the subperiods, let me emphasize that the estimates for the private economy are, in effect, weighted averages of estimates for the component industries. Some industries, particularly those which are technology intensive, show high rates of advance in excess of 4 percent a year: for example, airlines, pipelines, communications, electric and gas utilities, and chemical manufactures. Others showed increases well below average. The private services sector, for example, appears to have increased its productivity by little more than 1 percent a year, less than half the rate of increase in pri-

vate industry as a whole. This raises the question as to whether there is less potential for technological advance in services compared with commodity production and distribution, or whether too few resources have been devoted to promoting technological and organizational advance in the services area. (It is probably some of both.)

As shown in table 1, there is considerable variation in rates of change in productivity among subperiods, as measured between peak years of the business cycle. These are frequently associated with variations in rates of change in output. Thus, in the first subperiod 1948-53, both real product and productivity showed above-average rates of gain. In the next two subperiods between 1953 and 1960, there was a retardation in the growth of both real product and productivity. The best gains of all were shown during the long expansion of 1960-66. But in the final subperiod 1966-69, when real product grew not far below its secular rate, productivity advance retarded drastically to 1.1 percent a year, on average. And in the recession year 1970, preliminary estimates indicate that there was no increase in total factor productivity, and even output-per-man-hour grew by less than 1 percent. While productivity advance typically slows down in recessions, the decline in 1970 was more than is usual.

Concern with the apparent slowdown in productivity advance since 1966 was one reason for the establishment of a National Commission on Productivity in June 1970. One of the four working groups of that Commission, which is headed by George Shultz, Director of the Office of Management and Budget, covers the topic of Government activities—not only those designed to promote productivity advance in the private economy, but also those designed to promote productivity within the Federal Government itself. I might also mention that the

President's Advisory Council on Management Improvement is likewise interested in promoting productivity measurement and improvement in Federal agencies.

The plain fact of the matter is that we do not really know the extent of productivity advance in the Federal establishment, apart from the several organizations mentioned earlier. Yet as shown in table 2 (p. 193), governments absorbed about one-quarter of the total GNP in 1966 (and a bit less in 1970 due to the drop in national security outlays), about half of which was Federal Government purchases. In terms of factor income (which leaves out purchases from the private sector), Government absorbed more than one-sixth. Obviously then, improvements in Government productivity can make a significant contribution to overall economic growth and also help mitigate inflation with respect to tax rates.

Measurement Methodology

In discussing methods of estimating productivity, with particular respect to Government, I need not go into detail. The Budget Bureau study, *Measuring Productivity of Federal Government Organizations*, describes methodology in much detail, both generally and specifically, for the five organizations that participated. But I should like to review some of the main points with regard to measuring output, and the inputs, in real terms, which are the component variables of productivity ratios.

Output Measurement

In the private service industries, two approaches to output measurement are possible: (1) measurement of the numbers of units of output of the various types, which are combined by application of prices for each type of service output in a base-period or (2) "deflating"

(i.e., dividing) current dollar expenditures by a price index reflecting price movements of the major types of services produced. Since general governments do not sell services by the piece at a specific price, only the first approach is open. And even there, instead of using prices as weights, we must use unit costs as an approximation to the values of the various types of public services.

During the pilot study of productivity, we thought one advantageous byproduct was that it forced public administrators to define the functions of their organizations in measureable terms—that is, to specify the programs, program elements, and individual types of outputs by means of which the organization fulfilled its mission. By now, this exercise has become more or less routine in many agencies, and output measures are regularly compiled as part of program budgeting, work measurement, or other phases of management information systems. For productivity purposes, however, it is necessary to select the *final* outputs, as noted above, and to aggregate, using unit costs of a relatively recent base year. The year 1967 is now designated by the Office of Statistical Policy of OMB as the recommended base-period for index numbers compiled by Federal agencies.

One difficult problem in measuring outputs is adjusting for quality change. This is usually done by adjusting units of the new quality service by the ratio of its unit costs to the unit costs of the previous quality service, at the time of changeover. For example, assume that processing tax return forms of various types is an important part of the output of the Internal Revenue Service (IRS). Assume further that a new Revenue Act results in a more complicated Form 1040 for reporting the individual income tax. As a result, average processing time on this form is increased by 5 percent. Then we would say that each form of this type which is pro-

cessed represents 5 percent more output, and we would adjust the new data for comparability with the old by dividing by a factor of 0.95. In some cases, the output and derived productivity measures may be supplemented by recourse to separate quality measures. In the IRS case, the "tax gap" is such a measure, showing the ratio of tax collections to estimated taxes owed.

Before looking at some examples of output measures, it is only fair to note that not all economic activities can be measured adequately. For example, no good method of measuring outputs of research and development work has been devised. But most outputs of most Federal civilian agencies are routine or standardized enough, or are susceptible to adjustment for quality change, so that useful output and productivity estimates can be prepared, in my judgment.

Now, to look at some cases: table 3 (p. 194) shows the outputs of the Division of Disbursement in the Treasury Department. The outputs are simple, consisting of two types (since the abandonment of cash payments): the numbers of savings bonds issued and of checks issued. An interesting feature of this case, however, is that it was possible to estimate output per employee by method used in issuing checks, as shown in chart 3 (p. 191). Thus, the increase in output per employee in the Division may be analyzed in terms of increases in efficiency in the use of particular methods and as a result of shifts of output from lower productivity methods, such as addressing machines, to higher productivity methods, such as semielectronic or electronic data processing (EDP).

Table 4 (p. 194) shows the outputs of the Department of Insurance in the Veterans Administration. Of the eight outputs which were identified, the servicing of policies in force is by far the most

important, cost-wise. As in the Division of Disbursement, adoption of EDP led to major productivity gains.

A more complex set of outputs is shown in table 5 (p. 195) on the Post Office Department. Fourteen types of mail have been distinguished, which are measured in terms of numbers of pieces carried or pounds and cubic feet in the case of heavier items. In addition, seven types of services are shown at the bottom of the table for a total of 21 outputs. The cost ascertainment system of the Department provided estimates of unit costs in the base period, 1962, by which the various outputs were combined.

In the Systems Maintenance Service of the Federal Aviation Agency (FAA), as shown in table 6 (p. 196), outputs were measured in terms of "standard facility years." Within the three major groups—air navigation, air traffic control, and nonaeronautical—are 83 smaller groupings and 318 classes and subclasses of facilities. Separate measures were prepared for the six FAA regions, permitting comparisons of productivity levels and changes. It was subsequently discovered that the output measures chosen did not admit of significant productivity advance. If output had been defined in terms of the volume of air traffic aided and controlled by the system, substantial productivity increases would have been registered.

In the Bureau of Land Management of the Department of the Interior, outputs were developed for 17 programs, as shown in table 7 (p. 197). This was the only one of the five pilot studies for which productivity measures were not completed. It was found that although current outputs could be measured, it was not possible to devise adequate measures of the investment outputs, such as increases in timber stands and range cover.

Inputs

Methodology for measuring inputs can be reviewed quickly. The inputs, and the methods for measurement, are essentially the same in the public as in the private sector, except for the weighting of capital inputs.

It is customary to measure labor inputs in terms of man-hours worked (rather than paid for). If hours data are not available, average employment, preferably full-time equivalent employment, may be used. Man-hours or employment are weighted by average earnings (including fringes) in the base period. If feasible, it is desirable to weight labor input by grade or other classifications of employees, so that shifts among skill or experience categories will be reflected in the labor input measures.

Purchase of intermediate inputs of materials, supplies, and services from outside industry are much less important in the service sectors than in commodity production. These inputs can usually be measured easily. Quantities can be weighted by base-period prices. Or, purchases can be deflated by an index of the prices of the chief intermediate inputs. It should also be noted that real intermediate purchases, instead of being treated as inputs, may be deducted from gross output to yield net output or real value added estimates. In this case, net output is compared with the labor and capital factor inputs only, in "total factor productivity" measures.

Capital input measurement is more complicated, but I shall skip the complications. Basically, one estimates the real stocks of structures, equipment, land, and inventories used by an organization, and weights by base-period rental rates. If rental rates are not available, rentals may be constructed as the sum of imputed interest on the capital investment, depreciation of facilities, and mainte-

nance costs. A special problem in Government productivity estimation is that not all capital costs are charged to the agencies using the capital goods in present Federal accounting practices.

Productivity Indexes

Once the estimates of output and input have been completed, the former are divided by the latter and the ratios expressed as index numbers of productivity. Or inputs may be divided by outputs to yield unit cost measures, as shown in chart 4 (p. 192) for the Division of Disbursement. The partial ratios are also interesting in showing where the economies in unit costs have been achieved. Thus, in the Division of Disbursement case, almost all the increase in total productivity was due to labor savings. Inputs of intermediate products and of capital grew more or less in line with output as indicated by the horizontal movement of these two partial unit cost measures.

Before leaving the case studies, it is interesting to compare rates of change in the productivity indexes for the four organizations whose studies were carried to completion. As shown in table 8 (p. 198), the results are mixed, with two organizations showing rapid productivity advance and the other two little or no advance.

The Budget Bureau report noted that the two progressive organizations were characterized by: (1) radical changes in production technology, (2) relative uniformity, rather than diversity, of outputs, and (3) comparatively few locations. Contrary to the findings of private industry studies, there was *not* a positive correlation between relative changes in productivity and in output. Four studies do not provide a good basis for generalization, of course. Once the base has been broadened, further useful generalization will undoubtedly emerge.

Uses and Benefits of Productivity Measurement

This brings us to the final topic. Of the various uses and benefits of productivity measures, I believe that one of the most important is that such measures increase "productivity-mindedness" of public officials, focusing attention on the need for innovations to reduce unit real costs, and providing a means for evaluating the results of investments undertaken towards that end.

Cost-reducing innovations usually stem from applied research and development programs, both formal and informal. It is surprising that so little research and development has been undertaken within or for Government, with the objective of developing cost-reducing equipment or procedures. Agency managers and engineers should also, of course, work with suppliers of equipment or intermediate goods, and construction contractors, in stimulating them to develop products that contribute to greater efficiency of governmental operations. This was an important factor in the Division of Disbursement's rapid technological progress. Government programs for training and retraining employees in the use of increasingly complex technologies is also an important aspect of productivity-improvement programs.

The important thing is that each year, in each agency, cost-reducing projects be developed, and the necessary investments be provided in the budgeting processes for those projects which are economic, i.e., which promise a net rate of return greater than the cost of financing. To cite an example, the Kappel Commission report on the organization of the Post Office Department brought out that a prime reason for the poor productivity performance of that Department was the inadequate and erratic na-

ture of the research and development and tangible investment programs.

I would hope that expansion of productivity measurement systems would help to systematize capital budgeting procedures within Government, comparable with the procedures used by large firms in progressive private industries. Further since productivity indexes measure cost-savings that are achieved, they provide a means of following up on agency investment programs to see if the anticipated savings have actually been realized.

Productivity indexes have other management control uses, which I can mention only briefly. Poor productivity performance in a given quarter or year raises a red flag, signaling the need for investigation to pinpoint the possible causes. Further, differences in levels or changes in productivity among like organizations, such as regional offices of a given agency (such as the Veterans Administration), can serve as a spur to the managers of the lagging offices, and promote the transfer of technology from the more efficient to the less efficient operations.

The other chief set of uses has to do with budgeting and longer term projections of input requirements and costs. That is, given projections of activity levels or outputs of an organization, productivity projections result in estimated input requirements. To obtain cost estimates, the input projections are multiplied by input price forecasts.

The historical productivity estimates furnish a useful background for projections. But past trends must be modified on the basis of known technological changes which are expected to take place during the forecast period.

Not only are productivity estimates helpful to an agency for budgeting, but

they may be, and have been, used by OMB in budget review. Needless to say, congressional Appropriations Committees are also very much interested in evidences of improvement in agency efficiency.

For all these reasons, I am convinced that it will be desirable to extend productivity measurement systems to all Government organizations where they are applicable, but have not yet been tried. It is not costly to develop productivity measures and even less so to maintain them. If they produce only a small fraction of the benefits claimed for them, they will have more than paid their way!

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Discussion

What is the relationship between accrual accounting and productivity measurement?

Dr. Kendrick: Accrual accounting provides the appropriate data base for productivity estimates. The outputs of a period (including the real net change in finished and in-process inventories) must be related to the real costs incurred during the period. The timing of payments may differ from the accruals, and it is the latter which is relevant.

Why is there a hesitancy on the part of Federal managers to apply productivity measurement?

Dr. Kendrick: Many public administrators do not understand the nature, construction, and uses of productivity measures. Others, while they may understand productivity measurement, fear that the measures may be misused by, for example, the setting of unrealistic goals.

What is the difference between productivity measurement and work measurement?

Dr. Kendrick: Work measurement compares actual performance with per-

formance standards under a given technology. Productivity measurement does not require standards, but compares outputs with inputs in successive time periods, thus reflecting the effects of changing technology on output-input relations, as well as the changes in efficiency under given technological and organizational conditions reflected in work measures. Work measures are more limited in scope, in that they do not reflect technological change, and they are usually applied to component groups, not to a complex organization.

Would you explain the problems of adequate incentives or disincentives in the use of productivity measurement?

Dr. Kendrick: In the private economy, the incentive of widening profit margins by reducing unit costs more than competing firms is the chief impetus for the innovations that underlie productivity advance. In the Government sector, where there is no profit motive nor income statement, productivity measures help make managers more conscious of the need to cut unit real costs by innovations in the technology and organization of production. Perhaps bonuses to Government managers, based on some fraction of the cost reductions associated with productivity advances, would enhance the motivations to increase productivity. They would certainly help neutralize the bureaucratic disincentives to productivity advance epitomized by "Parkinson's Law."

How did you determine that 75 percent of the civilian agencies could use productivity measurements?

Dr. Kendrick: This estimate was based on a review of the full thousand-odd page U.S. budget document. I determined that approximately three-fourths of Federal civilian Government employees work in agencies which have

performance measures covering at least two-thirds of their activities.

What effect do quality factors have on productivity measurements?

Dr. Kendrick: As is true of output measures generally, for private industries as well as for Government organizations, it is difficult to adjust adequately for quality change. Where quality changes are associated with changes in unit real costs, adjustments can be made. In other cases, the output and productivity measures should be supplemented by qualitative measures. For example, the average time required to move the mail from sender to recipient for comparable distances over successive periods would be one index of the quality of postal service. It is important, of course, to insure that outputs and productivity are not being increased at the expense of quality deterioration.

What success has there been in obtaining output measures for social programs?

Dr. Kendrick: There has been much interest in recent years in the development of social indicators and expanded socioeconomic accounts. The Federal statistical agencies are cooperating with social scientists in this effort, but so far progress has been slow because of many difficult conceptual and statistical problems involved. The recent HEW publication *Towards a Social Report* was a useful progress report on the subject.

What is the applicability of productivity measurements to administrative processes?

Dr. Kendrick: By measuring changes in productive efficiency of an organization as a result of innovation—the most distinctive function of management—productivity indexes also measure management efficiency in this regard. They do not, however, measure the efficiency

with which routine administrative processes are carried out. They do help focus attention on capital budgets—including intangible investments in research, development, education, and training—de-

signed to reduce unit real costs and thus increase productivity. They also provide a means of following up on investments by measuring the cost reductions actually achieved.

The GAO Function

While millions of Americans have heard of the GAO, their knowledge of the organization often scarcely goes beyond the name.

In a democracy the GAO could be compared to the press, serving as a balance against unlimited government, an independent auditor of power.

As Justice Sutherland once wrote about the press, the GAO, too, serves "as one of the greatest interpreters between men and government and the people." Its function is to hold for congressional examination and scrutiny the operations of government.

Senator Stuart Symington

Congressional Record

June 14, 1971

CHART 1

ILLUSTRATIVE PRODUCTIVITY CALCULATIONS

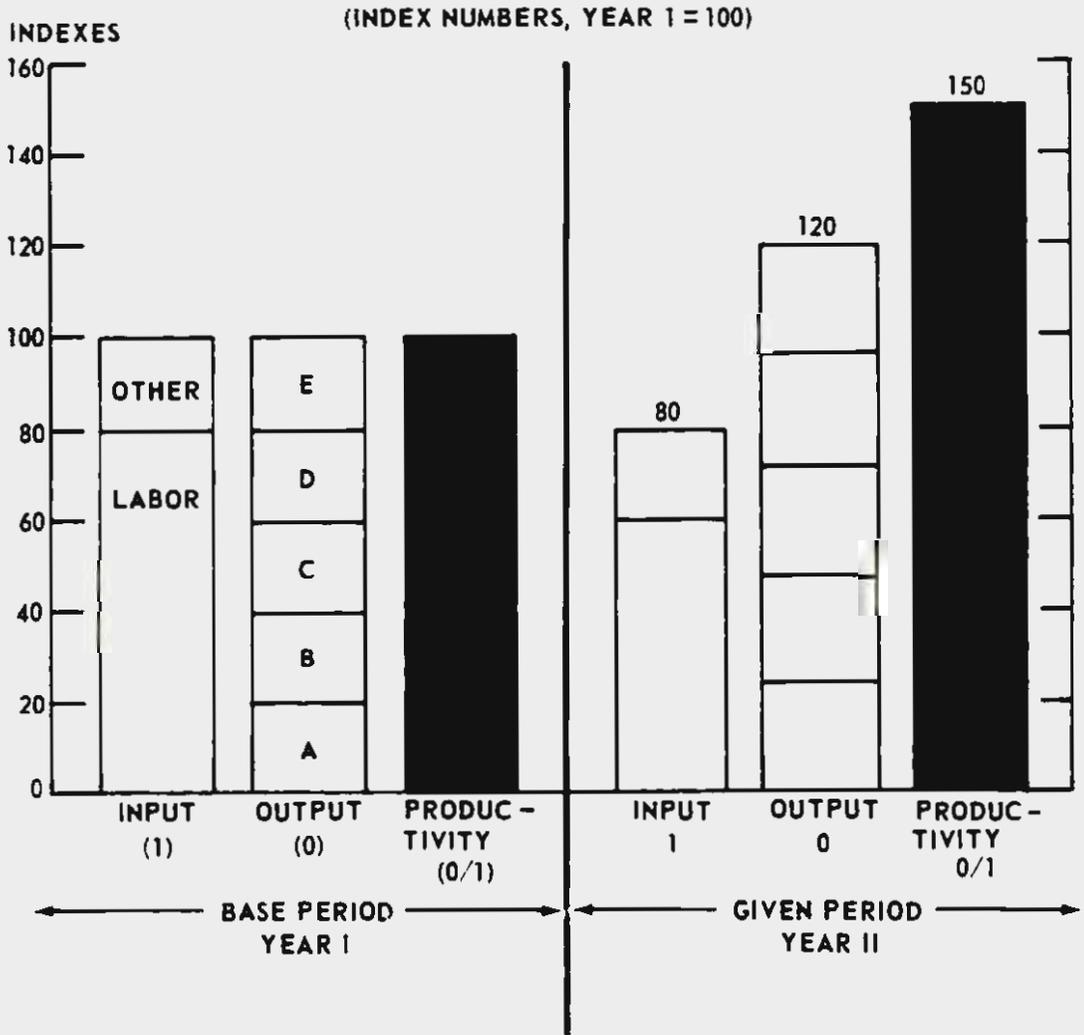
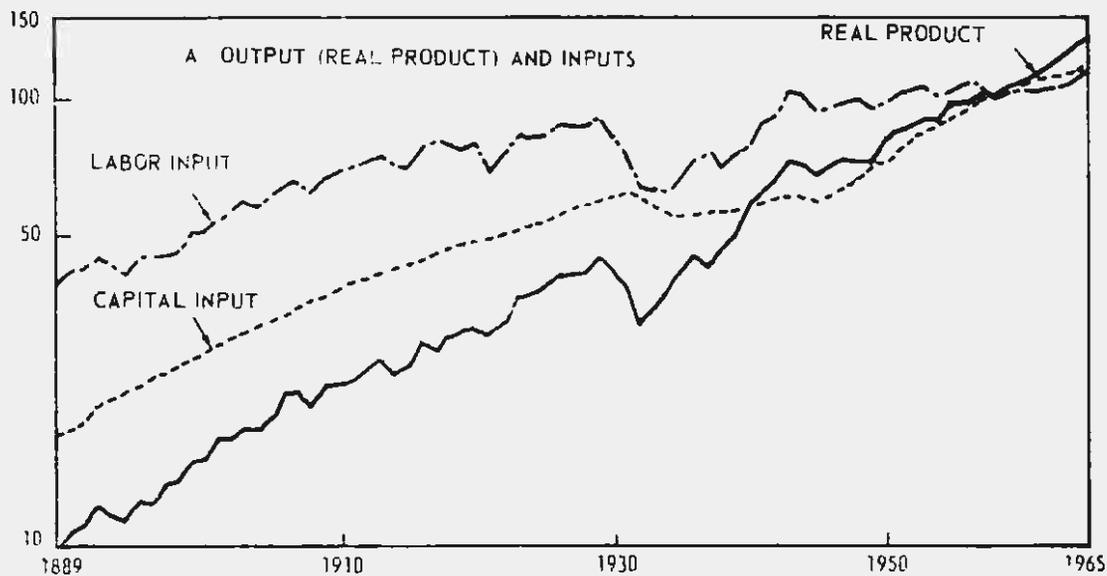


CHART 2 A

A CENTURY OF U.S. ECONOMIC GROWTH OUTPUT, INPUTS & PRODUCTIVITY RATIOS U.S. PRIVATE DOMESTIC ECONOMY

INDEX NUMBERS, 1889 - 1965 (1958 = 100)

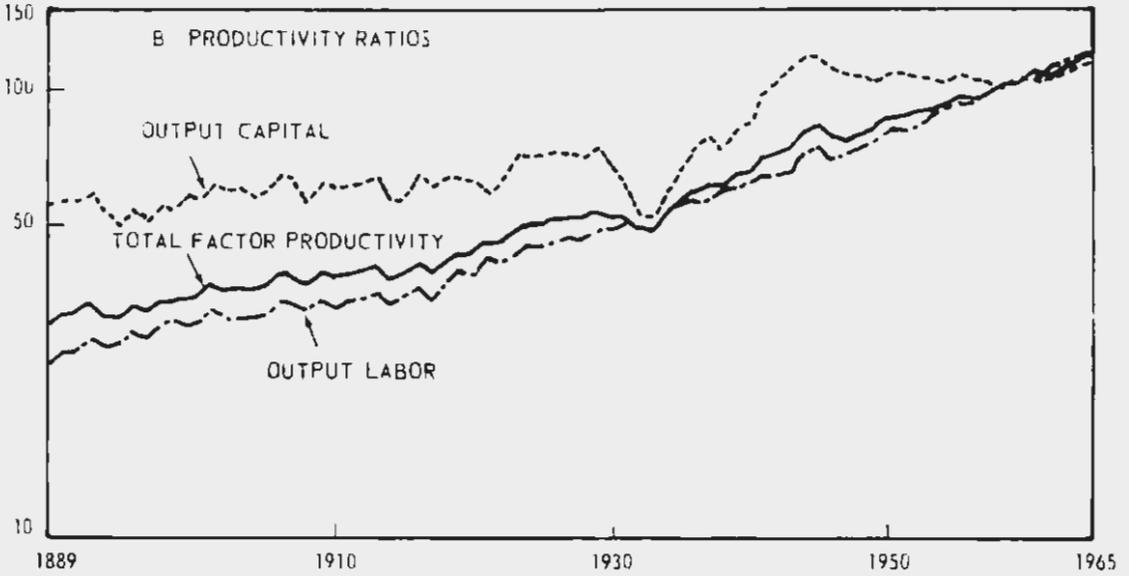


Source: John W. Kendrick, *Postwar Productivity Trends in the United States, 1948-1969* (New York, National Bureau of Economic Research, in press, 1971).

CHART 2 B

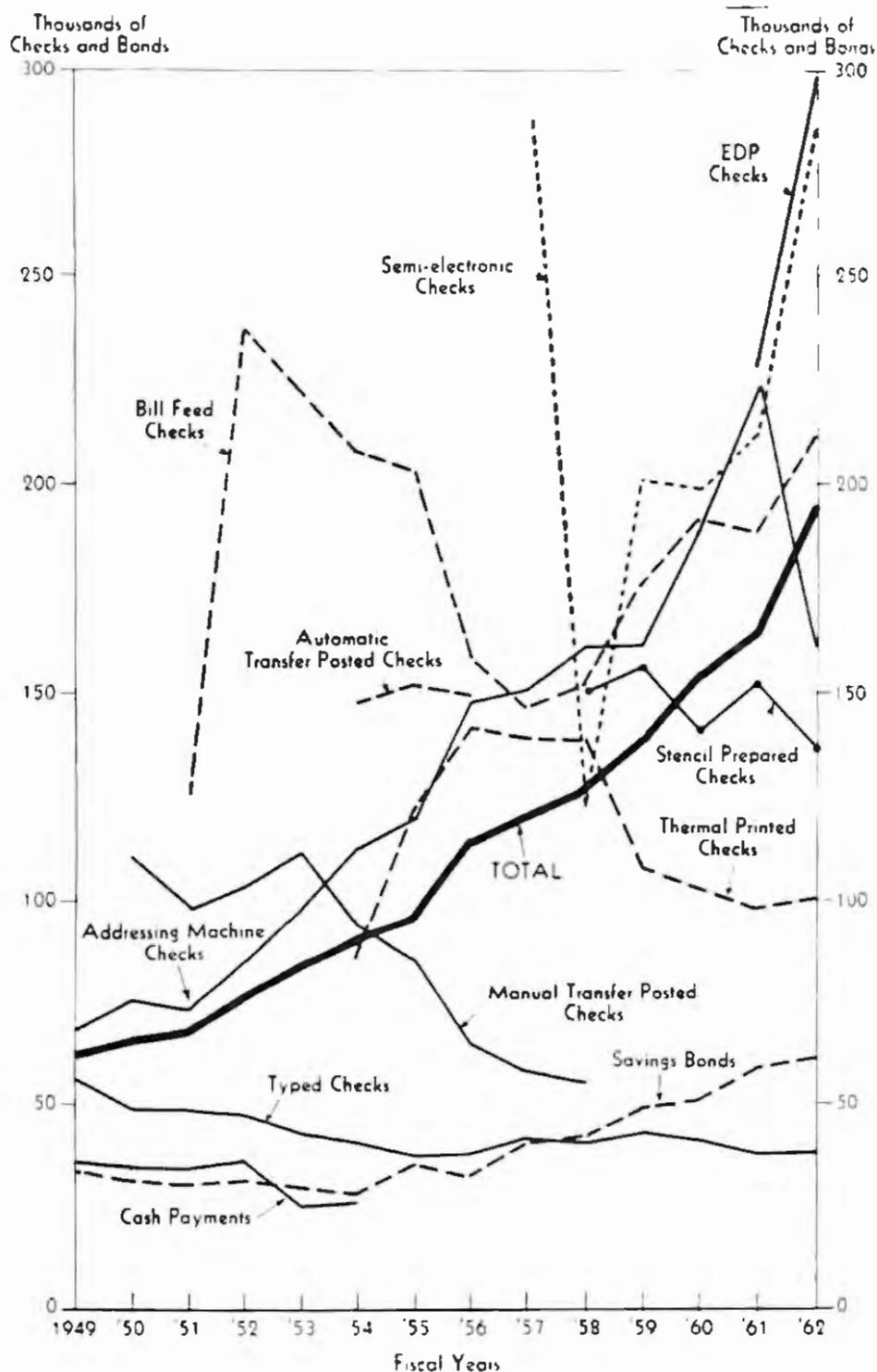
A CENTURY OF U.S. ECONOMIC GROWTH OUTPUT, INPUTS & PRODUCTIVITY RATIOS U.S. PRIVATE DOMESTIC ECONOMY

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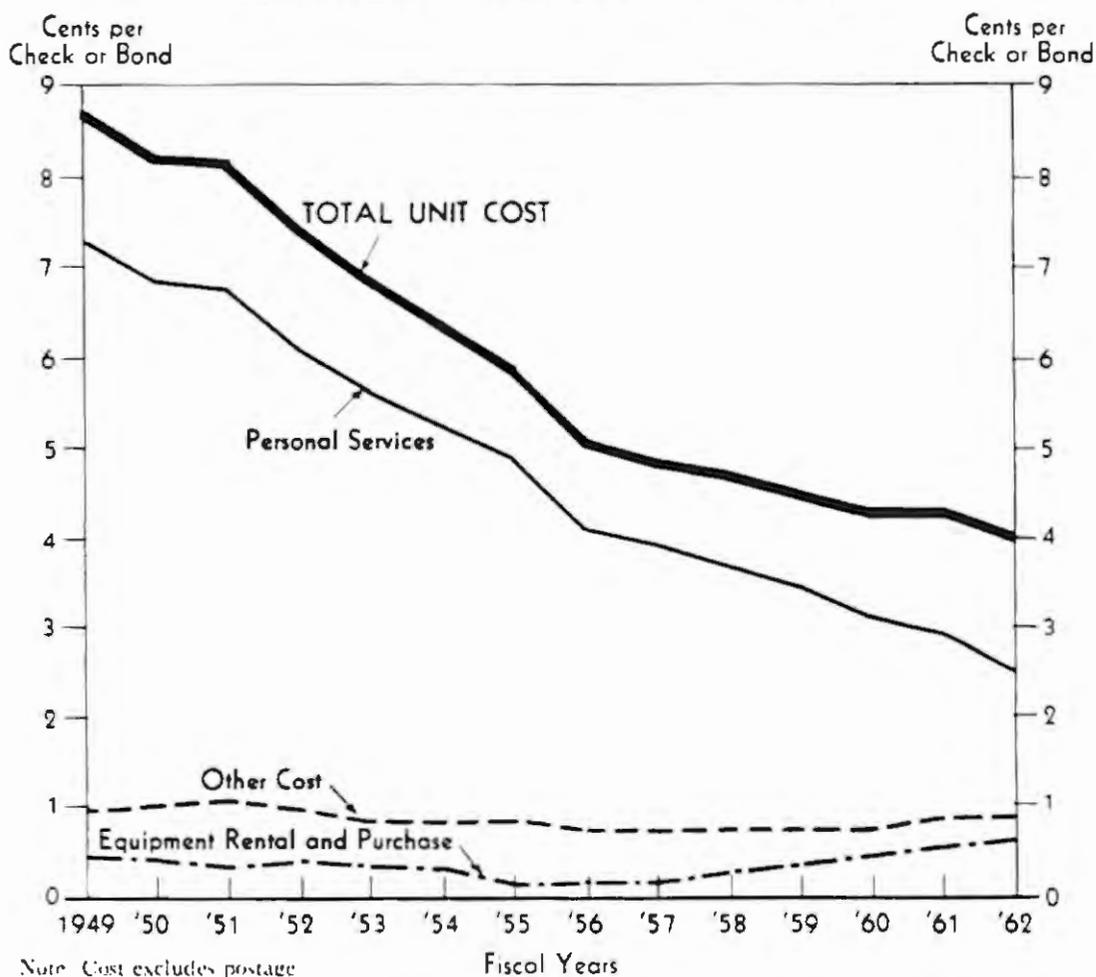
Source: John W. Kendrick, *Postwar Productivity in the United States, 1918-1969* (New York, National Bureau of Economic Research, in press, 1971)

CHART 3
 Division of Debitment
CHECKS AND BONDS PER MAN-YEAR BY PROCESS OF PREPARATION, 1949-1962



Source: *Measuring Productivity of Federal Government Organization* (U.S. Bureau of the Budget, 1964), p. 120.

CHART 4
 Division of Disbursement
UNIT COST OF PROCESSING CHECKS AND BONDS
 IN CONSTANT 1962 DOLLARS, 1949-1962



Source: *Measuring Productivity of Federal Government Organization* (U.S. Bureau of the Budget, 1964), p. 121.

Table 1

TOTAL AND PARTIAL PRODUCTIVITY RATIOS

Private Domestic Economy

Percentage Rates of Change, 1948-69, by Subperiods

	1948-69	Subperiods				
		1948-53	1953-57	1957-60	1960-66	1966-69
Private domestic business economy						
Real product	3.9	4.6	2.5	2.6	5.2	3.4
Real product per unit of						
total factor input	2.3	2.8	1.9	2.3	2.9	1.1
Labor-weighted man-hours	2.9	3.5	2.6	2.9	3.2	1.6
Unweighted man-hours	3.2	4.1	2.7	2.6	3.6	1.9
Capital	0.3	0.3	-1.2	0.3	1.8	-1.0
Capital labor ratio	2.4	3.2	3.8	2.6	1.3	1.0

Source: John W. Kendrick, *Postwar Productivity Trends in the United States, 1948-1969*. New York, National Bureau of Economic Research, in press, 1971.)

Table 2

THE ROLE OF GENERAL GOVERNMENTS IN THE U.S. ECONOMY, 1966

	In billions	Percent distribution
Total gross national product*	\$799.8	100.0
Government purchases of goods & services	206.7	25.8
Federal	107.0	13.4
State and local	99.7	12.4
Total gross national income originating*	734.4	100.0
General government	126.5	17.2
Compensating of Government employees	76.6	10.4
Imputed interest on public capital	18.3	2.5
Imputed depreciation allowances	31.6	4.3

* Including imputed interest and depreciation on public capital. Source: Office of Business Economics, plus imputations as estimated by John W. Kendrick.

Table 3

**DIVISION OF DISBURSEMENT: NUMBER OF SAVINGS BONDS ISSUED, CASH
PAYMENTS, AND CHECKS ISSUED BY METHOD OF PREPARATION**

(Selected years; in thousands)

	Fiscal years	
	1950	1962
Savings bonds issued	2,486	3,999
Cash payments	664	0
Checks issued (by method)		
Typed	51,204	12,984
Addressing machine	129,921	8,837
Manual transfer posted	13,823	0
Bill feed	0	107,199
Automatic transfer posted	0	0
Thermal printed	0	3,029
Semielectronic	0	67,941
Stencil	0	3,552
EDP	0	114,120
Total	198,098	321,661

Source: *Measuring Productivity of Federal Government Organizations*, Table 21, p. 108. Annual data are shown in the original table.

Table 4

VA DEPARTMENT OF INSURANCE: VOLUME OF OUTPUTS, BY TYPE

(Selected years; in thousands)

	1955	1962
Average number of policies in force	6,469	6,052
New policies issued ("service disabled" and "other")	212	4
Selected terminations:		
Death	20	27
Lapse	335	91
Cash surrender and matured endowment	30	15
Disability claims:		
New claims	29	20
Review decisions	65	58
Loan applications	97	116

Source: *Measuring Productivity of Federal Government Organizations*, table IV -1-1, p. 183. Annual data are shown in the original table.

Table 5

POST OFFICE DEPARTMENT, QUANTITIES OF OUTPUT BY CLASS OF MAIL SERVICE

FISCAL YEARS 1953 and 1962

(Selected years; in millions)

Class of mail and service	Measure	1962	1953
1st-class mail	Pieces	35,332	27,257
Domestic airmail, letters and cards	do.	1,513	1,412
Domestic airmail, parcels	do.	32	18
2d-class mail	Pieces	8,090	6,762
	Pounds	2,908	2,497
	Cubic feet	133	113
Controlled circulation publications	Pieces	165	56
3d-class mail	do.	17,837	12,210
4th-class mail—"books" (educational and library materials)	Pieces	153	68
	Pounds	636	300
	Cubic feet	35	15
Other 4th class mail	Pieces	871	970
	Pounds	4,938	6,197
	Cubic feet	508	541
International surface mail	Pieces	287	336
International airmail, letters and cards	do.	218	148
International airmail, parcels	Pieces	1.3	0.86
Penalty mail	do.	1,877	1,658
Franked mail	do.	111	49
Free-for-blind mail	do.	6	2.7
Registry service	Items	55	90
Certified mail service	do.	31	0
Insurance service	do.	165	198
Collect-on-delivery service	do.	24	49
Special delivery service	do.	92	114
Money order service	Money orders	252	370
Postal savings service	Certificates	2.7	20

Source: *Measuring Productivity of Federal Government Organizations*, table 45, pp. 208-209. Annual data are shown in the original table.

Table 6

SYSTEMS MAINTENANCE SERVICE, GROWTH OF OUTPUT BY MAJOR TYPE OF
FACILITIES, 1958-62

	Standard Facility Years	
	Fiscal year 1958	Fiscal year 1962
Air navigation:		
VHF omnidirectional facilities	403.12	610.53
TACAN and distance measuring equipment	123.31	592.49
Low-frequency ranges and fan markers	294.71	262.26
Homing beacons	59.82	68.72
Instrument landing systems	285.06	374.67
Approach light systems	43.52	187.32
Beacons and fields	120.83	60.50
Group I—subtotal	1,330.37	2,156.49
Air traffic control:		
Towers, stations, and centers	1,709.27	3,888.62
Radar systems	239.23	884.37
VHF and microwave links	113.59	481.35
Direction finders	31.26	49.55
Teletypewriter systems	126.01	206.81
Engine generating equipments	52.34	46.87
Group II—subtotal	2,271.70	5,557.57
Nonaeronautical:		
Housing, utilities, and miscellaneous	318.30	386.21
Group III—subtotal	318.30	386.21
Total	3,920.37	8,100.27

Source: *Measuring Productivity of Federal Government Organizations*, table 58, p. 264. See Appendix VI-I for a complete listing of all types and classes of facilities.

Table 7

**BUREAU OF LAND MANAGEMENT, ESTIMATED DISTRIBUTION OF TOTAL¹
MANHOURS WORKED, BY PROGRAM AND TYPE OF OUTPUT, FISCAL YEAR 1962**

Program and type of output	Man-hours allocated to current outputs	Man-hours allocated to investment outputs
Lands and mineral program total	1,803,541	681,731
Agricultural cases	163,085	n.a.
Exchanges	195,702	do.
Sales of land	271,808	do.
Selections	184,830	do.
Land title cases	163,085	do.
Leases and permits (land)	108,723	do.
Mineral entries	179,077	do.
Oil and gas leases (on land)	358,155	do.
Oil and gas leases (OCS ²)	71,631	do.
Material sales	35,815	do.
Leases, permits, licenses (mineral)	71,631	do.
Forestry program total	664,589	791,861
Timber offered for sale	531,671	n.a.
Timber cut	132,918	do.
Cadastral surveys for other agencies total	77,036	0
Miles of survey line	30,814	0
Monuments set	46,222	0
Range program total	557,897	1,156,053
Recreation program total	1,548	6,194
BLM total	3,104,612	2,635,539

n.a. = Not available.

¹ Excludes 10,036 man-hours devoted to fighting of fires.

² Outer Continental Shelf.

Source: *Measuring Productivity of Federal Government Organizations*, table 65, p. 326.

Table 8

AVERAGE ANNUAL GAINS IN PRODUCTIVITY OF FOUR FEDERAL GOVERNMENT ORGANIZATIONS

(Percent per year)

Organization and period	Average output per man-hour	Average output per constant dollar of payroll cost	Average output per constant dollar of total cost
Department of Insurance, Veterans Administration, 1955-62	9.8	8.3	6.9
Division of Disbursement, Department of the Treasury, 1949-62	9.4 ^a	8.6	6.1 ^b
Post Office Department, 1953-62	0.3	0.2	0.4 ^c
Systems Maintenance Service, Federal Aviation Agency, 1958-62	-4.0	0.1	n.a.

^a Output per man-year

^b Excludes postage

^c Includes personal services, transportation, and space occupancy costs

n.a.—not available

NOTES: The data shown in this table do not warrant comparisons of management effectiveness in individual organizations because these estimates of actual productivity gains realized do not make any allowance for possible differences in the potential for productivity improvements that existed during the period.

Period averages were calculated by the compound interest formula (annually compounded) applied to the values of the productivity index in the first and last year of the period.

Source: *Measuring Productivity of Federal Government Organizations*, table 1, p. 14.

Economy and Efficiency in Public Expenditures

As a member of the Joint Committee for Reduction of Federal Expenditures, my interests for years have coincided with the basic duty laid on the General Accounting Office by law to seek out means of achieving greater economy and efficiency in public expenditures. Those interests, of course, are equally vital to me in my capacity as chairman of the Ways and Means Committee—since a dollar saved is a dollar earned.

The Comptroller General's annual reports to the Congress consistently show substantial measurable savings that are directly attributable to the General Accounting Office's work. * * *

Aside from the reported measurable savings, the record shows that there are many other substantial economies as a result of the General Accounting Office's work. These take the form of desired results achieved at reduced cost, more or better results for the same money, and reduction or elimination of planned activities. They are based on actions taken by the Congress or its committees that reflect information and recommendations provided by the General Accounting Office, and by agency heads as a result of General Accounting Office recommendations. * * *

On the other side of the coin, the General Accounting Office has been instrumental, through its reports, in unearthing for the Congress information regarding literally billions of dollars of: underestimates of program costs; cost overruns; unnecessary costs borne by the Government; revenues foregone; and uneconomical, inefficient, and ineffective use of resources in terms of accomplishing legislated objectives.

Congressman Wilbur D. Mills
Chairman, House Ways and
Means Committee

Congressional Record

June 28, 1971



Hugh Sidey
Chief, Time-Life
Washington News Bureau

Hugh Sidey is a fourth-generation journalist. His great-grandfather founded the Adair County Free Press, a weekly paper in Greenfield, Iowa, subsequently owned and operated by his grandfather and now run by his father and brother.

Mr. Sidey learned the mechanical end of the business first—feeding presses, setting type, and sweeping floors—when he was in grade school. Later he sold ads, wrote stories, took pictures, and made the photo-engravings. After a hitch in the Army at the end of World War II, he completed his education at Iowa State College.

Then began the classic journalistic migration from the heartland to Washington. Mr. Sidey started on the Council Bluffs (Iowa) Nonpareil, where he covered every type of story, then moved across the Missouri River to the Omaha (Nebraska) World-Herald, reporting from city hall for the next 4 years.

His next move was to a 2-year stint with Life in New York, then to Time magazine in Washington, D.C. He remained in Washington, as White House correspondent and deputy chief of the Time-Life Washington News Bureau. On January 1, 1969, he became chief.

In 1960 Mr. Sidey traveled with presidential candidate John F. Kennedy on his campaign trail and was one of the reporters in Dallas with the presidential party 3 years later when President Kennedy was assassinated. During the summer of 1963, Mr. Sidey's book, John F. Kennedy, President: A Reporter's Inside Story (Atheneum) was published and quickly made the best seller list.

His latest book, A Very Personal Presidency: Lyndon B. Johnson in the White House (Atheneum) was published in July 1968.

Improving Public Understanding of Governmental Affairs

Public and congressional interest in the work of the General Accounting Office has increased with expanding Government and increased budgets. Although GAO does not promote its reports with the press, radio, and television, it has undertaken to make those reports communicate better and to make GAO more accessible to the media. Both steps have created an awareness and interest in GAO far beyond that of earlier days.

There is, however, a substantial need for improved communication between all Government and the public. Agencies such as GAO and such outstanding journalists as Mr. Sidey can play an important role in meeting this need. Mr. Sidey emphasizes that Government is people who work for people. He suggests that the key to achieving better understanding of governmental affairs is to keep the human factors in the forefront in governmental reports and releases and in press stories.

I feel it is a special honor to be asked in on your Golden Anniversary to talk about my favorite subject, the public understanding of governmental affairs, and perhaps leave with you a few thoughts about how to improve it.

I am somewhat of an expert in the matter of 50th anniversaries. As a boy on my father's weekly newspaper out in Iowa I was, at quite an early age, taught how to use a camera and assigned to funerals, weddings, school plays, and assorted other social happenings. One of my most frequent subjects was golden wedding anniversaries. Out in Iowa for reasons not yet fully fathomed, according to Dr. Paul McCracken, Chairman of the Council of Economic Advisers and a fellow Iowan, if you live through your first year you tend to live forever. Even more mysterious, when I was a boy those

people who got married tended to stay married. So I was blessed with a rich trade in golden wedding anniversary pictures. Once or twice a week or even more often I would load up my huge camera and be off for somebody's tidy front parlor. After taking two pictures—sometimes four, if the couple was of unusual prominence—I would have a piece of cake and a little punch and leave feeling full and warm and quite gratified that people and institutions endured so long that they wanted the event recorded.

I did not bring my camera today. There will be no cake or punch. But I must say that I come here and hopefully will leave with a gratified and warm feeling that I have participated once again in something that has endured for 50 years—a wedding of sorts of the GAO to

superb public service. My congratulations to you all. The institution, to the best of my knowledge, has come through these years without any serious blemish on its record. It is bigger and stronger than ever, fully a part of legislative Government and a permanent resident in this city ready for another 50 years. If I am around for that one, I very much want an invitation and I will bring my camera.

The most important thought in this meeting is that it was called in the better interests of the United States of America. I know that may not seem to be a very startling concept—so terribly simple—but it is, in an unusual way, quite remarkable in today's environment. We have for the moment forgotten that we live in an adversary culture, or that we are to be friendly enemies, or that one of us is an "effete" snob, or that the best way to look at a bureaucrat is down. We are here in an atmosphere of civility, something Chief Justice Burger pleaded for so brilliantly just this week, and this is a rich treasure itself.

Fine Tuning Public Understanding

It does in its way illustrate a point which I would like to begin with. There is probably far more understanding of American government by the American people than you or I realize. The people—"peepul," as Lyndon Johnson used to say—are remarkable. Wherever I go they raise the darndest questions, about people and policy and about institutions. So when we talk about improving public understanding of government, let it be understood we are not discussing filling some huge gap in awareness. We are talking about fine tuning. We are talking about the subtleties of power. We are pursuing an excellence in the affairs of men that no other society has sought for its citizens. To use that old but very

apt analogy, we have jumped as a high jumper would the first 6 feet and we are now working on those last few inches. It does not make achieving better understanding less important, or less difficult. But it is a task that should be approached in optimism and good will and the feeling that we have gone far, but now must do a bit better.

Washington Does Not Reflect the Nation

I would suggest first that we get some better idea of the Federal City and the atmosphere it creates. It is not like most other parts of this Nation. Government is our entire life. We eat it, drink it, and sleep it. We digest *The Washington Post* and *The Evening Star* which cover Senate hearings like other papers cover rezoning problems. We are assaulted by panels and news programs featuring Congressmen and Cabinet officials with the frequency of western movie reruns out in California. Washington has become some special state within a larger state. It has taken on a life of its own that no longer truly reflects the Nation in many important ways. There is so much power here, economic, military, administrative, that much of what we do is magnified out of normal proportions. But in the hinterland, they are not always so captivated by Senate debates on new bills, or by the state of national appropriations or inter-Cabinet arguments. My judgment is that most people are far more concerned with some of the smaller things of government that bear directly on their lives—classrooms, crop payments, traffic lights; that they are happier and more optimistic than we who must endure the dissenting few, who must wake up every day to charge and counter-charge; that they are far more "normal" than you and I and therefore are profoundly interested in

who is doing what and at what cost and whether it is worthwhile. And if that idea can be reduced further, it comes down to the story of people.

A while back one of President Nixon's speech writers, William Safire, had a short essay in *The New York Times* about this matter. "Mr. Dooley's dictum," he wrote, "politics ain't beanbag" has a modern corollary: "government ain't machinery." Then Mr. Safire related a story about the President, who was told by an aide that a certain request would be relayed "to the appropriate mechanism."

Mr. Nixon began to reminisce about a visit he had made to a nation behind the Iron Curtain in 1959. "There was a steel mill on the itinerary," the President said. "The diplomat who was my escort officer—a brilliant fellow—turned me over to the plant manager for the usual guided tour. The manager was especially proud of the new machinery in the plant, and he told me all about what it cost and how it speeded up the process. He got a little impatient when I stopped to shake hands with the workers around whatever machine he was showing off. In the car on the way back from the mill, the diplomat said something I've always remembered. 'It's not hard to find men who understand machinery,' he said. 'Our trouble is we don't have enough men who understand men.'"

Government Is People

And that, I would suggest, very neatly sums up the problems of better understanding of governmental affairs. Government is people, who work for people. Yet, far too many of us both in government and in the press consistently try to filter out the human factors in our stories and reports. We have developed a box score mentality which deals with billions of dollars appropriated, numbers of bills

passed, masses enrolled, gross national product produced. In the end we sometimes produce a bloodless, dull, and often inaccurate narrative of the affairs of the Government. It in turn is too often ignored by the people, or half read and thus half understood, or allowed to become part of the record which distorts and alters meaning.

It is my belief that much of the trouble began during the New Deal days when journalists were faced with the job of assimilating new concepts, new quantities. The box score, which reaches its highest form in *Congressional Quarterly*, became an easy shorthand to events in Washington. It had in those days a certain accuracy. The crises were not of the spirit, as they are today, but of material—food, clothing, housing. In that relatively simple and new governmental structure the jobs created, wages paid, relief handed out were directly measurable. It was reasonable for any journalist to assume that, in 1933 when the Civil Conservation Corps was created by Congress, within 4 months 300,000 boys would have jobs and there would be visible improvements in national parks and forests.

But 40 years later that measure doesn't work. How does one assess the impact of the Head Start program? We are still arguing over that. It was Pat Moynihan's conviction before he left the White House this year that the newest and best scientific evidence strongly indicated that most important patterns of life were set in children in their first 3 years, before any of the kids under the Federal program got into Head Start.

I do not disparage the gathering of statistics, of data, and reporting it in those very terms. That will always be basic to journalism in this city. But I feel that we must turn more to the human dimensions—who devises these pro-

grams like Head Start and why? What is the experience of one, two, three, or more kids who go through the program? Who are the critics, and what do they say? Almost always I feel there should be, in accounts of Government activities, a view of the men and women involved, both as creators and participants, or at least the feeling that behind each event is some human concern.

There is a legend in these parts that goes that public servants are entitled to private lives, that somehow they can separate their office hours from their time on the golf course or at the symphony. I don't believe that. And I further believe it to be one of the parts of our problem of understanding. In my view, you are very special people. You have in a way almost taken the vows by coming into government. And let me say here, that I apply the same standards to myself and other journalists. Every part of us, everything we do, affects in some way our work. Therefore, within reasonable limits, I believe that we all should be subject to scrutiny that if need be goes into our homes, our family relationships, and our backgrounds.

Let me illustrate. I have dealt over the past decade with the highest level of this Government, so forgive the use of Presidential references. I feel they are valid, that the same principles apply, even more so in some cases, on lower levels.

I am convinced that the clue to our involvement in Vietnam, whether you believe it right or wrong, lies in Lyndon Johnson's background and personality more than our treaty obligations or concerns about regional security or the threat that the Communists, if not stopped in Southeast Asia, would soon be coming up Wilshire Boulevard. Johnson was a Texan, nurtured in the legends of the West. He could not abide defeat

of any nature, or what he construed to be defeat. And he thought in the traditional manner about courage. You stood, fought, won. Some of us believe that Johnson was afflicted by something we called "the Alamo Syndrome" that compelled him to go to the aid of South Vietnam.

I have often in these recent years thought back to Dwight Eisenhower's Presidency and why he was able to hold such a majority of the Nation through 8 years. I could not find that many clues in the Republican Platform or in his messages to Congress. But the accounts of his boyhood in Abilene, his years at West Point, and the book of his reminiscences delineated superbly that basic decency and honesty which underlay the trust the people put in him.

I think it significant, for instance, that Richard Nixon was, and is, so taken with the movie on General George S. Patton. I found countless clues to John Kennedy's behavior in studying his upbringing. One 45-minute interview with old Joe Kennedy up in New York shortly after Kennedy's election, I believe, yielded more truth about why he was the man he was than any thing I did in my reporting career on Kennedy. It was a story of fierce love, pride, and money all mixed together.

I never really understood Ezra Benson or his agriculture policies until I spent a couple of weeks with him and heard from his lips about his days in England as a Mormon missionary and how he dodged eggs when he preached, occasionally had a fist fight or two in the name of the Lord, and in the end rather thrived on adversity. Just a few days ago I was struck in doing a roundup of all seven potential Democratic candidates that six of them came from small towns. I believe that now I see, for instance, what drives Harold Hughes and I sus-

pect I could predict with considerable accuracy just what course he would espouse for the country if he were to become the Democratic nominee.

Tell It Like It Is

In short, what I am saying to you is that all of you are the Government, that you must be talked to and written about. And then the things you do must be considered for what they do to people out there. In a packet of material given to me several weeks ago, I read a reprint of an article in *Reader's Digest* entitled "GAO: The Taxpayer's Best Friend." It was an account of savings made here and there, of mysteries unraveled in ledgers of Government agencies. But I must confess that had I not been engaged to come here today I might not have summoned up the extra adrenalin to get all the way through even that short piece. Somehow that fellow "the taxpayer" has become one dimensional, a cartoon figure who suggests to me, and I suspect a lot of others, a meek and flavorless resident of a mythical village. And I further suspect that had there been in this account at least part of a story of a real life man, with name, home town, family, and virtues and faults, going about his business of saving millions of dollars it might have meant a lot more. To be brief about it, and put it in the language which has some currency today—tell it like it is. We have for too many years been filtering out of our communications about this Government the facts of life.

In some instances this process is excused on the basis that the American people would not understand the complexities, the human variations, the subtleties of the Government's business. It is conceivable that this was true 50 years ago but I really wonder. It is ridiculous now. Whenever I hear someone in the Federal structure begin a conversation

with me about something being too complex for the reading public, I, in the words of Lyndon Johnson, reach for my wallet. I suspect that I am about to be had.

One of the first lessons that I learned in covering bigtime U.S. politics came from John Kennedy in 1959. We were discussing some of his rather lofty and learned prose and I ventured that it might not appeal to many people. He gave me a cold stare and said, "Never underestimate the American people. Too many men in this business look down on them. They are smarter than you think." If that was true then, it is doubly so now. Television, massive higher education, leisure time which has led to greater involvement in public affairs—all of these things have prepared the "reading public" to absorb just about as much as we can throw at them.

I don't mean some of the learned papers which are cranked out of our universities. We are talking about journalism now, the traditional means of communication from government to public. Henry Kissinger has joked that at Harvard obscurity was often substituted for profundity. He claims that some reviewer of one of his books after reading it declared that he was not certain if Kissinger was a good writer, but he was sure that anybody who finished the book was a good reader. No, I am talking about the daily and weekly and monthly communication which is the bulk of our knowledge. I recall not long ago finishing a seminar at Yale University where I was beset by some of the best young minds of the Ivy League. They were good. I sweated through Vietnam, the balance of payments, even the effect of sex in The White House, and then I drove from New Haven to LaGuardia Airport and caught a plane to Des Moines, Iowa.

I drove 30 miles to my alma mater,

Iowa State College, set out there among the corn fields. I recall the great calm which came over me as I worked on my speech for that evening, and how I felt I could idle along with this audience. Well, when the question period came, I sweated again. I went through Vietnam, the balance of payments, and yes, the effects of sex in The White House. Literally, ladies and gentlemen, the same questions asked with the same vehemence as at Yale. Out there they know. They are ready for anything we can hand to them.

You have heard of late a good deal about the adversary relationship, which is necessary in good government. I would not discount that. Ambassador Harlan Cleveland, a distinguished member of the Foreign Service, once said that out of the web of tension comes creative policy. But there is a danger that we should perhaps take note of and it bears directly on this matter of bringing better understanding of this Government.

There are times in this city when one gets the distinct impression that there are three, four, or five governments. There are times when a reading of the morning papers suggests that the press is some kind of foreign power to be dealt with with suspicion, contempt, downright distrust; that the executive branch is a fiefdom totally isolated from the rest of the Government, indeed the Nation; and that Congress is a separate kingdom. Lost in this great exercise of adversary government is the fact that we are all one people under one flag and in one country. Certainly, tension must exist, but sometimes we go too far. The press needs to shoulder its share of the blame, but Government, too, should look to its easy posture of assuming that anybody who comes before it with a question is one of those rotten apples that needs to be thrown out. I believe, today, just as strongly as I did several years ago when

I began in this business that we can work together toward a common goal, yes, with certain tension, with certain disagreements and frictions, but always with the understanding that we are all the same people and we in a very basic way want the same things. We have lost sight of that a bit these last months. We are the people. Well, the press is one part, intellectuals another, labor unions, doctors. We have been excluding too many groups.

That is not far removed from Justice Burger's appeal for a new era of civility in our national life. He singled out lawyers and the press but it applies across the board. I hope we will not look back several decades from now and label the Justice "the last gentleman." But there are days in covering this Government when I wonder. We must argue and discuss, but there is no call to be permanent enemies, to be vindictive or impolite. I have ceased listing the number of phone calls that have not been returned in the past few years. I am an adult and have rather a thick skin, so that when a man in the Government does not want to talk to me for any number of reasons, all of which could be valid, then I can absorb and still smile at almost any response from his secretary, even that he doesn't want to see me, doesn't trust me, doesn't have anything he can give me. But the infuriating thing is to be told by some sweet voiced young thing that the man in question will return your call or will surely respond in some other way, and then to have days of silence. I must say my first reaction is one of suspicion.

Justice Burger suggested that more wars in this world have been prevented by the politeness and civility of diplomats over the ages than had been won by the generals on the battlefields. I must agree. I can report myself as a test case in which, when contending in gentlemanly fashion with a news source

about a controversial question, his side of the affair appeared a lot clearer than in cases where the phone was slammed down or there were those nonexistent calls to tell me the fellow in question could not see me. I have always been amazed in this business of gathering and reporting the affairs of public men, how inevitably, if one takes the time to look, there are two or more sides to every problem, and how, when one is allowed a glimpse of why and how some action was taken, and that glimpse is given with civility, the report of the incident almost always takes on a more balanced view than it might have otherwise.

Ah, you say, what of the objectivity of the press. Well, I must quote my late Editor-in-Chief and friend, Henry R. Luce. There is no such thing as objectivity. There are facts and there are judgments, and men just ultimately combine them to form the printed word and all the human problems enter that equation.

The Case for Candor

Let us move from the case for good manners to the case for candor. This last case is even stronger. There arose with new vigor in the Kennedy years the idea that the Government had a right, perhaps even a duty under certain circumstances, to lie. One of the public servants of that time sat down and wrote a rather lengthy piece on the issue for the *Saturday Evening Post*. I find the whole idea an outrage. Further, I find it utterly unproductive. I cannot think of a single case, big or small, where the Government lied to the American people and it was either necessary or beneficial. Perhaps there are such cases buried somewhere in the files of the CIA. But I doubt it. I do not for an instant suggest that every fragment of information which the Government possesses should be shared with the people. Of course there must be na-

tional secrets. But I do believe we must be cautious as we go down that road. There are fewer and fewer real national secrets every year. And yet there still are an alarming number of men in Government who believe that more and more must be classified, or at least withheld. And real disaster waits in this age at the end of that line for men who deceive, dissemble, or lie.

Did we gain by lying about the U-2 or the Bay of Pigs? Was there really benefit in trying to hide \$10 billion in Vietnam expenses? Did the Mylai coverup help anyone? When on earth are we going to learn that truth is the best defense—the only defense—and along with that, to learn that error is not politically fatal, that again, the American people are ready to understand that. I do not suggest that truth is always easy, that it does not bring pain, or even that it aids a specific cause. I say very simply that it is necessary in our way of life.

The greatest reason that Lyndon Johnson is back on the ranch is the credibility gap. It was real. I lived through it. It was not a very pleasant experience. Nor is it enjoyable to have a clerk in any branch of Government do the same thing. I suggest a substitute for the lie is a "no comment" or simply a silence. I rather like the dictum handed down by the late Speaker Sam Raybrun to his new men, "Keep your mouth shut. You don't have to explain what you don't say." Obviously, I don't advocate a conspiracy of silence, not in this age, with such a craving for information. I suggest that, in those rare moments when disclosure of certain facts would truly injure a cause, the person on the spot decline to answer, again with civility and understanding, but decline. Don't lie.

The Problem of Truth

Truth, however, is not always as simple as I have suggested in the foregoing

remarks. Total and instant communication have made a very simple change of heart seem sinister. On the campaign plane in 1964, LBJ insisted that he would follow the advice of General Douglas MacArthur and not commit American boys to fight Asian battles. Confronted with the facts of Vietnam, he changed his approach. He was not allowed to forget it.

Richard Nixon has had his problems. One year an unbalanced budget was considered almost immoral. The next year he hailed it as the salvation of the Nation. It is perfectly logical to assume that conditions, or Mr. Nixon's heart, quite naturally changed over this time. But it is also quite apparent that more temperate language, taking into account the total recall today's journalism affords, would have served him better.

Problems of truth arise in getting faulty facts, in making careless errors. I suggest that no other problem in our time, in governmental affairs, needs closer attention than this matter of truth. It requires first the courage to tell it, the intelligence to understand, as Abraham Lincoln did, that it is the ultimate wisdom in the affairs of men, and finally, in our electronic age, to perceive that there are so many special ways that distortion and contradiction can arise unintentionally. When they accumulate sufficiently, they have the same effect on the American people as an outright lie. A credibility problem is composed of faulty facts, hyperbole, and the hard sell almost as much as deception.

Government Belongs to All the People

One of the dangers which confront men who dwell in the Federal precincts seems to me to be the feeling of total ownership or possession of their jurisdiction. From The White House on down it

would appear that after a given time the awe of their position wears off and they come to believe that they own the Government.

I tell the story of Lyndon Johnson at El Toro Marine Air Base several years ago. After reviewing some of the troops destined for Vietnam, he headed back toward his helicopter. He went, however, towards the wrong machine. A Marine major stopped him and said, "Mr. President, that is not your helicopter. Yours is over there." Lyndon Johnson looked down at him and said, "Son, they are all my helicopters."

I believe that in no small way this was one of the problems which arose in the case of former Supreme Court Justice Abe Fortas. For many men, who helped create the Government as we know it today, who served it in many capacities, who knew the great leaders in it, the Government became a personal piece of property, the rules to be written, or discarded, as that person saw fit. I believe that men in the Government must constantly remind themselves that they do what they do in trust, that they have their portion of the Government on loan, that it belongs to all the people and that is why their job is so special.

The Press

I have talked at considerable length about you in the Government. Let me turn now to the press. Contrary to what you may have been led to believe recently by some very high authorities in this Government, the press is not perfect. As a matter of fact, there is woeful misunderstanding of what it is, what it is about, and its general level of competence. I do not believe that there will be much improvement in the understanding of governmental affairs until those within the Government begin to under-

stand better than they have so far, the press (electronic and printed).

It is composed of humans, who err in all the traditional ways, sometimes in even more exotic fashion than other mortals. Much of Vice President Spiro Agnew's criticism is justified. Much is nonsense. But enough is on the mark to make him worth listening to. The press has grown fat, arrogant, and even lazy. And yet it serves this Nation better than ever. Let me attempt to explain the paradox.

The press, and I speak of television as well as print, is caught in the same wave of skepticism that other institutions are—the auto industry, medicine, the law profession, and the churches. We are alone in being summoned before the public for scrutiny. That is good. But as this review goes on, keep in mind some facts.

The press is a free enterprise institution, accepting no more special support from the Government than other businesses, less in many instances. It must survive in the market place. I am not certain yet that that is the best method. But nothing better has been devised, of which I am aware. So we must lure and keep readers in order to keep publishing and broadcasting and that means we must not only be relevant and enlightening, but entertaining. We come in many forms for many people. Some of us do one thing, others have different audiences. To this day I still have to pause and explain to irritated Government staff members that *Time Magazine* has never attempted to print news like *The New York Times*, that *Time Magazine* chooses up sides, and with its limited space cannot run all the facts in any given debate. I have been singularly unsuccessful over my 16 years in this city in convincing members of the bureaucracy that that is the way Luce planned it. We

attempt to find the truth. We try to be fair. But then we do it our way.

It is common when I go out on lectures these days for the audiences to accuse us of being outrageously inaccurate. We have our share of faulty facts, I agree. But the press makes no more errors than bank clerks, or schoolteachers, or lawyers or doctors. We must at the end of every day or week or month lay out all of our work for you and the public to see. There is no hiding. A journalist's soul, heart, and gut is committed to paper and that is a pretty open place to be, as I am sure those of you who have written can attest. So, the errors, along with the truth, are handed every morning or night to the critics and dissection is not all that hard particularly when there are differing opinions coming in from all points of the compass.

Fifty years ago, getting the news was a relatively simple function. One got up in the morning in Chicago and read Colonel McCormick's *Chicago Tribune*. The world was all neatly contained in those few columns. There was not much radio news to infiltrate one's mind, no TV, and magazines were largely written out of the newspapers. It was a tidy and comfortable way to live. One could go to work safe in the knowledge he knew what was happening. That of course was untrue. The reader of the single paper was woefully ignorant of events, conditions, people. But we had not reached Toffler's *Future Shock*, the age of acceleration, so it did not matter much.

But now the assault on the sense is awesome—TV, radio, half a dozen newspapers if you live in Washington, magazines, and movies. I suspect part of the new anger at the press comes from the sheer weight of it. Yet, I contend that never have people been so well served by the press, never have they been able, if they want, to get closer to the real

truth of the world's events than today. It is not easy. It demands selective reading, hard personal editing, skepticism, diligence at the news stand. But if one cares in this life to get some vague idea of the truth of this age, one can.

Some people, of course, believe that getting information should be a gratifying and comfortable experience. Not so. We do not promise our readers that we are going to be comfortable or that they are going to be satisfied with what they learn in our pages. Part of the public anger with us, in my opinion, is as basic as that—they want to kill the messenger of unpleasant tidings. My friend Tom Wicker, of *The New York Times* speaking at the Kennedy Center the other day reminded his audience that the Vietnam war would go on if *The New York Times* were terminated tomorrow. There would still be hungry people if NBC signed off permanently at noon today.

We simply know more about ourselves. I like to think that we feel deeper than we ever did. And of course compassion brings pain. Yes, I believe we must guard against the journalism of disparagement which Moynihan warns about. We are too faddish, too easily led to criticize. We need to be reminded of this. We need to have the men of Government understand our condition, human and mechanical, and give us suggestions.

The Public Also Has Responsibility

Finally, I would not leave the public out of this equation for better understanding. I am disturbed, as others have been, about the response of the public to some events and public debates. The question has arisen: are the American people loosing their nerve? It is a very simple matter when faced with difficult problems, like pollution and racial conflict, to suggest there is no leadership in

Washington or that nothing one reads can be believed, then to turn away from making any effort to solve these problems. I believe that the public needs gentle reminders that they have a responsibility—to be civil, to be informed, to be tolerant. They must work at understanding the nature of the conflict in this city, in this Government, and not be overcome when they see it in its raw state on their living room screen. They must be willing to live with the fact that their Government will err, and so will the press who bears the news. They must try harder to understand, finally, as you and I must, that we are, in the end, all one, headed in one direction, and while we cannot even begin to solve all the difficulties that confront us, we can move just a bit down that way to a better world.

Discussion

One of our fundamental objectives in the General Accounting Office is to try to be objective, impartial, and factual in our criticisms of the executive branch agencies and in our oversight role. One of the concerns we naturally have is, particularly in times of stress, that an individual or group of individuals might be influenced. This may be by a problem in Vietnam or a problem of unemployment or concern over pollution or a number of things. We therefore try to build in balances and checks internally to obviate this danger to the extent we can. Is there a comparable problem or is there a comparable mechanism in the press to concern itself with this same problem? We frequently hear individuals say that so and so feels so strongly about an issue that he has allowed it to color his treatment in the news, that he is not including all the facts, that he is not presenting his case in a factual manner, that he is writing editorials instead

of news stories. Do you have any comment on this?

Mr. Sidey: You have put your finger on one of the big debates in our profession today—this manner of how far do you go in interpretive reporting. It is a fact of life that a story which simply lists the facts, right-left, pro-con, whatever it is, can frequently be far more accurate than a man's opinion. I mean it just can't very often reflect the true conditions of a situation. Out of that understanding evolved this age of interpretive reporting.

My judgment is that it has probably gone too far. The pendulum has swung too far, so that on some days when you read the front page of the *Washington Post*, as a particular example, you get a whole editorial page on which all of these hot-eyed young men are trying to tell people what to do rather than report the story. That has happened at our magazine; in fact, it happened just in these last demonstrations. We had a young man who was part of the movement. His objective was to use our magazine. Yes, that is a serious problem and we don't have enough internal checks and balances yet. But we are trying to work on it. At the *Washington Post*, Mr. Richard Harwood is undertaking that kind of internal examination. We've done it to some extent. It isn't good enough yet. The pendulum went too far. I think hopefully it will swing back.

Would you please explain to us why it is that the newspapers and news magazines make so many errors of fact about subjects that are presented to their readers? As auditors we often know a great deal about given situations in Government and it is our experience that most of the time these publications distort the picture that we have of the same situations. As a result, newspapers and news magazines are not considered reliable by many Government professionals.

Mr. Sidey: This happens when people who are passionate about causes go in and ignore the facts or use them as they want. This is unfortunate. I would suggest that that question is a little overstated. I don't think we are wrong most of the time. We are wrong more than we need be. That is all I can tell you. We try our best. Sometimes the sources are wrong. Sometimes, again, the old human equation goes bad—you know, it was a bad morning or a bad night—the same elements that enter your trade, your profession. I don't, as I said in the talk, think we are any worse than anybody else but we have got to get better. That's for sure.

Do you try to control your reporting? What's that going to do to the reporters themselves? Will they work under those conditions?

Mr. Sidey: Well, some of them don't; some of them quit. As a matter of fact that is what happened to the underground press. Some of their reporters are people who found the restrictions of normal journalism to be a little too great, so they created these forms that they think will give them freedom of expression, but that hasn't worried me one bit. Journalism, like anything else, takes discipline and it is just nonsense to suggest that people could come in without experience or without certain restraints and write accurately, knowingly, and interestingly about events. It still hasn't happened.

It is our intent to insist on people who will do their best to reflect both sides and do their best to get the facts. We still insist on that and we still fire people because some don't. We still move people because they get too involved with certain sources and certain conditions. We are working on it. It is not perfect by all means.

Do you think the television coverage

of the recent demonstrations put the demonstrations in proper perspective? From the news programs carried by television that many of us saw, a viewer outside of Washington would have had the impression that the whole city was torn up by the demonstrations which was not, of course, the case at all. It seemed to many of us at GAO that a much worse situation was presented to the country—and to the world—than actually existed.

Mr. Sidey: Yes, I mean, I agree with the criticism. We come right back to this matter of what do you do with that 15-minute newscast. For that 15 minutes and for 60 million living rooms around this Nation every night, that is the total world. It distorted Vietnam because you had battle scenes that came in so intensely that people were upset. It was the first time they had seen killing or seen these things. You had the same thing with the demonstrations. The irony of it is that, of course, the demonstrations grew out of television showing the war and when the demonstrators grew violent, the same thing happened to them—a great revulsion against them took place.

No, it isn't distortion. We don't have an answer. We haven't calculated the full dimension of television and how you gauge its impact. Again, though, I must say, it takes some selective viewing. It is going to take the people out there to understand that that 15 minutes isn't everything. They have to work at that but, I believe, we also have to improve our editing process. Just as simple as that.

Do you think that the press—including all media—is justified in relying, as heavily as it does, on its constitutional right of "freedom of information" to justify its activities? It seems to many of us in Government that it is we who are always wrong, that the press seldom admits its mistakes—except in very small

type—and justifies its lack of disciplines and professional standards under its constitutional freedom to publish.

Mr. Sidey: These are very good questions. I suspect a spy in my midst. That's right on the head—the press has done this. I am sorry to say that I have to criticize my trade, my profession or whatever you call it, for doing this very thing—for not being self-critical enough. Were there some of us years ago, who said, "Look, we are going to have to take our own actions into account here or other people are going to do it?" It is my great sorrow that it had to be Spiro Agnew in the manner he did it. He did it in certain ways and, yes, we need more internal discipline. We need more criticism. We must watch ourselves.

However, I don't agree with the part of the question that we take refuge behind the constitutional right of freedom of information. That freedom, I believe, is terribly important and, as imperfect as this press system is, it is vital to our way of life. Whenever you go to Russia or other Iron Curtain countries, or places where there are great human problems, you find that the press has been restricted—totally controlled. I must agree with Thomas Jefferson that even given the glaring imperfections and the problems that we have, the press is the best thing going to really assure a continuation of our democracy.

What do you think of GAO reports to the Congress as public documents? Do you think that they communicate the essential message of each report well enough? Should they be better written? Should they be shorter? Would GAO be a more effective Government agency if it made more of an effort to communicate its message—in its reports—than is now the case?

Mr. Sidey: Yes, I believe so. I think I covered that fairly well with my speech.

I would like to see more of the human element involved here—and how it relates to our country. Mr. Staats touched on that in his opening remarks stating that you were actually being forced to the public eye more, simply by the importance and the size of your operation. I believe that, yes, it needs more study, it needs more thought, more facts need to be laid out.

Newspapers are a powerful factor in the forming of public opinion and yet it seems to me in the last several years in Washington that predominantly the news media tries to take a negative tone on any President, almost any public official, against almost any program or administration regardless of what party. Is there any way for the media to be constructive, looking for some positive aspects to build up rather than tear down?

Mr. Sidey: We come back to this question of Mr. Moynihan about the journalism of disparagement—the cliquishness and faddishness of it. I want to challenge you on a few things.

First, without having done it at all and I have not even read the morning *Washington Post*. I believe that if you went out and you measured quantitatively all of the stories here in your morning paper, you would find more good ones than bad ones. I have tried this on several occasions with magazines and papers and it is almost inevitably the same. It runs about 60 or 70 percent with stories that either don't take a side or are about sewer bond issues or ladies aide society meetings. This can be considered good news over the bad news.

Now the play of the bad news is the problem. Your headlines and your front pages tend to be dominated by the negative. But I do believe there is a tendency by too many people to remember the bad news and forget the good news—or

not even read the good news. The good news tends to be boring and you don't even go through it. I have tried this on several of my audiences but I won't this morning—I don't want to embarrass anybody—but what I do when I have studied the paper is I say, "Did you see such and such a story?" "No, I didn't see that." "Did you see such and such?" "No, I didn't see that." But people do see the story about the rape or murder or bank-robbery and they read them too. So we come back to this problem of the market place, you know, of what people want. What their appetites are. You know, I regret that *Playboy* is 300 pages and *Time* only 100 pages. But you have a point. Let me say there is a point there—just too much negative.

I suspect part of it is that it's easier to criticize. You know how it is, it's easier to be against somebody and this town tends to encourage that. I was amused some time ago by a new minister in my church out in Potomac who said he found Washington to be totally different from the city he came from. People got up arguing. That sort of thing. So there is that problem. We need to watch it—we really do. We need to be told about it and that's happening. You people are telling us about it. You people are quite mild. Most of the audiences tear me limb from limb but it is true.

Now, secondly, I want to really question you. We don't topple Presidents. The press doesn't. We can't do that. They do that themselves. A President holds all of the cards. I mean, they have got the power not only of the media that they can control in their own way but they have got the power and the structure of Government. They have got the economic power. No, I just don't buy that. Lyndon Johnson is back on the ranch because of himself, not because of us. You can't break a President. I just believe that is a total myth. Sure we have

difficulties in that but they control all of the cards. I don't think our power is that great.

Regarding the TV special "The Selling of the Pentagon" and the controversy over whether a committee of Congress can ask for their backup data, do you as a journalist feel that some other agency should hold the press accountable?

Mr. Sidey: Well, I think when it becomes a controversy of that nature, yes. I mean, the press ought to be held up and looked at. Now I would get into a little argument about whether all of the backup data should be presented. No, I'm against that. First a lot of it is misleading and a lot of it is heresay. It's like a raw FBI report. Now those should never be made public. They tell a funny story in the White House about President Kennedy getting some FBI reports and being so horrified by what he read that he didn't want to see another one.

So I think it would be a grave disservice to make them produce all of the data but the point of it is that they have programs up there. I mean that's public. Get up there and look at it. Criticize it. Question it. I think out of those hearings came the fact that CBS was wrong. I think they did some things they shouldn't have done. They were caught at it. I suspect next time—in fact I'm told that Dr. Stanton privately was very upset about his own crew—that there will be corrections. Basically those hearings also showed the thrust of that program. That in its totality it was not a bad account of this problem that we have. We can't hide behind anything really and we shouldn't. We should be accountable and if Congress wants to take a look or you want to or the White House, fine. My feelings are that there is still enough ideal left down there to say that if the public debate is conducted wisely and with good will we can all benefit.

GAO's Metamorphosis

The General Accounting Office, in response to these concerns, has long since abandoned its traditional role of watchdog of the Treasury under which it audited transactions for propriety and ruled on the legality of expenditures. In the last 25 years the Office has undergone a metamorphosis. While based in some part on new statutory directions, this has been effectuated mainly by expansion and modernization within the General Accounting Office under the able leadership of the Comptrollers General.

It has been my privilege over recent years to chair the subcommittee of the House Committee on Appropriations which considers the annual budget requests of the General Accounting Office. I have been able to observe at close hand the results of the Office's work and the high caliber, integrity, and dedication of its staff under the distinguished leadership of Comptroller General Staats.

Congressman George W. Andrews

Congressional Record

June 10, 1971



Harlan Cleveland
President
University of Hawaii

Dr. Harlan Cleveland is now in his third year as President of the 44,000-student University of Hawaii. During the past 24 years, he has worked successfully at four careers: government administrator, editor and publisher, diplomat, and educator.

He was chosen in 1947 at the age of 29 to administer the United Nations aid program in China where he supervised a staff of some 4,000 administrators and participated in negotiations on distribution of postwar relief to both the Communist and the Nationalist Chinese. As Assistant Director of the U.S. Mutual Security Agency in 1952-53, he supervised the fourth year of the Marshall Plan.

In 1953, he left Washington to become Executive Editor and then Publisher of The Reporter magazine. In 1956, he was appointed Dean of the Maxwell Graduate School of Citizenship and Public Affairs at Syracuse University, where he built a major overseas training program and was principal author of the landmark book, The Overseas Americans.

President Kennedy brought Dr. Cleveland back to Washington in 1961 as Assistant Secretary of State for International Organization Affairs. In 1965, President Johnson appointed Cleveland as U.S. Ambassador to the North Atlantic Treaty Organization, serving until 1969.

Born in New York City, Dr. Cleveland was graduated from Andover and Princeton and was a Rhodes Scholar. He has been awarded 11 honorary degrees and Princeton's Woodrow Wilson Award. He holds the United States Medal of Freedom, and has been decorated by the governments of Italy and the Republic of China. He served in 1970 to 1971 as President of the American Society of Public Administration.

He has authored or edited seven books and a new book, The Future Executive, will be published by Harper and Row soon.

The Growing of Public Executives

The General Accounting Office has drawn increasingly on the universities, both as a source of high quality professional staff and as a resource for postentry training. Dr. Cleveland has deep insights and profound concern for the future of the public service. Throughout his career he has made outstanding contributions to the cause for improved management in Government, both as a public official and as an educator. His underlying concern for better public management was a major reason for including him in this series of lectures. Dr. Cleveland observes that our scarcest resource appears to be men and women who have the incentive to grow beyond their specialized fields, who have some understanding of administrative processes, and who are challenged rather than repelled by complexity. He emphasizes that we need to grow people who can cope with competence about "the situation-as-a-whole."

My introduction to the General Accounting Office came with the audit of my first Federal travel voucher. In 1940 I joined the U.S. Department of Agriculture (USDA) and was promptly sent on assignment to several States. Of course I kept meticulous track of every penny, determined that my expense account would be a model of bureaucratic caution. Two years later, I trembled as I opened a letter from one of Elmer Staats' distinguished predecessors. I had failed—there was a disallowance. My voyage had ended with a taxi ride from Union Station back to my USDA office. So good were those good old days that taxis in Zone 1 cost only 20 cents. I had generously rounded it out to a quarter. My generosity was not a Federal obligation, said the Comptroller General: the nickel had been disallowed.

Both the GAO and I have come a long way since then. I can now afford

my own taxi tips, and the Comptroller General can afford to move beyond detailed auditing to broader forms of management analysis and more sophisticated applications of the policy sciences.

As such the GAO is necessarily concerned with the growing of executive leaders for a complex society, which is my subject today.

I

For half a lifetime as a public executive, I have wrestled with complexity in public and private employ, in Europe and Asia as well as in the United States. That this experience must have produced some useful ideas about executive leadership will be this lecture's presumption, in both senses of the word.

A career as an executive is not something you plan for yourself. It's the series of accidental changes of job and shifts

of scenery on which you look back later, weaving through the story retroactively some thread of logic that was not visible at the time. If you try too carefully to plan your life, the danger is that you will succeed—succeed in narrowing your options, closing off avenues of adventure that cannot now be imagined, perhaps because they are not yet technologically possible. When a student asks me for career advice, I can only suggest that he or she opt for the most exciting "next step" without worrying where it will lead, and then work hard on the job in hand, not pine for the one in the bush. When your job no longer demands of you more than you have, go and do something else. Always take by preference the job you *don't* know how to do. If you build into your life enough variety of experience, you will be training for leadership, in the role I call the "public executive." You will have plenty of company. Before long there will be, by my definition and my reckoning, one million public executives in the United States alone.

So my remarks will be addressed to those who are, or wish to become, executive leaders in the realm of public responsibility—which includes, not only those who work in "the Government" but also a great many executives in private business, nonprofit organizations, and the professions. Others can listen in if they will, but it is the self-conscious executives who most need to think about their role, because they seem to be inheriting the earth—though not because they are meek. It is not a comfortable moment to inherit the earth, just when the earth is revealed as polluted, overpopulated, and in mortal peril from man's civilizing intervention in nature. But it is just these cosmic dangers which are causing people to turn to those men and women who see their task in life as bringing people together in organiza-

tions to make something different happen.

II

The Attraction of Responsibility

People who have not tasted executive responsibility more readily imagine the pains than the joys of sitting where the buck stops. When I worked as an Assistant Secretary of State in Washington, visitors to my office would often say, "I certainly don't envy you," or "I wouldn't have your job for anything," or something of the sort. The same thing happens with disconcerting frequency to a university president. Perhaps it is part of our egalitarian ethic to believe that those in each organization who draw the most pay and occupy the largest offices are the least happy in their work.

The attraction of responsibility is the sense of relevance that comes from being where the action is. The excitement of working in big organizations, especially big Government agencies, is curiously hard to convey to young people who haven't tried it. To give them a rough idea, I have sometimes described 5 minutes out of my years as a public executive in Washington. These 5 minutes are admittedly not typical of life in the Federal bureaucracy, but it is fair to say that something almost as gripping happened about once a month and sometimes oftener.

The time was October 23, 1962, at 4:45 of a Tuesday afternoon, I was in my State Department office, watching a television screen as Adlai Stevenson, the U.S. Ambassador to the United Nations, read to the U.N. Security Council in New York a speech I had helped write, denouncing the presence in Cuba of Soviet nuclear missiles. The telephone rang, and President Kennedy asked a question.

Seven days before, photographs taken by an American U-2 plane had revealed that Soviet missiles had been brought into Cuba, and were nearly ready for operation.

In urgent secret meetings, an elaborate "scenario" was drafted for getting those missiles out of there. A first tier of some two dozen officials was let in on the secret, and set to work on strategy; a second tier of staff including myself, was then brought in to flesh out the "scenario" with action papers. Adopting the principle that nonviolence should be tried before either bombing the missile sites or invading Cuba, President Kennedy and his advisers decided to try diplomacy and defensive military action first. Thus on Monday evening the 22d, the President revealed the missiles in a Nation-wide television speech, calling for a "naval quarantine" of Cuba by the whole Western Hemisphere, and action by the U.N. Security Council to persuade Nikita Khrushchev, the head of the Soviet Government, to remove the missiles forthwith. While the President was speaking, we delivered formal calls for an emergency meeting of the Organization of American States (OAS) in Washington on Tuesday morning, and an emergency meeting of the Security Council in New York at 4:00 p.m. that afternoon. The idea was to get our Latin American allies to join in sponsoring the blockade (U.S. naval vessels were already speeding to their positions), and then announce the action as a *collective* security measure when we lodged our formal complaint in the Security Council a few hours later.

Over the weekend Tom Wilson in my office and Arthur Schlesinger from the White House had finished work on Adlai Stevenson's opening speech to the Security Council. I stayed in Washington to backstop the U.N. part of the scenario. We had assumed the OAS action could be completed during the morning, but sev-

eral Latin American ambassadors wanted to get further instructions from their governments during an extended lunch hour. Thus it was that the OAS meeting was only just reconvening over in the Pan American Building when the U.N. Security Council began its meeting and its President, who was ironically the Soviet representative that month, called on Ambassador Stevenson as the first speaker.

It was still crucial to our plan to present our naval blockade as the product of hemispheric outrage. The State Department's Latin American chief, Assistant Secretary Ed Martin, was helping Secretary Rusk at the OAS meeting, so I arranged for him to phone me just as soon as the OAS had taken its vote.

The Stevenson speech was being carried on national television; my then deputy Joseph J. Sisco was in New York to help, and we could see him on television, sitting right behind the U.N. Ambassador. Stevenson was reading his speech, and I was following the script on my desk as he spoke. Fifteen minutes from the end of the text, I still had no word from the OAS meeting. Then about 4:40 p.m., Ed Martin called from the Pan American Building to say that all but Uruguay had agreed, and the Secretary authorized us to insert this news in the Stevenson speech.

I called Sisco out of the Security Council meeting, to a little room with a telephone which the U.S. delegation was occupying for just such an emergency. On our Washington television screen we could see Joe Sisco tapped on the shoulder, and hurry off the screen to take my call. I dictated a paragraph to insert in the Stevenson text, and suggested at what point to insert it. Still watching the screen, I saw Sisco come back into view and lay a white sheet of paper on the rostrum.

The Ambassador, however, was in full

rhetorical flight. Holding his manuscript off the desk with both hands, he did not appear to notice the precious addition to his speech. I watched with a sinking feeling as he swept on past the point at which I had suggested it should be inserted. Only a minute or two of text remained; there might not be enough time left for another call to New York.

At this point, the phone rang and my secretary Tess Beach, normally calm and collected, rushed in to report "The President is on the phone—I mean *personally!*" I reached for the phone, still watching my corner of the Cuba missile scenario come loose in New York. "I've just heard about the OAS action," the President said, speaking even more rapidly than usual. "Is there some way we can get it into Stevenson's speech before he finishes?"

For a giddy instant wondered what I would have said if we had not thought to cover that base. "We've done an insert on that, Mr. President, and it's just been placed in front of him," I said. "But frankly, I'm not sure he saw it, because—" At that moment, Stevenson reached for the little rectangle of white paper, took it in at a glance, and cleared his throat. Before I could say anything more, President Kennedy, who was naturally watching the same television show in his White House office, cut in. "Oh, I see. He's picking it up and reading it now. Thanks very much, Harlan."

The Cuba missile crisis was not yet over. But mine was.

* * * * *

III

Impact of Technological Change on Decisionmaking

Executives are men and women who bring people together in organizations to

make something different happen. They live in motion, working in the midst of events they help create. The name of their game is complexity, and the counters in the game are decisions.

The social fallout of science requires an enormous range of new decisions to be made by somebody from day to day. Some of them are directly the result of scientific invention and technological innovation; other new-type decisions are the consequence of the human congestion that science makes possible.

My grandfather did not regard himself as responsible for racial oppression, or international relations, or the plight of the cities, or other gaps in the "moral science" of his day. He did not need to have an opinion on legalized abortion, let alone on whether scientists ought to reach into people's molecules to induce mutations in their genes. Grandfather read Jules Verne and doubtless assumed that man would one day reach the moon, but (though he was a lawyer and a politician) he did not trouble himself about the law of outer space and celestial bodies. Nor did he worry about the testing and control of nuclear weapons, or think about insurance against nuclear accidents. He did not even have second thoughts about spraying his garden with pest-killers; their use was neither widespread nor efficient.

But we are quite suddenly in the presence of machines and drugs and procedures that can change the balance of nature, ruin the human environment, activate or tranquilize a teenager, alter human personality, raise or lower intelligence, enhance or impair memory and learning, make births more various or uniform, and extend the very frontiers of death. Machines are taking over most of the work that "unskilled workers" used to do; new weaponry has altered the arithmetic of war and the strategies of peace:

new means of transport and communication make individuals more independent and cultures and societies more interdependent. Before the scientific revolution in farming and medicine, there was not effectively a "world food problem" or a "world health problem," there was merely an unavoidable prevalence of starvation and disease. Now that something can be done about these ancient afflictions, decisions have to be made by somebody to do or not to do that something.

The effect of technological change on the character of human decisions is illustrated with almost too much drama in the rapid mutation in air and missile defense. It was hard enough to get used to the idea that our personal safety might depend on a small group of young men watching for enemy invasion at an outpost of the Distant Early Warning Line. As new technologies shortened the warning times, responsibility for being right the first time was more and more diffused to the far corners of the earth, where a sleepy GI could cost us precious minutes, or an overzealous one cost us the future itself. Newer technologies were then devised to reserve to the President the kinds of decisions that used to be made by subordinate commanders—decisions about the movement of troops or the firing of long-range weapons—even if there were only a few moments to decide and the President were on the golf course or at a dinner party. But the more computerized the technology becomes and the shorter the timespan for the last-minute application of human judgment, the more fanciful becomes the notion that the President is still in tactical charge.

In an antiballistic missile system, for example, experts have to program into computers the possible characteristics of incoming missiles, so the machine can identify, track, and fire at them before they get to their targets, a matter of minutes after they appear over the horizon.

The decision to fire is no longer, in such a system, the Commander-in-Chief's; that decision has been predelegated, with instructions, to the computer. The President's responsibility is exercised, if at all, much earlier in the process, by trying to make sure the experts who programmed the computer knew what they were doing. And how does he make sure of that?

IV

New Kinds of Organization and Management Needs

The extraordinary growth in the number and public importance of decisions to be made will require new kinds of organizations, managed in new ways by new kinds of people.

As long as most of mankind's social tasks could be accomplished inside hierarchical pyramids, it was convenient enough to call such structure "organizations." But more and more important social tasks in an industrialized society can only be accomplished by linking together a congeries of organizations, each contributing its part to some larger purpose which is presumed to be shared by them all. The future-oriented word for "organization" is "system."

If an organization is the relations among its members, an organization system is "a bundle of relations." The technical use of the now popular term "system" includes complexities which man cannot manage (the solar system), or man is just beginning to understand (the nervous system), or are created by man for his own use (a language, a school system, a weapons system). I will use the word system to mean a bundle of relations which is (1) aimed at a subjective human purpose and (2) so large and complicated that all the connections among its parts cannot be known by any one person even if

that person is in some mystical sense said to be "in charge."¹

For the past half century or so, much of what we have called progress has resulted from using systems concepts to analyze problems and organize to solve them. The study of organisms and organizations as systems has provided a tool for breakthroughs in a wide variety of fields. With the help of computers, we have discovered more effective ways to organize our thinking about everything from weather forecasting and conflict theory to airplane reservations and getting the paychecks out on time. We can illumine complex systems: structural linguistics, information theory, cybernetics, and information feedback systems; input-output analysis and linear programming (mathematical methods for allocating resources), systematic theories of economic growth, econometrics, cost-benefit analysis, and PPBS (Planning-Programming-Budgeting Systems); game theory, statistical decision theory, survey research (including attitude polling), operations research, and technology assessment. With computer simulation, we can forecast economic processes, estimate environmental impacts, study social events as the interplay of many conditions, construct decision models, and apply mathematical probability to possible social and political futures.

The practicing executive can have only a general idea of the potential and the limitations of such efforts to think more systematically about where we are going and how to get there. But he is justified in guessing that systematic study and rigorous planning are blunt tools at best. Detailed planning ahead was highly pop-

ular for a time. But we have already had too many examples of detailed and systematic plans to go in the wrong direction. The McNamara Pentagon laid down men and equipment in Vietnam more efficiently than this had ever been done before in military history—but it turned out that, on reflection, we did not want them to be there. Quantitative methods for measuring pacification of the Vietnam countryside turned out to be public-relations gimmicks at best and instruments of self-delusion at worst. The effort to systemize success or failure in the Vietnam war—in the absence of that old dependable analytical tool, the map with drawn battle lines—led to a high dependence on counting dead bodies: killing thus became the self-justifying "subjective human purpose" of the military system for that time and place, and our wider political aims, not to mention our humanity and our moral purposes, were sidetracked as unsystematic because immeasurable.

Whether plans can be quantified, and progress in pursuing them measured, depends of course on the subjective human purpose which each "bundle of relations" is supposed to accomplish. In some forms of scientific inquiry and some large engineering systems—building a new factory, developing a nuclear sub, getting a man on the moon—the main components and outcomes can be rather accurately specified, counted, tested, evaluated, and if necessary replicated. But in dealing with the assessment of the future results of science and technology, for which more and more public executives find themselves responsible, the quantifiable parts of the analysis often turn out to be the less important parts. That is why detailed planning-ahead is no longer so much in vogue. The future executive will need a new definition of planning: *improvisation on a general sense of direction*. The irreducible functions of the executive are to de-

¹ There are hundreds of ways to use, and define, the word "system." Here I am using the summary definition of Anatol Rapoport in the *International Encyclopedia of the Social Sciences*, refined by John P. Craven in a new book on *Ocean Engineering Systems* (The M.I.T. Press, 1971).

fine the subjective human purposes, and then make sure that his (or her) part of the system keeps moving toward them.

It is organization systems, combined with systematic scientific inquiry, that have brought mankind to the present heights of progress-cum-frustration. If we are to take hold of our future, we are going to require more comprehensive systems, not simpler ones. As one example, computerized business systems and law enforcement procedures have already raised large questions about their effect on the individual's right of privacy: the system that creates the new procedures must therefore include the analysis and protection of the rights of individuals. A "system" that invented the internal combustion engine and put it in an automobile was obviously not comprehensive enough: we know to our sorrow (in some cities we literally weep in the smog) that the system planning should have included an assessment of the second and third order consequences of mass-producing that new technology. Whether we can do better with nuclear energy, weather modification, laser beams, genetic engineering, and the rest will depend largely on the vision, the ethical perceptions, and the administrative skills of our future public executives.

V

Organizations Will Be More Horizontal

In sum: The organizations that get things done will no longer be hierarchical pyramids with most of the real control at the top. They will be *systems*—interlaced webs of tension in which control is loose, power diffused, and centers of decision plural. "Decisionmaking" will become an increasingly intricate process of multilateral brokerage both inside and outside the organization which thinks it has the

responsibility for making, or at least announcing, the decision.

Because organizations will be more horizontal, the way they are governed is likely to be more collegial, consensual, and consultative. The bigger the problems to be tackled, the more real power is diffused and the larger the number of persons who can exercise it—if they work at it. This trend is visible in totalitarian as well as democratic societies. "Collective leadership" and committee work are not conclusive evidence of democratic feelings. They are imperatives of bigness and complexity.

The degree to which the world's work is accomplished horizontally will still vary, to be sure, according to what is administered. The spectrum of executive action will still range from organizations where at least some commands go down a hierarchical line, to those in which nearly everything is done by horizontal negotiation among specialists and executives. A Marine platoon, together with family businesses and local trade unions, may still be found near one end of the continuum; hospitals, research labs, and academic faculties may remain the limiting cases of horizontal process. But Lesson No. 1 for the future executive is this: accelerating growth in the size and complexity of organization systems seems destined to move the whole spectrum away from the more formal, hierarchical, ordergiving way of doing business and toward the more informal, fluid workways a bargaining, brokerage, advice, and consent.

Bigness and complexity are also blurring the traditional line between "public" and "private." The managers of "private" enterprise, profit or nonprofit, will move farther toward the concept that they are responsible to people-in-general, and thereby bring the government more into their affairs. At the same

time the government will farm out to the "private sector" a growing proportion of the public business. No large organization, whatever its formal ownership, will be able to escape its public responsibility.

They will be manned, these new-style public-private horizontal systems, by a new breed of men and (increasingly) women. I call them the public executives, people who will manage public responsibilities whether in "public" or "private" organizations. They will climb ladders of specialized achievement into positions that require them to "get it all together." Their administrative style will have to be adjusted to an environment which is ill-described by drawing square and static diagrams on two-dimensional charts; it feels more like a continuous chemical reaction in a liquefied solution. The public executives will enjoy complexity—or look for some less demanding line of work.

If what is wrong with modern society is the weakness of "moral science," as technologist Ben Franklin predicted, then public executives will carry the main responsibility for mixing values with technology. In a society built more and more on lateral relationships, it is already time to revise Paul Appleby's famous definition of "policy" which applied so well to a hierarchical culture. For Appleby, policy was the decisions that are made at your level and higher. But for public executive of the future, policy will be mostly your own sense of direction, modified by negotiation with your peers, clients, and critics.

It is too easy to describe the future executives as "change-agents"—accelerating change is their destiny, and, like it or not, they will be its agents. It will not be a comfortable role. Picking their way through the jungle of complexity and making up their own policy as they go along, public executives will have every

reason to feel sorry for themselves. But they will also apprehend that the function of the executive is to make the difficult choices others are reluctant to make. And in any society, those who choose the most have the most reason to feel free.

VI

The Multiplying Requirement for Leaders

We are accustomed to thinking of leaders as few among many. But the history of hierarchical governance is a poor guide to the age of consultation and consensus which has already begun.

Modern civilization has long since abandoned the principle that a community should be governed and styles should be set by the merely rich and highly born. Yet there persists today, in most of the world, a pyramid-shaped social structure in which a relatively few men and women—mostly men, which is one of the problems—are in general charge. The revolutions of the eighteenth and nineteenth centuries, and the anticolonial movement of the twentieth, typically cast out small groups of bosses in favor of other small groups of bosses, ruling with no greater consent of the governed. Those who talked most about devolving power to the people seemed most anxious to concentrate power in the hands of the few.

But somewhere along the way in the modernized, industrialized, "developed" nations and especially in the United States of America, rule by the few became technologically obsolete. The more inter-related are the parts of an economy, a polity, and a culture, the more people it takes to run things. Each year it takes a greater *proportion* of leaders to participate in socially significant decisions—because each year there are so many new kinds of decisions to be made, and so many more concerned groups that feel

they have a right to be cut in on the decisionmaking. Even in the totalitarian societies, the notion of effective "dictatorship" is breaking down. The dynamics of development loosen the up-and-down controls, and spread the responsibility for initiative and follow-through to hundreds, then thousands, then tens of thousands of "cadres."

In the mid-1950's I tried to count America's "opinion leaders," because I was publisher of a magazine I thought they ought to read. (Other publications later adopted parallel appeals to "the influentials," "the men who get ahead," and the like.) My 1955 estimate was 555,000; a similar analysis of "opinion leaders" might yield as many as 1,000,000 in the decade of the seventies. The concept of "opinion leaders" is broader than public executives, since the former also includes teachers, artists, doctors, lawyers, judges, legislators, and other professional people as well. But the public executives—policymakers in public, philanthropic, voluntary, and large-scale "private" enterprise—were about seven out of 10 of the "opinion leaders" in the earlier estimate. They might thus be 700,000 out of 200,000,000 Americans in 1971. Before long the public executives will number a million in the United States alone.

What no Greek political theorist imagined or people's revolutionary accomplished—a devolution of real power to hundreds of thousands of people—is coming to pass as the social consequence of modern science and technology. We have our aristocracy, but it is increasingly an aristocracy of achievement. By common consent we no longer entrust the setting of styles to any one class, any one race, any one priesthood or courthouse gang—or even to the White House staff. The destiny decisions we face are so terribly important they cannot be left to the experts, the wealthy, the products of the Ivy League, or the residents of the East-

ern Seaboard. For a generation it has been conventionally wise to predict that more complex technologies would make for more centralization of leadership. My thesis is to the contrary: complexity of organization systems is diffusing the opportunity to lead and multiplying the requirement for leaders.

The paradox of our not-so-manifest destiny is here. Though we need more and more leaders, there is no career ladder called "leadership." The control panels where expertness is married to purpose must be manned by an aristocracy of *specialized* achievement. Yet our scarcest resource appears to be men and women who have the incentive to grow beyond their specialized fields, who have some understanding of the administrative process, who are challenged rather than repelled by complexity.

On the one hand science has made possible continuous change at an accelerating rate, accompanied by growing interdependence of social decisions, growing hugeness of organization systems, and growing diffusion of power within and among them. The major obstacle to the next stage in America's success story is obviously our inability to "get it all together." Getting it all together requires a rapidly expanding ration of executive leaders, and an even larger number of people able to understand the policy issues, relate them to each other, and serve as opinion leaders outside their own fields of expertise.

Yet it has been the practice of modern civilization to place such stress on the division of labor as to siphon off into relatively narrow specialties nearly all of the first-rate talent. A young man or woman building a career can envision the excitement of the laboratory or the construction job, the hospital or the department store, the scholar's study or the teacher's classroom. Close attention to the situation

as a whole is set aside by most college students by the end of their sophomore year, if indeed they did not start concentrating on nursing or electronics or auto mechanics or accounting before that. Even if a young man or woman aspires to a "generalist" role as politician or public executive, he or she can readily perceive that the ladders to leadership are the specialties and professions. Ten years later one can hardly blame them if they have come to prefer the shelter of expertise to the risky role of leadership. It is easier to be an expert, with the obligation merely to be right, than to be a leader with the obligation to fuse a dozen forms of rigid rectitude into relevant action.

VII

Schooling of Public Executives

Do we know enough about how to grow people who can care with competence about the situation as a whole? Suppose we here this morning were asked to form a school for this purpose? Would we know where to start?

Our trouble is that we don't even know what to call the project. The words others use to stand for situation-as-a-whole education—"public administration," "public affairs," "policy science," "development," even "citizenship"—carry such a freight of connotations.

"Administration" is still living with its earlier mistress, the management specialist.

"Policy science" is still trying to recover from its dalliance with mathematical rigor—which came close to *rigor mortis*.

"Development" has come to be focused on the problems of poor countries in exotic continents, even though our own continental society is developing too, and faster.

"Citizenship" sounds too much like education for patriotism. Indeed, the early correspondence between Mr. Maxwell and Syracuse University suggests that indoctrination in patriotism was something like what he had in mind for what became the Maxwell School.

"Public affairs" is the best of the lot—but it means all things to all schools, and its respectability quotient is not high in the relevant academic departments.

So I am almost persuaded that our school should not carry a title denoting the subject-matter with which it deals. If it did, we would have to call it the Graduate School of the Situation as a Whole, and no political legislature or eleemosynary foundation would finance so relevant an enterprise as that.

Maybe we should, instead, use a name that denotes our target—say, a Graduate School for Public Executives.

The content of schooling for executive leadership has to be tailored to the budding public executives themselves—not in the mass but individually—to help them analyze what they lack, and expose them to whatever that is. We would, I think, want to concentrate on people in midcareer, who have already achieved something in a specialty but are gravitating toward general executive leadership. We would want to involve both public officials and private executives who have large public responsibilities (whether their firm or foundation admits it or not).

My guess is that we will find some gaps that are sufficiently common to all emerging public executives to provide the basis for a core curriculum.

One obvious lack will be breadth.

The public executive is dealing, not with sciences but with science; not so much with hardware as with software, not so much with technology as with its assessment.

He is concerned, not with detailed planning ahead—which is usually wasteful and misleading anyway—but with a more demanding challenge: improvisation on a general sense of direction, which is the real-world definition of planning.

He is preoccupied not with special knowledge but with general understanding, not with simplification but with "complication."

Doesn't this go beyond education about subjects, and shade over into education for attitudes?

Maybe it doesn't matter in *what* he is educated, but how he is educated. Almost any subject matter will do, if it is sufficiently complicated, as an example of real-world complexity. The important thing is that the executive come away from his previous education and experience with some attitudes, some ways of thinking that are, I believe, indispensable to effective general management:

The notion that crises are normal, tensions are promising, and complexity is fun.

The understanding that paranoia and self-pity are reserved for non-executives.

The conviction that there must be some more upbeat outcome than would result from summarizing the gloom and reluctance of all his expert advisers.

A sense of responsibility for the situation as a whole.

In a society built more and more on horizontal relationships, it is already time to revise Paul Appleby's famous definition of policy which worked so well in a hierarchical culture where recommendations went up and orders came down. For Appleby, you will remember, policy was the decisions that are made at your level and higher. But for the modern public executive, policy is mostly the decisions

he negotiates with his peers. And this means that if he doesn't know in what direction the public interest requires him to push his fraction of the public business, nobody else does either.

This in turn means that the public executive is his own expert on values. And *that* is why new Schools for Public Executives will have to concern themselves deeply with where we are going and why, not just with how to get there cost-effectively—with how to produce efficient managers who *don't* get drawn by logic, quantitative analysis, and computerized retrieval, into illogical, unsystematic, and irretrievable errors like the war in Vietnam.

VIII

More Gifted Generalists Needed

In the spate of comment in 1957, after the first Sputnik set off an agonized reappraisal of American education, a rare and sensible voice was raised by a committee of citizens under the chairmanship of John Gardner. The Gardner Commission suggested a substitute for the tearing of hair and the rending of garments which had become, and still are today, so prevalent among seers, prophets, and educators as well as in other specialized fields.

The Gardner report did not complain about the specific shortages in mathematicians, scientists, technologists, and people who speak exotic languages, which shortages had just been declared by act of Congress to be the main trouble with American education. The Gardner report did not worry at all about our ability to produce specialists at will, but rather saw in the supply of gifted generalists the prime bottleneck in our manpower planning. "The trend toward specialization," this report said, "has created among other things an extraordinary demand for gifted generalists, men with

enough actual and technical competence to deal with the specialists, and enough breadth to play more versatile roles, whether it be managers, teachers, interpreters, or critics." Such individuals will be drawn increasingly from the ranks of those whose education and experience have included both depth and breadth, who have specialized but have not allowed themselves to become imprisoned in their speciality.

"There is a premium," the report went on, "on men and women with a talent for innovation, for individuals who can move beyond the limits of present fashion. In a time of breathtaking technological and social changes there is a need for people who understand the process and the nature of change and who are able to cope with it. We should educate our young people to meet an unknown need rather than prepare them for needs already identified."

Fourteen years of dust have collected on that report, but the wisdom of that passage survives intact. Even more than in 1957, the bottleneck is the situation as a whole, and the crucial gap in society's manpower planning is the education of situation-as-a-whole guys—and gals. And that is why those of you who are willing to escape from your specialties and train to be general managers are so precious a national asset.

Discussion

You have been discussing ways in which universities or schools of public education can produce the generalist type of individual needed for today's public service. Within the constraints of the present organizational structure or resources available, what are the universities doing, or what can they do, to produce the kind of individuals required?

Dr. Cleveland: There are two main kinds of constraints in the way universi-

ties tackle this problem now. One is that the basic organizational break is vertical. Academic departments are built around specialized methodologies. But there isn't any real-world problem that can be fitted into an academic department. After being dean of a graduate school in the social sciences and then finding myself at a desk in the State Department, I used to amuse myself by asking myself, "Where would these various problems that are drifting across my desk fit in if I were to try to fit them into the Maxwell School?" I found that the real-world problems in the State Department did not fit into neatly structured academic disciplines, but rather each one required an interdisciplinary approach for its solution. There is a resistance to this in the tightly hierarchical departments so that it takes a very special effort to cut across these vertical cylinders where all the primary loyalties are related to a discipline, rather than to an analysis of cross-disciplinary problems.

The other problem is that, for the kind of thing that I am talking about, the instructional staff really has to have a certain amount of experience with real-world problems. It isn't enough to train a youngster in the use of several methodologies without his really having a clear idea of how you could put them together in organizational terms. It is obviously very difficult for people to envision that, if they haven't tried it themselves. So I think that indicates that there has to be a lot more commuting between the academic world and the world of government and large enterprise of other kinds than there is now. We are much better at this than most countries, but there still is only a handful of people in any given university who are able to relate to these kinds of things—the bringing of people together in organizations to make something happen on one hand and the analytical ways of

thinking about individual pieces of problems, the academic methodologies, on the other. That's why I think you have to have special organizations within universities. I think that it isn't natural for a university to organize to solve the kind of problem that I talked about in the lecture. There are very few universities that even regard this as a major thing to do at the present time. That, of course, is why the prime bottleneck in our manpower planning is that we are consciously producing every category of people that we need except the people to put it all together, and that doesn't make sense.

What are some of the negative impressions that college students have about the public service? And what is the public service doing that contributes to these negative impressions, in your opinion?

Dr. Cleveland: First of all you've got to break down the term "college students" because there are all kinds of people. There is a widespread feeling that is produced by affluence. Some students can say to themselves at age 20, "I know that I am going to make a decent living for the rest of my life, so what am I going to do, really?" Now most generations, all generations perhaps up to now, in all societies have found much of their adventure in struggling to make a living. But if working to make a living isn't all that interesting, if a large portion of the whole college generation faces the problem that only rich men's children used to face, then you have a problem of motivation to begin with, which acts not only against government but also against almost all existing forms of work.

Secondly, overlaid on that you have the growing feeling—that bigness and complexity are somehow bad things, that they are the exceptions to some rule of pastoral simplicity and that institutions

themselves are, maybe, the problem. Not that they're not the right kinds of institutions and that we'd better build some better ones, but that the very existence of organization is somehow a bad thing. That was one of the striking characteristics of the many revolutions on a number of campuses in the late 1960's. By and large the leaders of the Students for a Democratic Society (SDS) were allergic to organization, which is another way of saying that they were allergic to power—not only allergic to other people's wielding power but also allergic to power itself, which is why SDS fizzled out so relatively rapidly. The leaders would get into a room to decide what was happening, but somehow it was not decided, for no one claimed to be chairman of the meeting. Nor was any real staff work done as a consequence of the meeting, because that would be your giving power to yourself and that was what you were against. But a revolutionary who doesn't believe in power probably isn't going to get very much power, because he has to be organized for it. That is an extreme example, I think, of what some—of what many—students feel: that somehow bigness and complexity are bad things.

And then overlaid on that you have the reaction to a combination of the Vietnam War and the absence of technology assessment, in earlier generations, on big governmental decisions. That is to say that the fact that the Government is elected by the people and supposedly is serving the public interest doesn't prevent it from doing, on a very large scale, some very foolish things and this foolishness is thought by many students to be inherent in the nature of Government. I think that all of those considerations are really more important than the things that we used to worry about, in terms of the image of the Government worker and that kind of thing.

I think that that imagery is perhaps a fourth factor; namely, an inability to visualize the interest and excitement of working in a large organization and a tendency, on the part of people who have never tried it, to feel that it must be a terribly oppressive experience to work in a large organization. This is not the general feeling but there is this very strong feeling among students. I don't have a pat formula for what you do about changing this collection of attitudes, but I think that there are two or three ways that you can get at it. One way is to let the student live for a few more years and to go work somewhere, and that helps. Another is to contrive as a part of the educational experience more real-world, or at least synthetically real-world, experience such as internship arrangements, and projects that grapple with problems outside or off the campus.

I've been campaigning for a new kind of freshmen year in college. As it is now, the student's arrival might generate a conversation like this: "Well, what are you interested in?" "Well, I'm 17 or 18, I don't know what I'm interested in. History, maybe—because that was fun in high school—or math, or something." "Well you'd better get your distribution requirements out of the way then. You might take French I, Math I, English I, and so on." I'd just as soon a student not take any methodology courses at all in his freshmen year. I'd rather see him come in and make—try with some others to make—two or three collective attacks on some problem. We have enough problems in the world, so we could organize a freshmen year that's just full of problems. And students could opt for which problems they're going to solve, anything from world peace to "should we build a sewage disposal plant on Sand Island?" which happens to be one of the great local issues in Honolulu this week.

Now the purpose of these freshmen

experiences would be to induce frustration in the student. To induce in the student the sense of "How can I possibly grapple with this problem unless I know more about quantitative analysis than I do now?" or "How could I be persuasive in getting something done that I now perceive really needs to be done, if I really can hardly put an English sentence together decently? So I'd better take the English Composition course, and I'd better get some more math because otherwise I'm not going to be of any use to myself or to anybody else in a world full of problems that need solutions."

In other words I think the most important thing to do in the freshmen year is to develop the motivation for going through these often necessarily dull methodology courses. But instead, we start with the methodology courses having predominant populations of students who don't have any idea of why you would need those methodologies for anything, just as many students study French or Spanish with no idea of ever using it and with no motivation to get anywhere in it. I think the more you can mix the campus with the world outside the better it's going to be from the point of view of enabling students to visualize the kinds of problems that the Government grapples with and how interesting and important they are. Using internship arrangements very freely and at a very much more junior level than we have traditionally done is, I think, a very important part of that picture.

Faculties of today's universities have much expertise to offer. What can the people in public service now do to encourage more movement, both permanent and temporary, by these experts into public service, particularly at the State and local levels, as we move to a more decentralized form of government?

Dr. Cleveland: Well, your question

really answers itself. We ought to maximize the amount of interchange both ways, too. Also more of you ought to be teaching part of the time, partly because it would be terribly good for you. Teaching is terribly hard work. Facing a group of students, especially the modern skeptical students, is extremely good personal discipline in a situation where you are not protected, as you are in most other kinds of life, from the question "Does the King really have any clothes on?" So there is exchange both ways.

But I think that the problem is to contrive experiences. The tendency is for the professor of economics to get his real-world experiences by going into an economic research house of some sort. That's not the point. I'd rather see him go and try to run something with some real executive responsibility and see how economics has to be mixed with a lot of other disciplines in order to make anything happen, rather than see him simply move into the government, still as a kind of disembodied adviser to somebody who is responsible for action. The nature of the exchange, I think, is important. For the executives in the government, maybe we should do the opposite. Maybe they should concentrate on single methodologies—concentrate on depths, since they're dealing in breadths. But get the fellows in the universities who are concentrating on depths to rub their noses in how to get it all together in a real situation.

You will find here in the General Accounting Office what we vaguely call performance evaluation (executive selection). We start with a basis and wrestle with it. Some of the reasons are not only to find out where we are today, and enable us to forecast where we will be 5 years from now but the kinds of problems we will be faced with. Another part of the equation is to identify individuals who can relate to these problems, who

want to be a part of their solution and are recognized as having the ability, interest, and motivation. Of course for the organization to find these people we have to be able to articulate somehow who and what these executives are. Do you have any comment on what is really the dichotomy in the system—the gap which somehow we are trying to fill?

Dr. Cleveland: I'm not sure how to solve that problem in the General Accounting Office, because it's something close to insolvable even in the university, or maybe especially in the university. The State Legislature of Hawaii has rather belatedly fallen in love with PPBS, and so we have been developing a really new university management system which may have some usefulness elsewhere by the time we finally get through. It tackles PPBS in a different way from the way Charlie Hitch tackled it in California. Everybody's now sort of disenchanted with PPBS in the California system. And I think it does depend crucially on trying to set down, in a way that requires an awful lot of work and rethinking, the objectives of an ongoing organization. But what we found was that the kinds of objectives that were generally used in universities around the country, which we have studied, were sort of blue-sky objectives. They say that this is where we'd like to be 5 years from now, or whatever. But if you add up everybody's blue-sky objectives, they obviously add up to much more than anybody's going to finance or going to be able to staff, and so somehow the objectives—the concept of the objectives—have to be built into the organization, not just as footnotes, but built right into it: the constraints on the one hand and the special opportunities on the other.

You could all produce the objectives of higher education in 5 minutes, in general terms on a blue-sky basis. But then you have to decide for a university sit-

ting out in the middle of the Pacific Ocean what the special opportunities are that really affect the priorities. Now that's one piece of the problem. The other piece of the problem, that I find most baffling, is the measurement. Not because it isn't possible to measure a lot of things. The Department of Budget and Finance of the State of Hawaii hired a consultant who produced a whole list of measuring rods in one afternoon, and it was promulgated all over as sort of the word of law from the Governor's office. For us it had such things in it as "How many suicides have there been among your alumni, 5 years and 10 years out of school?" Now that has the great advantage of being quantitative, but it doesn't tell you whether it was good or bad that they committed suicide. To develop the measures that don't get lured into over-quantification, I find, is most difficult.

Then we have a problem that you must have in a different way, since you are supervising, coordinating, and watchdogging the whole Government and you don't have an output of widgets of your own, except paper maybe, but that's a limited sort of output. Our output is the student. So we talk about measuring when he comes in and measuring when he goes out and trying to figure out whether there is any difference and

whether the difference was the result of his growing up for 4 years or of something that you did, something that was the result of your input. That's an enormously difficult field. I guess my conclusion is that maybe you can get halfway to what a really rigorous analyst would be satisfied with in the way of a sophisticated statement of objectives—with the constraints and special opportunities built in—and some quantitative measures of performance against those objectives; that the other half of the problem requires an act of faith on the part of everybody involved; and that probably, on the whole, education is a good thing.

The fact that you can only get halfway, I guess, doesn't bother me as much as it should, because in universities, at least, we've been getting away with murder by taking it almost 100 percent on faith. Expansion of higher education has been done mostly with a kind of general idea that it is useful without being terribly well related even to the manpower market being served, let alone to some sophisticated sense of the requirements of a person for his growth and individual fulfillment. We can get half of the way with a more systematic approach. I think that we ought to be quite satisfied to take the other half on faith and maybe even the Comptroller General's Office ought to be satisfied too.

Expanding Responsibilities and Operations

The Congress, recognizing the need for independent assessment and oversight of the complex affairs of the executive branch, established the GAO in the legislative branch of the Federal Government in 1921. As the affairs of Government have multiplied in complexity and size, the responsibilities and authority originally vested in the GAO have been expanded by the Congress. The early GAO image of green-visored accountants has long since disappeared. Its staff of dedicated men and women is comprised of professional accountants, lawyers, and graduates of such other disciplines as economics, engineering, marketing, and finance.

The Office, under the able leadership of Comptroller General Elmer B. Staats, has stressed effectiveness in the use of the taxpayer's dollar in the many massive Federal programs. • • •

The record over the past five decades has been one which the men and women of the General Accounting Office can be justifiably proud and a period in which a great degree of satisfaction can be taken in having provided a valuable service to the Congress, the taxpayer, and the people of the country. I congratulate the GAO on its golden anniversary.

Senator Charles McC. Mathias, Jr.

Congressional Record

June 10, 1971



Leonard P. Spacek
Senior Partner
Arthur Andersen & Co.

Leonard P. Spacek has devoted his entire career to the accounting profession.

In 1928 he joined the staff of Arthur Andersen & Co., Certified Public Accountants, and became a partner in 1940. He was Managing Partner from 1947 to 1963, Chairman from 1963 to 1970, and Senior Partner from 1970 to present.

Mr. Spacek attended Coe College where he earned a Doctor of Laws Degree. He was granted an Honorary Doctor of Humane Letters Degree by the National College of Education.

For a number of years Mr. Spacek specialized in utility regulatory problems and has testified in numerous rate-litigation cases before commissions and courts throughout the United States.

Mr. Spacek is a member of the American Institute of Certified Public Accountants and was one of the original members of its Accounting Principles Board from 1960-65. He is also a member of the Illinois Society of Certified Public Accountants, the American Accounting Association, and the National Association of Accountants.

Among the more than 30 public service groups in which Mr. Spacek is active are the Advisory Board of the Brookings Institution, the Industry Advisory Council of the Department of Defense, and the National Alliance of Businessmen. He is a Trustee or Director of Northwestern University, Coe College, the John Crerar Library, and the Museum of Science and Industry of Chicago.

States. Furthermore, "Effective Government Management" must be accepted, supported, and demanded by the productive forces of this nation as a prerequisite to their efforts to produce the wealth and the requirements to sustain life. Otherwise, the nation itself will not long exist as we know it.

Therefore, the breadth and application of good accounting is infinite in a country like ours. I say a "country like ours" because we have a democracy dedicated to balancing "freedom" and the "fruits of that freedom" to all of its people. Notwithstanding all of the complaints which this freedom permits and encourages, this nation stands alone in opposing oppression of all descriptions. Our risk, as a nation, lies in our taking freedom so much for granted that we think it will always be there if we leave it for a moment to indulge in some suppressive digressions.

I have been exposed to accounting in at least one country which is not dedicated to the freedom of its people. I was impressed by the high quality of accounting in that country, and it too is used to establish "Effective Government Management." However, the accounting and management which rests upon it is used to deny freedom to its people. As a consequence, since freedom does not exist, the fruits of freedom are not available for distribution to that nation's citizens. The citizens of that nation suffer the absence of freedom and, therefore, absence of the plant that bears the fruit that will sustain wholesome life.

Thus, let us not forget that "Quality Accounting" is like an explosive. It can be used inwardly to destroy and outwardly to preserve freedom for the public. In our nation, the same dual use of accounting can be used to injure one segment of our citizens at the expense of another segment. It can be used by

government to oppress one or more segments of our people as well as to provide justice to all. Good accounting like good government knows no bias. If this premise for accounting were not preserved, the citizens injured would suffer the loss of some of their freedom by mismanagement by government institutions and corporations just as surely as if guns or bombs were used by one group against another. Since we are fortunate enough to have had forefathers that preserved freedom for us, we as individual accountants are an important link in the preservation of the rights to assets and their use and the assessment of liabilities among our citizens through the quality of our work.

The citizens of this country are entitled to receive the honest facts on cost and revenues, irrespective of the class of taxpayer they may be, irrespective of whether they are labor or management, irrespective of whether they are consumer or investor, irrespective of whether they are employed or unemployed, or retired, irrespective of whether they are government or public contractors, irrespective of whether they are representing government or are plain citizens, ad infinitum. Proper accounting knows no classification of its facts according to who receives them. If it were otherwise, accounting would be completely destructive of its purposes and would produce a fundamental violation of basic relationships as among U.S. citizens.

Mechanics of Accounting Need Major Restructuring

We sometimes get mesmerized with the procedures by which accounting is performed and thus lose sight of its substance or bury its communicative value. Mechanical processes of accounting are fun to the nonaccountant, and often we

Utilizing What Is New In Accounting

The role of the accountant in both private and public sectors has experienced—and continues to experience—almost explosive change. As a top administrator in the public accounting field and as a free-thinker on the state of the accounting art, Mr. Spacek has special qualifications to discuss the current thrust of the accounting profession in the context of modern organization and management. He states that effective Government management must be accepted, supported, and demanded by the productive forces of our Nation as a prerequisite to their efforts to produce the wealth and the requirements to sustain life. He also points out that the breadth and application of good accounting is infinite in a country like ours, whose citizens are entitled to receive the honest facts on costs and revenues, and that proper accounting should not classify facts according to who receives them.

Introduction

To young people a fifty-year anniversary celebration probably sounds like commemorating a great historical event. To a person like me, it is a 50-year young anniversary. My business career covers 46 of those years, and I am frankly surprised that GAO is only 50 years old. I guess even I took its existence and its services for granted. The citizens of the United States have been extremely fortunate to have enjoyed the excellent management that GAO has had. The theme of this meeting is, therefore, most appropriate in light of past good management foresight. I feel fortunate to be among those asked to appear before you because "Accounting Procedures and Reporting" is literally the guts prerequisite to "Improving Management for More Effective Government." Furthermore, improved management is the connecting link between a "System" or "Establish-

ment" anchored to the experience of past growth on the one hand and the freedom to experience new and more dynamic growth in the future on the other hand.

Furthermore, it should be stated at the outset that at no time in this past 50 years have we been faced with the great accounting problems we face now—caused by inflation. This is brand new in the life of GAO and its 50 years of existence. But I must hold my comments on this subject for later in this presentation.

Quality Accounting Serves an Ignoble as Well as Noble Purpose

While I know most all of you are particularly interested in "Government," the theme of this meeting, "Effective Management," is applicable to every phase of life that exists in the United

confuse up-to-date mechanics with quality of the product. The computer has made this diversionary tract even more attractive than when handwork was necessary. With computer speed we can build more useless accounting castles than we could ever imagine with handwork or mechanical machines.

As a consequence, at times the computer has created a Berlin wall between the needs of management to use its effectiveness and the facts needed to improve management decisionmaking. We must keep in mind that decisionmaking by readers is the end use of all accounting products.

One solution is for management to dictate and approve the facts it needs for effective operational decisionmaking, and for technicians to determine the mechanics of programming and building of computer systems to supply those facts. Too often we let the computer mechanics dictate which facts are provided to management without requiring the management to state and assume the responsibility of the architectural design of the information needed to move the most effective decisions. If the architectural design and responsibility therefore is supplied by management, it becomes the accountant's and auditor's responsibility to fill in the specifications.

The communication of a quality (i.e., reliability) accounting product from the computer to management has not improved in the same degree as have the mechanics of codifying, sorting, and tabulating. New accounting procedures require that this effectiveness be reversed. In this area of procedures, we certainly are not utilizing effectively what is new in accounting and, therefore, the opportunities for increasing the utilization of the computer in accounting at a lesser cost are legion. However, the need for improvement of form and greater sim-

plification of computer communication for effective management is not the subject for my discussion with you today. I would rather emphasize the improvement of raw data upon which the computers feed. Until that is done, the computers cannot produce and management cannot have reliable data that is prerequisite to effective management.

Internal and External Reporting Must Be Coordinated from a Single Accounting System

The difference between internal and external accounting is like the difference between underclothing and top clothing. They supplement and support each other and one cannot be eliminated from the other without destroying the effectiveness of both. In articles, speeches, and textbooks, we often confuse readers by placing undue emphasis on one or another of these levels of reporting as being more important than the other. Neither is more important than the other. If the internal reporting among a train crew were not reliable and accurate, the engineer could not use the train externally. Both are needed for effective management of the train. Our accounting systems function the same way.

Over the past 40 of the 50 years about which we are speaking, we have advanced a new concept for internal reporting, which is completely disengaged from external reporting but constitutes the only reliable basis by which external reporting can exist. This concept is (1) to formulate internal reporting around the concepts of management dictated by the personal habits and talents of the particular manager in charge and (2) to base internal accounting on concepts of cost accounting which represent as accurately as possible true "economic costs" at each level of management supervision.

I want to spend a little time on these two steps of internal reporting before moving on to external reporting.

Use of Modern Personalized Management Internal Reporting Systems

Success in the use of modern personalized internal reporting systems under Step I has been achieved in some instances through the use of "Responsibility Accounting" and "Functional Accounting." The use of the adjective "personalized" is to emphasize the communication root of a proper system. The system must answer questions for the manager which he personally believes must be answered to maximize the utilization of his talent as a manager. The label on the system is of no consequence: responsibility accounting, functional accounting, or any other name. Internal accounting systems are too often designed to solidify procedures around some precedent or stereotyped form of communication of costs that do not tell the particular manager what he needs in order to be effective. Such a system acts as a Berlin wall to the manager because he can't get through it or can't change it.

The system is often a bookkeeper's concept of what management should have and he assumes the internal reporting system should be the same for all managers, regardless of their individual abilities and methods of thinking.

Breaking down this wall is one of the most important steps in utilizing what is new in internal reporting. Therefore, modern personalized management internal reporting must be audited periodically to evaluate its communication value to management. Adjustments should be made where needed, just as we would adjust cost figures to proper amounts as a result of an audit. A peri-

odic audit of the efficiency of management information reported is equally as important as auditing the cost figures themselves. Very seldom, however, does the auditor-accountant go to management and audit the sufficiency and timing of the receipt of the right information. Thus, deficiencies in the information may be crippling or preventing the manager, without his knowledge, from making the best management decisions of which he is capable.

Modern personalized management reporting systems have probably been most widespread among electric and gas utilities. In this industry external reporting was required by law to be uniform for intercompany comparison purposes. While that straitjacket all but prohibited personalized management internal reporting, the same straitjacket activated design of a system that enabled management to get what it needed from its internal system without impairing uniform external reports in the process. Thus, both internal and external levels of effective management were preserved insofar as reporting was concerned.

The staffs of the Federal and State commissions readily saw the advantages and approved the use of personalized management reporting systems to enable these regulated utilities to reduce costs of operation and thereby benefit the public. At the same time, the internal systems developed provided analytical detail which facilitated the preparation of external reports in accordance with Uniform Systems of Accounts applying to all such utility companies. Consequently, electric and gas regulated companies had the traditional straitjacket of external reporting removed internally and were able to design effective internal management accounting systems. Yet most commercial and industrial company personnel still believe that their companies must live with external reporting restric-

tions when they are developing internal systems. It is not so.

Commercial and industrial companies, except for service companies and similar organizations, have not utilized personalized management internal reporting systems as they should have to achieve effective management. Neither have governmental agencies. An extension of internal reporting systems in these areas should greatly improve management and result in reduced operating costs that will benefit the public and our economy.

Room must continue to exist for personalized internal reporting systems in defense and other industries that will be subject to the Uniform Cost Accounting Standards (UCAS), if they are properly promulgated by the Board created for that purpose. The real bite of UCAS applies to the definition of "cost" as used for internal reporting on which I will comment later.

Thus, on the question of getting greater management effectiveness from personalized internal reporting systems much is yet to be done in all walks of life, corporations, all levels of government, hospitals and welfare activities. We in the accounting field all too often confine too much of our attention to verifying recorded costs without first placing on management the crucial decisions or concurrence of what information is needed for its effective management. We, as auditors or examiners, cannot assume that we are qualified managers and thereby take responsibility that the information provided is adequate to manage effectively. At best such systems are poor substitutes for those which management itself would design.

If management admits it doesn't know what information it needs for decision-making, that fact is probably more conclusive than any other fact that management is not capable of effective management. Disclosure of this admission is

one of the most important points that can be made in any accountant's report. However, once responsibility for data identification is placed on management, effective management usually eliminates a bulk of trivia and trash in internal reports. This in turn eliminates substantial costs incurred all the way from the field to the top office in gathering raw data that is to a great extent useless.

As auditors and examiners we give far too little attention to the job of requiring management to assume responsibility to determine the information it needs. As management changes, the new management should be required to restate the communication reporting system it needs to meet its particular way of management. This does not mean that the auditor, examiner, or accountant should abdicate his responsibility to assist management in developing an internal reporting system and evaluating the cost of producing it. He must continue to build the specifications for the procedures to meet the architectural design of management decisionmaking information as dictated by management. He must continue to be accountable for evaluating the internal control of the system.

The cost of production of an internal reporting system must always be measured against its worth for decisionmaking and internal control. The system should make clear where the costs of accounting outweigh the benefits to be achieved and where sampling will serve the same purpose of complete tabulation, etc. This procedure in styling a personalized reporting system is so new that it is seldom used—and yet so old that few people recognize that it was the system that existed when one-man managements were common. Management often does not know that personalized decisionmaking data can and should be available; therefore, the accountant must take the responsibility for pressing management

to appraise this approach and should not wait for management to demand it or criticize accounting for its failure to communicate data to management.

Personalized management internal reporting systems are like being fitted with a new suit that must be tailored to fit—that fitting may be perfect now, but it may not last forever. Conditions of all descriptions change. Like the need for a new suit to fit the changed conditions, so we need new and revised internal reporting systems to repersonalize the system for a continuing management that operates under changing conditions and different requirements for effective decisionmaking. How often this review is needed varies from company to company, but a review every 3 to 5 years is generally advisable to prune useless data and gather new data.

How do these responsibilities tie into government staff and my work as a member of the external accounting profession? I would say our responsibilities are just about the same. The government staff as it works with other agencies and other institutional or corporate problems is more guided by a "questioning" posture on behalf of the public than is true for the outside public accountant. However, the intensity of questioning should be much the same. Too often the outside public accountant seems to have a blind spot with respect to his own management abilities. As a result he confuses a substitution of his ideas on management information for his responsibility to place on management the responsibility for factual data needed for effective decisionmaking. As government staff, you are often placed in the position of writing laws or regulations about management responsibilities and reporting requirements, prior to management's participation in a project. Thus, you must exercise a greater degree of care in placing revision responsibilities on management.

One of the best illustrations of this double responsibility is the assignment of the Comptroller General to be Chairman of the Cost Accounting Standards Board, which has the major responsibility for Uniform Cost Accounting Standards. The standards must be set up so that they can be fitted with the personalized management internal reporting desired and necessary by each individual contractor. The standards must also be designed to delineate clearly and uniformly the true economic cost of production and cost divisionalization so that third-party review of management's prudence and effectiveness is possible. At the same time this cost divisionalization must provide for the application of pricing policies established by third parties. In this case, the government.

If UCAS are successful in meeting all four objectives, they will place on management of both contractor and government the clear opportunity to discharge their responsibility for effectiveness: if not, we can expect more Lockheeds and Penn Centrals in the future. UCAS will not eliminate management problems, or ineffectiveness. They will not enable such problems to "surface" early enough so that effective management of both government and contractor can take action on them.

Use of Economic Costs in Internal Reporting System

Concern at all levels of proprietary ownership for the quality of management whether in government, corporations, institutions, etc., has led to questioning the internal reporting of practically every entity. This interest in "knowing" is consistent with a proprietary right to know. The day of owner-management in corporate affairs in the United States is about over, except in the very small entities, and secrecy from public proprietary interest

in government is only warranted at the most sensitive level. Management in all other walks of life in this country is hired help.

Each segment of the public is very "nosy" as to the results of operations for every entity in our economic system. This is only possible in a free country, so that we have a basic consistency between these two conditions: i.e., the demand to know and the right to know. Thus, internal accounting reports of all entities are now constantly perused by and on behalf of the proprietary public.

When most internal reports were conceived and designed, management did not expect them to be used by proprietary interests not versed in the loose vernacular used in such reporting systems. As a consequence, in internal reporting used, such terms as "cost of so and so" or "profit of division X" or similar ostensibly conclusive or unmodified nomenclatures are completely untrue. Such terms would more properly be "certain incurred costs" or "revenues or sales net of certain costs" but certainly not "cost" or "profit" in any total or defined way. Such loose reports and loose terms are as about as "communicative" of reliable data as that fill-in figure of speech phrase "you know" that punctuates all oral communication today. Both are meaningless and carry no values of communication. In internal reports, however, we have great responsibility for making terms we use meaningful so that they mean what they say to our boss the "nosy" public. A refinement of terms so that our reports are more communicative will greatly improve our accounting systems as well as their usefulness to all of us. I am positive that such a disciplining will double the thinking power put into such reports by accountants. More important, the usefulness of reports thus prepared, either through elimination of unnecessary data or through increased accuracy, will be doubled.

Internal reports cannot include all costs in an economic sense as I will later discuss in relation to external reports: therefore, accurate descriptions are important for not only what they state positively but also for what they do not say. A fundamental standard in the design of internal reports is to limit revenues, income, expenses, and other costs of a division to those supervised by the manager of that particular division. Other economic costs of that activity may be supervised by and be the responsibility of other higher echelon managers. These costs should be included in the latter's reports. In this way each tier of internal reporting includes only revenues and costs for which the particular managers of that tier are responsible. The final report of the chief executive to the public would include an accounting for his tier costs and all prior supervised tiers. The sum should be total "economic cost." Therefore, the new exposure of internal accounting reports requires new accounting systems that are more accurate in defining the particular revenues and particular costs being reported upon.

It has been an old habit to use hackneyed words and phrases in internal reporting, almost slang. Only by long association with such reports does one develop the ability to interpret them. When used by strangers, such as the public and government staff who are not constantly living with them, they are obsolete and can be dangerously misleading. For instance, the use of the term "profit" when one is referring to pretax profit is a complete misnomer, yet it is commonly used under the "you know" concept of communication.

These reports are particularly wasteful in leading public readers down a wrong path and to a wrong conclusion. For instance, I recently had reason to hear a report that the Defense Department had a very large supply of ice chains on hand

in Vietnam. Since it is natural to question how much ice one might reasonably expect to find in Vietnam, the existence of these chains in inventory seemed self-evident indication that ineffective management existed. However, the report was incomplete, misleading, and wasteful, since the chains were used to provide traction on mud roads. If the report had called these items "mud chains" instead of ice chains, the conclusion as to effectiveness of communication to management for action decisions would have been quite different.

Likewise, in practically all instances, internal reports should refer to "supervised cost" subdivisions of the particular department or division and not lead a reader to conclude such cost is total cost of that activity. I believe this point is particularly applicable to all levels of government, and I know it applies to all levels of corporate activity. We provide reports on "cost" as though such costs were total "economic costs," when they are not.

I recall reporting on the accounts of Bonneville Power Authority many years ago and qualifying the final results applicable to that division of government since no taxes had been charged. The final results should have been properly labeled as being before allocation of government services and carrying costs of government investment. A similar condition applies to practically every department of government when "costs" reported to the public are not complete economic costs. Reports on Vietnam costs should say "incremental costs" so as to distinguish clearly between total economic costs and those which are on-going irrespective of Vietnam, if the reports are to show these facts for effective government management.

Similar deficiencies in internal reports of corporations lead to misinterpretations and may be misleading when such reports

are given public distribution. All misleading reports to the public are divisive of public trust and therefore damaging to all of us, regardless of the phase of the profession in which we practice. This result is probably not intentional but certainly arises from lack of attention.

Some in our profession disagree that reports should reflect costs that economically tell the "whole truth" to the proprietary owners of all government and all business representing the public. Their counter argument is often that the public would loudly protest many of the things a minority of us think are desirable. However, to provide the public with incomplete reports in order to secure their approval is lying, and reports constructed for such purposes fail to maximize the ways in which accounting can be used for more effective government. The public must assume the burden of understanding proper and accurate explanations of true costs and accept the consequences of such factual reports in the action it takes. We as accountants and you as the government staff are guilty of bias when our reports do not clearly state carefully worded descriptions of what costs are or are not.

I hope that progressive accountants would eliminate incomplete phrases and titles that convey half-truths. The use of a few more words often enables me to tell the whole truth. All of us in accounting are guilty of intentionally misleading the public on this score. I will cover this point in more detail later, but we must emphasize the use of terms and explanations that at least have an opportunity to convey the truth on facts to the public, the collective and ultimate owner of all resources on which we report.

Misleading reports too often provide those who wish to criticize reported results with half-truths or whole untruths that can be damaging. We must eliminate such reports. An attorney in his role of

an advocate will use various approaches to try to get the witness to weaken or damage his case, regardless of the facts, if he can. We in accounting cannot indulge in the same sport. We must have a more sincere response to "effective management" by the public, so that that public can impose more "effective management" on governments, corporations, and legislators.

No purpose is served in not making a full accounting of the facts to the public even though at the moment knowledge of all the facts may be distasteful to that public. This is the newer look of accounting reports. Neither the government and its representatives nor corporations or other institutions should be permitted to slant internal accounting reports on the effectiveness of management. To do so is to ignite a time bomb that will explode at a later date. Experience has shown this to be more damaging than if the actual facts were known on a timely basis when corrective action, if any, could have been taken. This principle is true even if timely internal reports prevent election of presidents, senators, congressmen, or awards to corporations, cities, or States. I well know how naive this viewpoint is in terms of total accomplishment, but without "the accounting profession" striving to reach it, no forward progress will be made.

This concludes my comments on personalizing and designing internal reports and on the use of economic costs in internal reports. Both of these aspects should encourage new uses of internal accounting reports for more effective management.

Cost Accounting Principles Vs. Generally Accepted Accounting Principles

Generally accepted accounting principles have a new look today that needs to

be understood before it can be appraised. The economics under which the United States produces its wealth has completely changed in the last 20 years. At the beginning we were an independent unit in world production. Today we have lost a great share of that independence and we are almost a dependent unit. We have been so accustomed to thinking we have "made it" that we won't even tell each other that we have practically "lost it" in international competition.

Some 15 years ago we began a serious discussion of these so-called "generally accepted accounting principles," by the accounting profession. The very existence of a standard of "general acceptance" for accounting principles was and always has been confusing, so that the application of such principles has been nebulous and difficult to explain to each segment of the public. With the economic status of our country in a tailspin we cannot afford not to have the real facts. The greatest gap in understanding in the United States today is not among the races, among the youth, or in environment. It is in our loss of economic muscle. To tell that story requires accounting based on true economics. The absence of jobs for youth today is not attributable to the downturn of business but to the export of jobs that economically could not survive here. Who is telling the young people these economic truths so that they put their minds to pressure the right to survival? The politician is a novice in this field and runs helter-skelter destroying the country he has pledged to protect and help.

Since the dictionary states that a principle is a "fundamental truth," it is natural that interested public segments would expect a principle of accounting to have a crisp and apparent certainty in its meaning. Reconciling that definition with the double talk and double interpretation by professional accountants when applied to reports to the public was bound to bring

a reaction of criticism of the profession from that public as well as from those within the profession who can't reconcile truth as shown by our reports with truth in fact.

Most of the criticisms and comments were leveled at accounting principles as affecting corporations, but they apply to mutual institutions and to government accounting as well. Since public capital invested in corporations generates most of the wealth needed by the public, the defects of corporation accounting automatically called for improved management and management demands more effective accounting. The criticisms of accounting principles and the defective principles that existed colored the effectiveness of management of every company to Federal agencies. These defects must all be faced by the Cost Accounting Standards Board when it determines the Uniform Cost Accounting Standards that are now in process of determination. If the precedence of "generally accepted accounting principles" is to be blindly followed by the Board, the standards which emerge will cause grave injustices to various segments of the public. It will result in freezing into regulation the obsolescence of past practices that have denied the public the economic truth that it must have to adjust itself so that it can survive in our international economy that is so new to the world we now live in. To do otherwise would be surefire economic oblivion to our nation. Therefore, the benefits of utilizing what is new in accounting can be completely nullified by not pruning out what is old, obsolete, and decadent in accounting.

The Cost Accounting Standards Board must justify the reasoning behind every principle of cost accounting it adopts. Only in this way can the objectives of the congressional act of telling the facts be achieved, and only in this way can the United States be told the economic facts

that face it internationally. All costs comprising true "economic costs" must be defined, even though the definitions may conflict with generally accepted accounting principles which were not designed to accumulate the "economic cost" of production.

Accounting principles which recognize true "economic costs" so that all segments of the public will be justly treated is a new and emerging concept and is not fully understood even by the accounting profession. At present it is grossly incomplete. The development of this emerging concept occurred by stages as our economic existence changed over the last 20 years from the nation being the source of most production to merely a "me too" participant nation in international production.

The recitations of shortcomings of accounting principles 15 years ago were shrugged off by the accounting profession, then scoffed at, and then defended in the name of experimentation, flexibility, management's right to set its own principles and the avoidance of strait-jacket rules. These reactions were made by government and corporate managers alike, but all are red herrings to the real issue of refining our communication so that true costs and revenues are conveyed to the public. True costs as I refer to them mean full "economic costs."

I am sorry to say that the members of the accounting profession were in the forefront of resisting a confrontation with inadequate reporting as a result of undefined accounting principles. The reports of the presidents of our professional society make interesting retrospective reading today. It is even more interesting to read the viewpoints of some corporate, academic, and government personnel in retrospect and compare those views to some of the present expressions from the same sources. Some of them would lead

one to believe that production of goods and services in the nation should be presumed to be sinful—as though production of wealth could be dispensed with without economic damage to the very voice that advocated such economic recklessness.

Such retrospective analysis, however, is not productive except as a method of learning how to approach correction of a deficient accounting product. We need to see what caused deficiencies and why such deficiencies became so deeply entrenched in our year-to-year reporting, even though the results communicated to a reader made him believe untruths.

Some find it difficult to understand why the accounting profession can constantly update and refine "auditing standards" but cannot do the same for "accounting principle standards." The answer is simple. Auditing standards have a terminal life without any retrospective effect when changed. Each year stands alone. On the other hand, accounting principles have a lifespan equal to that of the assets or liabilities recorded by application of such principles of accounting. The roots of today's accounting principles run deep into past history when conditions were almost contradictory with today's conditions. Yet accounting principles of 50 or 75 years ago are made the basis of today's reports when they are unrelated to today's economics. Thus, accounting principles carry over from one year to another for many, many years, often overlapping several human lifespans. Any change in the definition of accounting principles affects the carried-over assets and liabilities which have been reported upon by both management accountants and government. Each of these authorities reacts the same in resisting change if "change" means change in what was previously reported. The idea of changing yesterday's facts to be honestly reported consistent with today's conditions

is abhorred by managements, accountants, and Federal agencies alike. The only way to change the accounting within Federal agencies under such conditions is through political changes of the personnel involved.

The test of ability to change irrespective of prior reports is probably the best test of independent thinking, or forthright responsibility, to the public segments affected. If one opposes embracing substantively improved facts he lacks the necessary qualifications to use "new accounting" to improve management. A more truthful position is best illustrated by the facts behind a story attributed to Abraham Lincoln. In the morning he argued a legal case from his offhand reactions to the issues and won the case; that afternoon he had another case involving the same point before the same judge. When asked to reconcile his viewpoint with that of the morning, he said he had thought he was right then, but in his afternoon case he dug further into the facts and on that basis he knew he was right in his second viewpoint.

I can illustrate this much more effectively by another situation that has spanned a period of 75 years, 25 more than the GAO anniversary period. No attention has been given to it as yet, even though the public is today suffering the burdens of "ineffective management" of the Railroad Regulatory Commission, the railroad managements, the Treasury Department, and the Congress of the United States.

The industry is that of railroads, probably the oldest and largest industry in this nation, or the world. The roots go back to the days of William Jennings Bryan arguing in behalf of the public against railroads that were allegedly gouging a helpless rural public. Out of that experience came the Interstate Commerce Commission. About the same time

the Federal income tax became effective. The cost accounting system created for the railroads was inaugurated at that time—when the principles of depreciating and amortizing plant over the life of the property's usefulness were in their elementary stages, about the time of the Model T Ford.

The depreciation and amortization policies of the railroads were premised on the assumption that railroads would continue to be as useful, as they then were, forever. There were no roads, no trucks, no airplanes, no power driven water transportation. The greatest portion of the cost of plant investment was assigned to future users in the belief that under conditions then existing each generation could assign the cost without diminution to the next generation and thus put off the reckoning of cost forever. The Government even assessed Federal income taxes on this basis—and as a consequence overcollected taxes in the hundreds of millions from railroads as compared to other businesses. This scheme of avoiding the recognition of "true economic costs" of transportation prevailed until 1971, when true economics showed its ugly head. It took its first major victim, the Penn Central. When asked why did the Penn Central collapse, the answer would be that we didn't apply "what was new in accounting" since William Jennings Bryan and his famous court cases at the beginning of the century.

Had the railroad industry and the accounting profession recognized "what was new in accounting," the "economic cost" of transportation would have demanded changes in railroad accounting. The failure to recognize underlying railroad economics eventually brought Penn Central to its knees and is about to do the same to all in that industry.

Everything pertaining to the railroads has changed since the Interstate Com-

merce Commission was formed except its cost accounting for public and tax use. Blatant ineffective management by everyone concerned—the accounting profession, the Interstate Commerce Commission, the Internal Revenue Service, the railroad managements, and Congress—has brought a needless loss upon all segments of the public.

The alleged basis for the improper accounting was to restrict profits of investors and shippers for the benefit of the public. In effect these very restrictions resulted in serious detriment to all segments of the public. To starve the horse that pulls the plow will also starve you. The same conditions applied to the utilities of this nation only a few years later in 1919-20, but the 1932 depression, the Roosevelt government and regulatory commissions immediately invoked needed improvements, recognizing "economic costs" in accounting in the 1930's and converting inadequate accounting to what was new. Generally, the utilities have continued to have modern accounting in all respects except one since that time.

The Newest Problem— Accounting for Inflation

The greatest advance in modern accounting is now waiting on our threshold—waiting for proper implementation. On it depends the continued productivity of every institution upon which all segments of the public now depend. It will tell us truths we never dreamed existed. They won't be pleasant but will be honest and from them we will take actions that will save us from further disasters. These actions will include the effectiveness of our representative government, the corporations, and our institutions of every description.

This "newness" in accounting consider-

ation is the recognition of "cost of living" in terms of present-day price-leveled costs. In a manner, we have a mammoth reproduction of railroad economics now applying to every activity in which we are engaged. We are consuming the buildup of values of yesterday in today's living and making no accounting for the costs being consumed. This results from inflation—paying for yesterday's assets in today's diluted dollars and believing that the dollars we pay are true economic costs when they are not. We thus are misleading the public by showing them an understatement of the costs they are presently consuming to live.

The public is being misled into the belief that they are consuming no more than they are paying for. This is an untruth—and new accounting procedures require these facts to be shown if we are to have effective management of our economy at all levels. We are understating the "economic costs of corporation production," and this is beginning to reflect itself in such incidents as Lockheed, Penn Central, Rolls-Royce, and thousands of comparable situations of lesser size. But we must emphasize this is just the beginning of the problems that can become commonplace if costs are not adjusted for inflation.

Other reflections of improper accounting for inflation appear in the deterioration and pitiful condition of primary schools and a resultant cheating of the children of America; the colleges which are shortchanging the young adults; the hospitals which are losing ground in maintaining health service; the poor who cannot survive the diluted dollar; the cities and States that cannot maintain decent living conditions with the diluted dollar; the retired social security worker who cannot stand still even with continued increases, in face of the diluted dollar; every Federal Government department, the defense structure of the nation

and our balance of international payments which is constantly unbalanced by the diluted dollar resulting from inflation.

Today it is new in our accounting systems to reflect the cost of inflation or to issue reports on cost in price-leveled dollars. Reporting for the effects of inflation should have been done years ago to forewarn of these coming conditions. That timing is now too late, but the use of such newness in accounting can warn of coming further catastrophes and the costs which must be met to avoid them. Without utilizing this new accounting in our reporting practices to the public, we provide a blindfold for that public so it cannot see the destruction occurring to this nation's economy and its people. Even our growing joblessness is a consequence of the economic facts not getting to the public. Our taxes are excessively stated in terms of economic costs.

If we were to build a computer model of the effect of these forces in the future, the computer would print out a replica of Penn Central or Lockheed but a billion times as great. On a band-aid basis, we might provide for a slow collapse of Penn Central and Lockheed, but where would we find a pair of big arms strong enough to hold up a nation in that condition? Throughout our society, both in the private sector and in government at all levels, we are using up the warehouse of values built up in the past, but never costed into current living. Now we often hear that the public will not pay for replenishing the warehouses with living conditions that it has enjoyed in the past. If true economic cost had been reported, the seed corn would not have been eaten and we would have been less wasteful of resources in other respects. The use of resources would have been far more frugal and replenishment far less costly and we would have had a far stronger nation to exhibit to the young.

A new accounting based on "economic costs" will provide the facts so that "effective management of government" can exist, as well as effective management of all the other entities of this nation. Effective management at all levels is a prerequisite to the need for any government at all.

While addressing ourselves seriously to accounting for inflation as a new procedure, we must not lose sight of the fact that inflation has been with us since the beginning of time. Those responsible for reporting to the public who refused to report on inflation costs must bear the negligence for not acting early enough to provide proper warnings of Penn Centrals, Lockheeds, and even New York and other big cities and others to the public. Those who must be first charged are the accounting profession, Federal and State government regulatory bodies, and the Defense Department. The reasons why this delinquency has occurred in reporting true "economic costs" are several:

1. First, the failure of the accounting profession to adopt price-leveled accounting as a required accounting principle so that all entities would report true "economic costs" in stating their financial position and results of operation.

2. Second, in addition to the foregoing failure, the profession was far too subservient to managements of all entities, corporate and government, and failed to press for reports on "true economic costs" consumed. Cities and governments never reported consumption of assets as a current depreciation charge. Corporate management never reported price-leveled dollars, but reported only increases in profits based on dollars that were not leveled. These managements, like those of the railroads, at any particular moment were interested primarily in the short-term period of their remaining administrations. Bad news that would accrue over

a long-term period was to be avoided in the short run even though eventually the day of reckoning must come, hopefully as a responsibility of another management. This is a clear illustration of collective ineffective management by the accounting profession, Government regulatory bodies, and corporate management. None can have a valid excuse for their negligence in reporting the "true costs" of an obvious condition—of which they were well aware.

3. The third reason is "politics" and here the full responsibility falls on Government personnel and management. Its representatives coerced those in the accounting profession to prevent their use of the newest accounting to report the "true economic costs" to the public. In addition, these same Government managers would not initiate actions of their own to tell these basic truths to the public. It reminds me of the recent public reaction to the exposé by the *New York Times* on the report on managing the Vietnam war. In our case, not reporting proper "economic cost," no international diplomatic relations could be involved—only a malicious desire to deny the obvious could be charged to Government for withholding true cost reports to its own citizens. The Federal agencies went further than "classifying" such "economic cost" facts—they did not even allow a record to be made of them. Without a complete refutation of past policies in this regard in the use of new accounting techniques, Government will be turning its back on "new accounting" reports of truthful facts that will contribute significantly to effective management of Government.

Discussion

In view of your remarks, is there a change in the offering in Accounting Prin-

ciples Board Opinion No. 6 to require price-level accounting?

Mr. Spacek: I don't think there is anything in the offing because I don't think the accounting profession is strong enough to set forth the requirement to make a correct determination on price-level accounting. I believe that if it possessed the strength to address itself to the problem and took a truly independent and economic view, it would issue an opinion requiring price-level accounting. I don't believe the APB has the initiative to change its position and there will not be an opinion on the subject unless there is a public demand for it.

In reference to price-level changes for a statement of economic cost, should Opinion No. 6 be amended to permit it as a supplemental statement for internal but not for external purposes?

Mr. Spacek: It seems to me that there is a certain amount of error or, let's say, deception in doing that. If price-leveled financial statements are needed for internal purposes then how, and under what circumstances, could they be denied to public investors? If it means so much for internal purposes, why shouldn't these same facts be made known to the public for its information? I don't think Opinion No. 6 will be amended, at least in my lifetime, for this purpose. That doesn't mean I won't fight for it, but I have fought now for some 35 years for it and it hasn't come yet. I have sort of lost hope that our profession has the strength or the ability to think in terms of economics to make a proper correction of its views.

The Board has issued its Statement No. 3 recommending and even urging price-level statements to be issued to the public as supplemental to the official financial statements. Some few companies prepare price-leveled statements for internal purposes, but I doubt they use

them in making economic decisions as such statements should be used. When such price-leveled statements are required for product-pricing purposes, they certainly will be prepared promptly for internal use, and then I think used externally as well. But until the public either as investor or consumer demands to know these facts prior to being hurt—like in the Penn Central case—the effect of price-level changes will remain buried and the APB will not act to meet this public responsibility.

Recently in the literature, there has been some theoretical discussion concerning accounting for human resources and presenting the data in monetary form on financial statements. Do you believe this is practical and, if so, what would you suggest as measurement criteria?

Mr. Spacek: I think it is a lot of bunk to put such as asset on the balance sheet. It is not an asset that is owned—it is a hired asset. There is no way to measure its value because a person may be alive today and dead tomorrow. Human individual resources and their evaluation should come from the public confidence and judgment of them. The value of such human resources and public opinion of their value are as fickle as a woman's emotions. High respect one day is gone the next. Management's ability may be of one person or of a group and they are not bound together. They are not slaves and, therefore, can't be sold. Assets are owned resources. Human beings are not.

Bob McNamara is a great friend of mine and I worked with him a good many years. When he went into the Kennedy administration as Secretary of Defense, he was a resource of great value. Today I don't know that he would get many votes from the same people. I don't necessarily think that means that

he doesn't have great value either. But that's beside the point. Management value is dependent upon "what have you done for me lately" and that is a retrospective value, not prospective.

There is no such thing as evaluating one another in terms of a balance sheet. I think it would be pure fallacy to put human resources on a financial statement as a measurement of asset value in economic terms. I have been blunt only so that I could make my point quite clear.

I note that you feel that most of the criticisms and comments leveled at accounting principles as affecting corporations are also applicable to Government accounting. Could you be more specific?

Mr. Spacek: Well, I believe that to be specific would be quite a presentation, but one principle in this category is the question of reporting values of assets in financial statements. Let's take the SEC for an illustration. The SEC prevents proper values or evidences of values of assets to be presented in any balance sheet unless the company is going to dispose of them, and even then, they can't be in the financial statements, but in the text of the company's report accompanying the financial statements.

The reason why they do this is because in 1932 we had expressions of value that were opinions almost picked up off of the street. You just asked a fellow, "What do you think of this kind of a plant?" and he'd say, "Well, I think it is worth \$10 million." So you put that figure on the books. Now we have come a long way since 1928-29. We don't have those kinds of valuations. Our valuation process has greatly improved. We can get better ones today. We need to express values as they exist in our environment so that the investor, who is far removed from the various enterprises, has these values on the balance sheet so he

can appraise them and act accordingly. We accountants don't like to put them on the balance sheet because it requires us to do a little thinking to see whether they are good or not and to see on just what basis they are produced. SEC avoids them because they may not be permanent, but nothing is of permanent value, including the cost figures SEC insists on showing.

I think that the Federal Government has prevented such values from being on the balance sheet and, in doing so, is preventing a stockholder from knowing what values he possesses, resulting in disservice to the public. It permits windfalls to a stockholder who may buy into an enterprise with substantial values and a loss to the selling stockholder. That loss to investor is caused by SEC arbitrary rules of denying the public information it is entitled to. If that public misuses proper information, it is entitled to make its own mistakes. A stockholder should be told the evidences of value that exist and also told that a lot of the assets his corporation has on the books are not worth the paper they are written on.

For instance, is there \$6 billion of plant owned by Penn Central? Is there \$2½ billion plus of equity in Penn Central? The answer is "no." You couldn't get buyers for it, let alone get that much money out of it. If you got that much money out of it, there is no reason for it to go into bankruptcy. The absence of value to the assets on the books was misleading to stockholders and was required to be shown by the practices and thinking of the Interstate Commerce Commission.

Those illustrations have been caused by government. (When I say government, I am talking about personnel of government.) At the time they did it, it was the popular thing to do and maybe they, as personnel of government, can't

be expected to take a proprietorship point of view for the public, but neither can they "protect" the public—they can only see that to the best of their ability the public is as fully informed as possible.

Would you suggest that with a change in management in an agency all internal reporting systems be reviewed to determine whether they fulfill the needs of the new management?

Mr. Spacek: I absolutely would. I would not hesitate to say, "Now listen, you're running the show now and I want to make sure that you have the tools that you think you ought to have to run it. I don't want you to wait until something fails, and then say, 'My God, why didn't you tell me?' You tell me the tools you need to fix this engine and to run it." Then let's give that management the accounting tools he needs to use his talents, whatever they are.

We don't do this now in accounting—don't misunderstand me—but we darn well should do it. We try to work it into accounting but it isn't a specific responsibility we carry except as our conscience dictates. I do believe it is necessary because the monkey is going to be put on management's back for the adequacy of performance and, therefore, it must have the accounting it wants so that it can perform. If the accounting isn't right to fit the new management, change it to what that management thinks is right. If he is going to be the manager, let him have the tools he wants.

What should the accountant do if he finds that management is unwilling to assume the responsibility for the design of the information needed?

Mr. Spacek: Well, number one. I think we should then compel him to say so. As far as I'm concerned, such an admission proves that he does not have the

capability of being manager. Now that doesn't mean that he has to do it 15 minutes after he takes over, but it does mean that he has to be responsible for what statistics he gets, the signals he gets, the information he gets, in order to pilot the plane that he is on. He has to say what his flight plan is, what he needs, and what he doesn't need. Instead of we accountants telling him that he has to have this or that in order to run the company, we have to put this responsibility where it belongs—on the fellow who is to manage. As accountants we don't know enough to tell the manager what he must have. Many accountants think they do, but they are fooling themselves as well as others. If the manager says he doesn't know, I would print that right at the top of the label because it seems to me that means "get another man to run it."

Assuming you could redirect the programs for education for accountants, what suggestions would you make?

Mr. Spacek: Educators are in a terrible spot with respect to accounting (I don't know what I would do if I were one) because we don't have objective standards of accounting. What should an asset in the balance sheet represent? What should a liability represent? What should an income account represent? How do we state the ingredients? For instance, we have a lot of public discussion of the ingredients that are shown on drug bottles but we don't have any discussion of the ingredients that are seen on financial statements. We only discuss procedures in arriving at the end product—not the standard the end product must meet. The accounting profession has failed to do this and this is what I have tried to bring out.

I'll explain why the accounting profession has failed to do it. The profession has developed over a relatively short period of time. After all, our industrial

setup is only about 75 to 100 years old and it was previously a privately owned enterprise system, which was interpreted to mean that the owner could do as he pleased. When we got public investors, somebody said that we would have to do something about making sure that what was told to these investors was the truth. So that is when the "public" accounting profession was invented, even though accountants existed long before that to serve the owner.

But when the accountant started serving the public, he didn't switch his ultimate allegiance from the management to the public. He looked at himself as a notary saying, "Yes, this is what management did." Well, that wasn't in accordance with the concept of what his job was. That concept is still fuzzy and while SEC, FPC, and other commissions have provided a forward force to better accounting, they also were impervious to the real meaning of what the concept of the public accountant was. As a consequence, they didn't demand that the public accountant perform per his conceptual responsibility instead of his so-called "evolutionary" responsibility. That was what the facts were that management should have reported to the public. What were the facts in presenting this information so that it met certain communication values to the recipient of the information—the investor? This hasn't been done until more or less recently and even then it has come as regulatory rules instead of stating "principles" to be met. The public has pretty well now demanded that they are the people that the accountant is to serve, in addition to management, and in case of conflict, the "public" comes ahead of management.

I would say that a good share of our time at the Accounting Principles Board was spent arguing as to whether or not we were merely to let the management

determine its financial statements and we were just supposed to say, "Were they trying to be honest in doing what they were doing?" You can be honest in telling somebody what you've done but if you aren't communicating the right facts to them, is that dishonesty? It may not be dishonesty but it is failure or lack of performance which results in the same damage to the reader. You have to tell the public what you intend to tell them in financial statements before it means anything to say that the accounts are properly stated.

In other words, management was allowed pretty much to determine its own reports, under its own cost system, under its own principles. That private domain over the meaning of accounting was a violation of the partnership with the public to join them as owners. That was all right when one man owned a company because he knew enough about the business that he could sort out the chaff. The public can't sort out the chaff. It hasn't been more than 4 or 5 years since we started thinking that the public has a proprietary interest in setting up accounting standards that will convey meaningful information to that public.

How can you educate people on a proper basis if you don't know these objectives and can't properly define them? For instance, I always admired the legal profession. I have always regretted that I couldn't be a member of it. They are so flexible. In presenting my remarks I omitted a story of Lincoln that was told in Illinois about the time when he had two cases before the court. He won his first case in the morning. In the afternoon he looked over his desk and he had a case on the same issue before the same judge but he was on the opposite side. He looked up the facts and he found out that the facts and the law really supported him in the afternoon. When the judge asked him to reconcile his position

he said, "In the morning I *thought* I was right. This afternoon I *know* I'm right."

I have a great deal of sympathy for teaching because practically every teacher has to teach like one of the blind men who went in to see what an elephant was like. He has to teach what in effect his experience has exposed him to, rather than having objective standards for financial presentation purposes.

We talk about accounting principles a great deal. Accounting principles are merely a method sharply describing the objective of what you are trying to tell the public in a short report or what you are going to tell anybody in a short report. Define your terms. That is all accounting principles accomplish. Without that definition I don't believe you can teach well, but the answer to your question is, yes, there should be a great deal of improvement in the teaching of accounting. Before I say that, I have to say at the same time, that you have to give the teacher some tools to teach with, based on principles, not rules which no one can relate to "good accounting conduct." If educators disagree with tools on that basis, they can teach their own ideas too, but they could then reconcile them to the reasons for accepted principles or objective standards and thus give students an education that will help them think. Now, teaching accounting is a process of taking a course in memorizing rules. Teachers can teach all sides of the issue once they have clear points of view to reconcile to and start the student on a thinking career.

You stated that in establishing uniform cost accounting standards, the Cost Accounting Standards Board should determine the right cost accounting standard irrespective of generally accepted accounting principles because they will determine those on the basis of what is fair to each segment of the public, being

the supplier and the user. In this case it will be primarily concerning the Government user. Do you agree that if the principles are properly stated, they will apply to any user and the generally accepted accounting principles would presumably have to change to meet that?

Mr. Spacek: My answer is absolutely yes. The generally accepted accounting principles have not given emphasis to determining correct cost accounting as distinguished from proper valuation cost accounting. We have used both interchangeably and we have never distinguished between the two, or defined each and its use. I believe that I am looking for the Cost Accounting Standards Board to establish a record that will be extremely helpful in correcting accounting principles for all concerned, whether it is in the Government procurement area or in the investor reporting area.

Do you make any distinction in your comments on price-level accounting between internal reporting and external reporting?

Mr. Spacek: No. If price-level accounting is justified by what it conveys to a user, it is required for both internal and external reporting. I think it absolutely is.

I would like to add an explanation—that price-level accounting, in the way it is discussed in the profession, in the infinitely accurate sense, is ridiculous. All accounting and all life goes by steps. For instance, you men and women get salary increases periodically. That doesn't mean that overnight on the date you got a salary increase your competence went up. It means that life cannot measure everything on such a fine tuning basis and therefore there has to be stabilization for a period of time and a reevaluation from time to time. So it is with price-level accounting. The idea of arguing that price-level accounting is neces-

sary to adjust prepaid insurance is absurd—I just don't have enough interest to stand on a platform and discuss it because it is a useless exercise to meet the standards of communication that have meaning to the users of accounting. Life has too many important problems to discuss.

I think price-level accounting should be made simple. I think all accounting should be made simple. As much as possible, we should put effort in simplicity

so that principles can be understood and remembered without carrying along a book the size of Webster's Dictionary to figure out what the principle is. Now I don't mean the dictum, the accounting procedures, and things of this nature that need instructions. But the principle—what are we trying to shoot at—as I said before, ought to be something like the Ten Commandments. Simple enough so that if I really sat down and gave them a little thought, I ought to be able to remember them.

Importance to the Congress

Over the past half century the role of the General Accounting Office has become extremely important in the oversight function of the Congress, as well as in the operation of the Congress itself.

Several distinguished Americans have served as Comptroller General, and the agency has built an inspiring record of service to the Government and the Nation.

Congressman Thaddeus J. Dulski
Chairman, House Post Office and
Civil Service Committee

Congressional Record

June 16, 1971

GAO's Independence and Objectivity

The independence and objectivity of the General Accounting Office are equally as valuable and important to us as its competence. Perhaps the greatest tribute that can be paid to independence and objectivity is to receive criticism from both sides. The Comptroller General and the General Accounting Office have had their share of criticism from both sides. They have been charged with being too harsh by Government departments and agencies, Government contractors, and industry associations. They have also been charged with being too lenient by Members of the Congress—myself included on occasion, the press, and many of our constituents. Its true character, obviously, lies in between—where it belongs.

Senator William Proxmire
Chairman, Joint Economic Committee
Congressional Record
June 10, 1971



John J. Corson
Chairman of the Board
Fry Consultants, Inc.

John J. Corson describes his current activity (July 1, 1966, to present) as "consultant, corporate director, and trustee." Simultaneously, Mr. Corson serves as chairman of the board, Fry Consultants, Inc., and consultant to the Comptroller General of the United States; president of the Carnegie Corporation; president, Automatic Retailers of America, Inc.; and president, American Sterilizer Co. He is trustee of the Chicago Medical School, the Institute for Court Management, the Institute for Educational Development and the Salzburg Seminar on American Studies. He was a member of the committee appointed by President Johnson to appraise Federal employee compensation in 1967, and chairman of the committee appointed by Secretary Volpe, Department of Transportation, to study problems of air traffic control.

Mr. Corson began his career in 1932 as assistant to Douglas Southall Freeman, the biographer of the Confederacy and editor of the Richmond (Va.) News Leader. For 10 years, starting in 1935, he was a public servant, holding positions of executive responsibility with the U.S. Government and then Deputy Director General, United Nations Relief and Rehabilitation Administration.

In the early 1950's Mr. Corson became a consultant to government and industry and, with minor intervals, has continued this work. In the 1950's he held important consultant positions under President Eisenhower and was also a consultant on organization to the Government of Iran. During the early 1960's he served as chairman of a management survey team for the United Nations Economic and Social Council and also served President Johnson as a consultant.

He is the author of: Business in the Humane Society, McGraw-Hill, January 1971; Men Near the Top, a CED supplement paper, Johns Hopkins Univ. Press, 1964; Public Administration in the Modern Society (With Jos. P. Harris) McGraw-Hill, 1962; and The Governance of Colleges and Universities, McGraw-Hill, 1960.

The Uses and Limitations of Experts

GAO, perhaps more than any other agency in the Government, is continuously exposed to shortfalls in the management of Federal activities and to the need for greater competence in the planning and administration of our national affairs. We have witnessed a growing demand in the Congress for increasingly sophisticated assistance, both in the enactment of new programs and in evaluating the performance of established programs. GAO's capability to respond has been repeatedly strained by these demands and it has found it essential to add specialists to its staff as well as to turn to outside experts in an ever-increasing variety of disciplines. Mr. Corson points out that the application of the specialized knowledge and skill of a wide variety of competent experts can facilitate the conduct of the public business. But there are problems relating to experts and their use. The challenge is to link effectively the knowledge of the experts with the power and authority of the executive.

Since we are celebrating the 50th anniversary of the GAO, it is not inappropriate if I add a bit of history. A good full 30 years ago, I was in Washington on leave of absence from the University of Richmond. Each year as I remained here, I had to get a leave of absence extended. It took a little more talking each year but each time I was told: "We'll give you one more year, but you must find someone to take your place." In that predicament I did my damndest in 1938 or 1939 to induce a fellow by the name of Elmer Staats to take my place at the University of Richmond for a year. Fortunately I was unable to persuade Mr. Staats to become a professor of economics, and eventually he became Comptroller General of the United States. If I had succeeded in inducing him to go to Richmond, I might have ruined a fine career.

I will start this lecture from the same

bit of intellectual geography that Harlan Cleveland landed on at the conclusion of his lecture in this series. He said: "the crucial gap in society's manpower planning is the education of situation-as-a-whole guys—and gals. And that is why those of you who are willing to escape from your specialities and train to be general managers are so precious a national asset."

Before you accept Harlan's flattering conclusion too readily, let me remind you of the contrasting conclusion of another earlier authority who also had a great facility with words. He said 40 years ago:

"The day of the plain man has passed.—The plain man is too ignorant and too uninterested to be able to judge the inadequacies of the answers suggested to our problems. * * * The expert alone * * * can find his way about the labyrinthine intricacies of modern life. He alone knows how to

find the facts and determine what they mean. The plain man is simply obsolete in a world he has never been trained to understand. Either we must trust the making of fundamental decisions to experts, or there will be a breakdown in the machinery of government."¹

Both views, Harlan's and this latter one, which is by Harold Laski, I would contend are correct. The "situation-as-a-whole guy" (otherwise known as the generalist), if he has been helped to develop a new and essential skill, is a precious national asset indeed, for he can lead an organization. The plain man was able to lead in his simpler time without the aid of this recently discovered and essential skill that the "situation-as-a-whole guy" now has to have. The plain man demonstrated perhaps what William Allen White used to say, that there are three things any man can do: rock a baby, poke a fire, and manage a government bureau.

In more sophisticated terms, the administrative theorist of the 1970's presumed that the administrator need know little of the program, and little about the skills that it took to make the program go, like the engineer's knowledge of how to build a bridge. Indeed, under the logic of the 1940's, as the British put it, the administrator was capable of playing cricket on Monday, rugby on Tuesday, snooker on Wednesday, badminton on Thursday, go swimming on Friday, tackle tiddledy-winks on Saturday, and walk up a mountain on Sunday. But even by the mid-1940's, the makeup of many organizations had so changed that the amateur plain-man, the generalist, had begun to lose his grip.

The Multiplication of Experts

Bob Lovett, whose name most will recall, after completing a distinguished

¹ Harold J. Laski, "The Limitations of the Expert," *Harper's* (December, 1930).

period of public service during World War II, commented, in a speech in Princeton in 1946, that if all the specialists and technicians in Washington were placed end-to-end, they ought to be left that way.² Since Mr. Lovett spoke, the number and proportion of specialists, technicians, scientists, and professionals (and from here on I propose to use the term experts to refer to them all) found in the employ of the executive branch has increased greatly. Of 35,000 individuals in grades GS-15 and above in 1971, 54 percent had master's degrees or better. And of those who have advanced degrees, 6,000 are engineers; 4,900, physicians; 3,500, physical scientists; 2,100, social scientists; 1,000 biologists; and 1,000 are mathematicians and statisticians.³

This trend is reflected, also, in the makeup of the work force of the GAO. A decade ago, in 1961, GAO's staff included approximately 2,100 professional employees: 2,000 accountants and 100 lawyers. On June 30, 1971, of approximately 3,000 professional employees, 2,500 were accountants and lawyers, and the remaining 500, one-sixth of the total, included an array of experts unknown to the GAO a decade ago. The group included economists, computer specialists, engineers (five categories, indeed, of engineers), an actuary, operations research specialists, and mathematicians. In addition, the GAO has on call as consultants a social worker, a sociologist, a psychologist, and a score of other spe-

² "A Business Executive Looks at Government," *The Public Service and University Education*, Joseph E. McLean, ed., (Princeton University Press, 1949), pp. 71-72.

³ As reported in a letter to the author by Seymour Berlin, Director of the Bureau of Executive Manpower, U.S. Civil Service Commission, Oct. 12, 1971.

cialists. Some of you honest accountants still wonder what they do around here, but they are here—and this is typical, if you will, of other organizations—not only public organizations, but private as well.

This multiplication of experts is primarily attributable to the broadening scope of governmental activities. It is attributable simultaneously, of course, to what we have come to call the scientific revolution. The expansion of knowledge that we have seen over the last couple of decades has simultaneously both illuminated new needs and provided ways of meeting those needs. Each expansion of governmental scope has brought with it a new breed of experts: the oceanographers, environmentalists, urbanologists, for example, are some of the most recent breeds. And where this trend toward the use of the expert was not encouraged, as for example in the air traffic control operations in the Federal Aviation Agency, or as Bill Gorham told you in his lecture, in the framing of legislation by the Congress for Medicaid and environmental protection, serious and costly failures have been experienced.

The problem posed for the "situation-as-a-whole guy" by this multiplication of experts is similar to that, it seems to me, of the gourmet, who is offered an exotic dish, and asked to tell his host what ingredients went into this concoction, and how it was prepared. In the simpler times, about which Harold Laski wrote in 1930, the plain man, the generalist, might comprehend the efforts of the relatively few experts he had, but the problem for the "situation-as-a-whole guy" is how to use not a few, but many specialists whose more complex techniques are less intelligible to anyone other than his fellow experts than anything we knew back in the 1940's.

Some Traits of Experts

There is no denying that the application of the specialized knowledge and skill of a wide variety of competent experts can facilitate the doing of the public business. But that skill is often accompanied by certain traits that make the expert a hard guy to live with and require adjustments in the structure and the functioning of large organizations. Others writing of the function of experts in an organization have used three ugly words in referring to experts: tyrannical, arrogant, disloyal. While I describe each of these traits, think back in your minds and see if these traits have been demonstrated in the offices of this building.

The *tyranny* of the expert flows from the inherent complexity of the knowledge he applies. This complexity results in some instances in the failure of the administrator to hire experts because either he does not understand them or he fears them. In other instances, when the administrator does have experts, he is either unwilling or unable to dig so deeply into what the expert has to say that the experts become useless appendages because the boss does not know enough to put their knowledge to work. In still other instances, the administrator's unwillingness to dig and dig deep results in his becoming a Gulliver tied down by a lot of Lilliputian experts, in short, a "rubber stamp." If he would avoid that fate, the administrator would do well to remember the advice given by a hornyhanded farmer who said that: "If you want a cow to let down her milk, you can't write her a letter or call her on the telephone. You've just got to get right down beside her and get to work." So it is with the administrator and the expert.

Sydney Weinberg had an axiom that experts would well heed. Weinberg said "make it as simple as possible, but not

one damn bit simpler." The truly effective experts interpret their reasoning in words that are not only so simple and clear that you can understand them, but they are persuasive. In contrast, the expert "on the make," and you have seen a lot of them, presumes that he can demonstrate his expertise by his jargon, and many an expert, when asked to interpret his jargon, retreats behind its unintelligibility with such words as "don't ask me why, you wouldn't understand if I told you." And, of course, there are those actuaries, economists, computer specialists, physicists, and mathematicians who expect the boss to accept their counsel and not ask why.

The *arrogance* I speak of—perhaps the use of that term is an extravagant one, but it is descriptive—the arrogance of the expert is often reflected in the demand that he be permitted to report to the chief executive alone. The lawyers got away with that demand a long, long time ago. And many another expert has claimed this privilege since. Like the old ditty that the Cabots speak only to the Lowells and the Lowells only to God, so the actuaries, the physicists, the management scientists, and the economists speak only to the head man.

The *disloyalty* of the expert was pictured well by John Gardner, who pictures well a lot of modern concepts that are invisible to many of us. He wrote that: "The loyalty of the professional man is to his profession, and not to the organization that may house him at any given moment."⁴ His loyalty to the local organization is rarely of the same quality of that of the true organization man. He never quite believes in the organization. Indeed, within the organization, he represents and is loyal to his professional colleagues as well as, or more than, to

the head of the agency on whose payroll his name is carried.

As I worked over that paragraph in preparing these remarks, I thought of an old friend who is now Chairman of the Council of Economic Advisors. I envisioned Herb Stein sitting across the desk from the President. And if the President asks him to write, to say, or to do certain things, Herb Stein, being a thoroughly professional economist, must evaluate the President's request in terms of the standards of his professional discipline (mark the customary use of that word discipline). There are things that as an economist he can not say, positions he can not take, no matter the President's wishes. To make such comments or to take such positions would destroy his credibility with his peers. He is forced by the intellectual discipline to maintain a loyalty that supersedes his obligation to the President.

Coping With Experts' Traits

How does the administrator use and still cope with these organizationally objectionable traits of the expert? Louis Brownlow, the patron saint of public administration in the Roosevelt era, once suggested an antidote. He contended that a quality of the successful executive was a "catholic curiosity." It is said that this comment started a run on the Library of Congress for the papal bulls. But Brownlow was talking of the irrepressible desire of the really effective administrator to dig into every problem that comes before him, of the insatiable curiosity that forces him repeatedly to ask "why," and of the inability of the real administrator to sign on the dotted line because his subordinates tell him to. Thus, over time, by asking "why" repeatedly, he accumulates a working understanding of the substance of the fields of expertise on which he depends. The

⁴ Quoted by Alvin Toffler in *Future Shock* (Random House, 1970), p. 132.

administrator's curiosity does not have to develop in him an expertise equal to that of the expert. The expert must be granted freedom and the right to formulate his best judgments as to the technical aspects of the problem. Indeed, one should govern experts, as the Chinese proverb dictates, as one should cook a small fish—gently. Too much cooking, too much interference with the natural processes, destroy the flavor, he it the fish or the expert.

The administrator must be capable of understanding how and why the expert offers those judgments, for he, the administrator alone, has the power and the responsibility for decisions. And he alone will decide whether the expert's judgment, at a particular point in time, fits the political exigencies of that moment.⁵

Secondly, the administrator depending on experts must recognize that all the concepts of hierarchy—each man has one boss, and only one boss, and there must be straight, short, clear lines of authority—are, in an absolute sense, obsolete. The traditional organization would put engineers in one unit, economists in another, and computer specialists in still a third. But such organizational arrangements do not focus the expert's attention more on the problem and less on his discipline. They do not stimulate the needed intellectual interchange among different breeds of experts. If the administrator will couple with such a boundless and persistent curiosity as I have described the use of more flexible and impermanent organizational structures, he will more effectively control as well as utilize his experts.

⁵ For the very best discussion of this issue see Don K. Price, *The Scientific Establishment* (Harvard University Press, 1965) particularly Chapter 5 "The Spectrum from Truth to Power," pp. 120-162.

The task force and project management are such more flexible and impermanent organizational concepts. They are also organizational aberrations: they cut across nice straight lines of authority and make the blood of organizational traditionalists run cold. But they also are efficient ways of mobilizing the multiple kinds of knowledge and skills that are available in today's world for the study of a problem or the carrying out of a particular project. And they are efficient ways of utilizing the expert. They are efficient because both the task force and the project can and should be disbanded when the immediate need is met. The expert is not allowed, then, to continue in a position where he must act on a succession of questions for which the inherent narrowness and inflexibility of his specialized expert views become all too apparent.⁶

Those suggestions—the need for comprehension of much of what the expert is doing and why, the acceptance of non-traditional organizational concepts, plus a third, the use of the countervailing views of other experts, usually outside experts—will go to the roots of the distinction between the "situation-as-a-whole guy" and the "plain man" generalist of the past. They will go far toward resolving a basic problem of large-scale administration in this postscientific revolution era—that of bringing power to the support of authority. The burgeoning expansion of knowledge has separated power and authority. No longer can a public official rule in fact because the law stipulates that he is authorized to rule. The statute, unfortunately, cannot endow the public official with the knowledge that enables him to make the variety of decisions the law authorizes him to make. He must glean that knowledge

⁶ Jethro K. Leiber, "How Professionals Are Closing the Open Society," *The Tyranny of the Experts* (Walker & Co., 1970), p. 276.

from his organization, even as a computer whirls around and assembles bits of knowledge from its memory. In short, the situation-as-a-whole guy must be educated to understand a variety of experts.

Using Experts From the Outside

So much for the uses and limitations of experts who serve continuously in an organization. Why are experts *from without*—and I include here individuals from the think tanks, and the increasing number of firms offering a wide variety of consulting services—why are such experts used?

The primary and very best reason, to my mind, for the use of outside experts is to obtain talent that is not available within Government. For example, to make a go of the Headstart Program, Government required the services of skilled and innovative pediatricians, child psychologists, educators specialized in the learning ability of very young children, and others. Similarly, in the establishment of President Nixon's new welfare program, there will be a need for the talents of individuals skilled in organizational design and possessing a solid understanding of Government's experience over 40 years in providing aid to low-income families. That body of knowledge and expertise will be required not only to create the new structure, but importantly to reorient the individuals. It is estimated that a total of 80,000 will be required to meet and serve the needy persons who turn to Government for aid.

Vannevar Bush—and his is another name you will probably recall—laid this principle down in 1942, when as director of the Wartime Office of Scientific Research and Development he declared that: "We will put the contracts where

the talent is." I have long thought that he enunciated a truly significant principle, and one that the era of rapid scientific and technological development has made all the more important. The talent needed—whether they be economists knowledgeable in the behavior of prices, specialists expert in the design of organizational structure or management processes, or neurochemists experienced in drug therapy for mental disorders—is scarce, very scarce indeed! Government has frequent need for the services of one or another of such experts if it is to be truly effective. But, simultaneously, they are needed by the private sector of this nation—its businesses, universities, and the civilian population. The society cannot afford to have Government, if it could, recruit the numbers needed and tuck them away in Government offices and laboratories. Their use as consultants is preferable. Consider, in illustration of this point, what would have happened if NASA recruited for its staff all of the 90 percent of all this country's astronomers that worked, over the last decade, on NASA projects. Suppose NASA had put them all on the Government's payroll. What would have become of the universities that rely on them? Their use as consultants was a better solution.

A second and logical reason for Government's use of experts from without is to provide "more hands." Let me cite two examples. In 1966 the Food and Drug Administration was obligated as the result of new legislation passed that year to certify by a stipulated date that each of thousands of drugs already on the market would do what their label said they would do. The Food and Drug Administration simply did not have, and could not hire at prevailing Government salary rates, the research physicians, chemists, and others that were required to analyze each of these thousands of

drugs. It contracted this assignment to the National Academy of Sciences, which started out with some scientists and importantly with the prestige and flexibility that enabled it to attract the individuals needed to get the job done within the time available.

A second example. The firm with which I am associated, Fry Consultants, was retained 6 months ago to assist the new Postal Service to evaluate and classify thousands of jobs. I am sure that within the executive branch many individuals possess the basic skill required for job analyses. But the need was to get this task done within a short time, and the skilled manpower needed was not available within the Federal Government, be it the then Postal Department or the Civil Service Commission. Our firm was able to assign a cadre of individuals truly experienced in job analysis to get the task done. In both examples, the outsiders were needed to provide more and skilled hands. Contracting out offered, in each instance, a pragmatic means of obtaining the skills needed at times of particular need.

On other occasions, outsiders have been contracted with to avoid exceeding personnel ceilings. That also I would recognize as pragmatic. But I would not consider it a good reason for contracting out.

In other instances, government turns to outside experts for an objectivity that its own staffs cannot provide. Indeed, a prime function of the outside expert is, on many occasions, to tell the boss "no," and on some occasions to tell him he is just plain crazy. Twenty-five years ago I was retained by a fabulously wealthy manufacturer who mistook success in making money for wisdom. He asked me to perfect a scheme he had conceived to replace this country's social security system. After only a few days' honest study,

I realized that my task was to convince this oaf that his scheme was no good and that he had better forget it. But he was accustomed to being told by the men on his payrolls not only that his ideas were good, but that they were great. The outside expert, if he is worth his salt, will state a considered objective opinion, whether it is what the client wants to hear or not. In few organizations—and you think of the organizations that you audit from year to year—in few organizations I have seen can the rank and file of insiders be relied on to speak their minds candidly and continually when they know that the boss thinks otherwise.

Let me cite an example of a similar use of the objectivity the outside expert can supply. When NASA came into being, the first administrator, Keith Glennan, was confronted with a proposed organization plan conceived by the staff he inherited from the long-established National Advisory Committee on Aeronautics. Simultaneously, he was confronted with the strongly asserted and, at many points, differing concepts of nongovernmental scientists who had definite ideas as to the development of NASA. Confronted with these two sets of views, he retained a consulting firm to appraise both and to develop its own proposal for the organization of NASA.

The development during recent years of the concept of evaluation—a concept that is written into much legislation and built into the organizational structure of a number of departments and agencies—is a further manifestation of the need for objectivity, and the simple fact that few if any organizations can assess objectively their own performance. Proof of that fact will be provided when someone compares the glowing claims of success for many programs presented in the annual reports of departments with evaluations made of these programs by outsiders.

A fourth reason why outside experts are retained is to obtain the equivalent of a Good Housekeeping Seal of Approval. My firm was retained in the fall of 1956 to aid the Internal Revenue Service to straighten out a badly messed up district office in Chicago. The IRS needed help. Of that there was no doubt. It was a presidential election year. And if the newspapers had learned the state of things in the Chicago district office, it would have been embarrassing for the incumbent administration. George Humphrey, then Secretary of the Treasury, called me in and told me with exceeding candor that he and his staff could determine what was wrong and could straighten it out. But he wanted to be able to say, if the newspapers or a congressional committee found out the status of things in the Chicago office: "Oh, yes, we know all about it, we have a firm in there now, the best in the business, straightening it out." He sought a Good Housekeeping Seal of Approval. It is not an uncommon reason for the use of consultants.

There are those who discount each of the four reasons that I have stated why outside experts are used. They resent, and not unnaturally, the contracting with outside firms to provide extra hands on the grounds that they are usurping the jobs of civil servants. They doubt that many or most retained experts have talent superior to the talent available in Government. They question the willingness or the ability of the outsider to express an independent, if unpopular, point of view, and they accuse the expert of more often telling his client what the client wants to hear him say.

Selection of Experts

I can cite, as others can cite, instances illustrative of each of these criticisms of the outside expert, of the consultant.

And in each instance I would contend the client got just what he deserved. The needs of Government for the skills a real expert can supply, coupled with the loose processes which departments and agencies often use in selecting those whom they consult, has created a flock of college professors who pride themselves on being listed as consultants to one or another Government agency, and the establishment of a flock of so-called consulting firms whose particular talent is that their owners or members were once employed by a particular Government department.

The selection of an expert who will provide the needed skill or understanding is much like the selection of a professional to serve any other need. You do not retain a criminal lawyer to defend you in a tax suit. One does not seek the services of an obstetrician when his son falls off his bicycle and breaks a leg. And one does not accept the services of a jack-leg either to defend a tax suit or to set a broken leg. If one does not exercise like discrimination in the selection of a consultant from among the opportunity-seeking professors or the fee-seeking consulting firms, he does not know how to use the outside expert.

Experts and Organizations of the Future

The futurists, and that is another brand of experts of which I am sure you have heard, have predicted that in the decades ahead the large organization, public or private, will be a loose and changing structure, with an array of experts moving about within and from without to cope with the problems that arise in an increasingly complex technological society. That prediction seems likely or inevitable. The effectiveness with which the organizations of the future use these mobile, seemingly ir-

responsible, and sometimes objectionable experts will determine the organization's success.

The prototype of this organizational problem, it has long seemed to me, is seen in the university. There the professors operate with a maximum of freedom and mobility—and oftentimes with markedly limited responsibility or loyalty to the institution. And they increasingly claim a voice not only in the decisions as to what they will do, but as to

decisions that will govern the institution as a whole. The problem of the university is how to link the power possessed by the professors, the power to transmit and to develop indispensable knowledge—the reason for which the university exists—and the authority of the plain-man president. That, I submit, is the evolving problem of other organizations. If we would develop the “situation-as-a-whole guy,” we must equip him to link knowledge possessed by the experts and the hollow authority of the executive.

Paying Its Own Way

The GAO has been a valuable organization since its inception, but its true worth has become more and more evident as the Federal bureaucracy has mushroomed uncontrolled since World War II.

There is probably no accurate way to estimate the savings this agency has effected in the past half century, but the sum is truly immense.

I want to extend my personal congratulations to each employee of the General Accounting Office on the occasion of this anniversary. Each of them should be proud of the knowledge that they are members of a government agency that pays its own way. There are not very many of those around today.

Congressman H. R. Gross

Congressional Record

June 8, 1971



Alan L. Dean
Deputy Assistant Director
for Organization and
Management Systems, Office
of Management and Budget

Alan L. Dean is the Staff Coordinator for the President's Departmental Reorganization Program, as well as Deputy Assistant Director for Organization and Management Systems, Office of Management and Budget.

Prior to these positions, Mr. Dean was Assistant Secretary for Administration of the Department of Transportation. He was the Secretary's principal adviser on matters relating to the organization and internal management of the Department.

For 8 years Mr. Dean was Associate Administrator for Administration and Assistant Administrator for Management Services in the Federal Aviation Agency. During his last year there he was a member of the interagency task forces which drafted the Department of Transportation legislation and developed the plans for the implementation of the Department of Transportation Act.

Prior to joining the Federal Aviation Agency, Mr. Dean spent 18 years in Government service in positions ranging from that of a civilian personnel officer and training director in the War Department to senior management analyst in the Bureau of the Budget.

Mr. Dean is involved in local, national, and international activities. He is a member of the Planning Commission and the Board of Supervisors of Arlington County, Virginia, and the U.S. member on the Committee on Administrative Practices of the International Institute of Administrative Sciences.

Mr. Dean has received the Career Service Award from the National Civil Service League for distinguished public service, the Award for Outstanding Achievement from the Department of Transportation, the Decoration for Exceptional Services from the Federal Aviation Agency, and the Commendation for Meritorious Civilian Service from the U.S. War Department.

The Uses and Limitations of Experts

Mr. Dean provides further insight into the uses and limitations of experts from the viewpoint of the inside management expert who understands both Government-wide and individual agency needs for and uses of experts. Having a keen appreciation of what contributes to effectiveness in Federal administrations, he emphasizes that the hazards of drawing upon outside consultants must be understood if their full potential as experts is to be realized. In some situations, they should not be used at all; in others, results from their employment may be disappointing because of lack of skillful selection and use.

I very much appreciate this opportunity to meet with so many of the senior professional and other staff of GAO. In the last 13 years, I have had the privilege of having audit and financial management under my supervision in large agencies. Without the help of the GAO, many of the things the Federal Aviation Agency (FAA) and the Department of Transportation (DOT) accomplished could not have been done. And I refer not only to positive assistance, but to the actual audit reports themselves. In spite of their occasional tendency to create apoplectic reactions, in the hands of skilled managers those reports were frequently the needed additional impetus to get something done that was long overdue. On the whole, the quality of the reports was excellent, and the professional work of those who did the audits first-rate. So I wish, personally, to express my thanks for what so many of you have done in recent years.

In an attempt to give some structure and balance to these complementary lectures on the "Uses and Limitations of

Experts," John Corson and I agreed to a common definition of our topic, and we have sought to approach it from the different perspectives which we have gained in our work in and with public agencies.

We are concerned today with "experts" who are external to the organization, not with the in-house staffs which virtually every Federal agency must have in some degree to carry out the functions of Government in the 1970's. We are, thus, dealing with expert-consultants, be they individuals or be they on the rolls of companies which enter into contracts for the provision of expert assistance. Furthermore, since this 50th Anniversary Lecture Series has the theme "Improving Management for More Effective Government," we will concentrate on purveyors of expert assistance in the organization and administration of public agencies, as opposed to those whose services are in such specialized fields as engineering, architecture, or medicine.

John Corson, drawing upon his extraordinary background as a senior official

of management consulting firms, stressed the positive benefits which public officials and their agencies may realize through the appropriate use of management consultants and consulting firms. My emphasis, on the other hand, will be on the perils and limitations to which public administrators need to be alert when they consider drawing upon management experts not on the permanent rolls of their organizations. John Corson may, therefore, have portrayed a somewhat more glowing picture of the expert and his contributions than some in this audience may be prepared to accept. I may, on the other hand, give the appearance of undue concern with the risks of drawing upon outside experts and may seem to exude excessive pessimism toward the benefits to be expected from their use. Our hope is that, taken together, these lectures will complement each other and produce the balanced effect of a thoughtful discourse—one in which instructive arguments can be marshaled on behalf of both the affirmative and negative sides of the question before the house.

I am prepared at this point to stipulate that there are a number of situations in which the help of external management experts is either essential or extremely beneficial in the pursuit of the objectives of a public agency. John Corson touched on many of these in his remarks. If in-house capability is lacking and cannot be created in time to meet a need, if the advice deals with a one-time problem which does not warrant the building of permanent internal competence, if a workload peaking situation must be dealt with, if for institutional or historical reasons a problem will not lend itself to in-house investigation and resolution—in any of these circumstances an agency must be prepared to draw upon outside competence and, if it knows how to do so skillfully, it may receive

its money's worth and more. Unquestionably there are other situations in which an agency can advantageously draw upon the expertise of outside consultants.

In spite of the many occasions in which experts may be of great assistance to public agencies, I welcome this opportunity to discuss their limitations. I do so because an understanding of the hazards of drawing upon outside consultants is necessary if the prospects of their successful use are to be improved and if the full potential of the experts drawn upon is to be realized.

The limitations which I will mention are based in part on observations while serving in the Bureau of the Budget and, more recently, in the Office of Management and Budget (OMB), all of which service has been concerned with improving the organization and internal management of executive departments and agencies. But I shall also draw on the experience gained as Associate Administrator for Administration of the Federal Aviation Agency and as Assistant Secretary for Administration of the Department of Transportation. In these latter capacities, I was charged with providing advice to the heads of large agencies in all aspects of management improvement including the design of studies and the marshaling of the analytic resources needed for their execution. From this experience I have, in general, concluded that resort to the outside expert has come to be more frequent and more extensive than the public interest and the management needs of public agencies warrant.

The principal limitations in the use of experts which I have observed can be grouped under two headings. The first category relates to situations and conditions in which management experts should not be used at all. The second

relates to the failure by agencies to make skillful use of experts in circumstances theoretically well adapted to their enlistment.

Use of Management Experts in Inappropriate Situations

1. *As a substitute for developing in-house competence.*—The rapidity of change in our technology and in the way in which the Government seeks to influence our society has confronted most agencies with continuing problems of adapting their structures and systems of management to new conditions. The officials of such agencies have found it necessary to create staff units to conduct or oversee the analytic efforts needed to plan and implant such changes. These staffs all too often lack the competence and resources to meet the needs of their agencies, and under such circumstances there is an understandable temptation to turn to external experts.

Within limits this is an appropriate use of consultants and management firms—especially if their employment is seen as transitional while the agency strives to strengthen its own permanent staff. It is when the reliance upon consultants or contractors becomes a continuing substitute for internal competence that costs become excessive and problems of effectively utilizing management advice assume serious proportions.

Put another way, managers should have on their own staffs analysts and advisers who have a continuing role in the institution and who can on a sustained basis wrestle with the problems of improving its effectiveness. Such staffs are able to develop background knowledge, personal relationships, and a sense of the feasible which outside experts can rarely achieve. They also provide a basis of continuity of effort which agencies need to

overcome obstacles and to take advantage of changes in the institution's climate.

2. *As the fashionable thing to do.*—In management, as in other fields of human endeavor, fads and fashions frequently influence decisionmaking. After World War II the extensive use by the Department of Defense of nonprofit institutions such as RAND and a generally more liberal attitude toward the funding of externally performed studies resulted in a sharply expanded use of external experts as the "in" thing to do. Some officials felt uncomfortable unless they had one or more management firms delving into their agencies' operations. As with the premature or unthought through acquisition of ADP equipment, many of these contracts and consulting arrangements were based on superficial consideration of the job to be done, and the consequences were substantial expenditures for microscopic or even negative benefit.

I recall that when I became the Assistant Administrator for Management in the Federal Aviation Agency, I was given a tome prepared by a well-regarded management consultant firm which undertook to survey the predecessor Civil Aeronautics Administration (CAA) and to make recommendations to increase its efficiency. This was an expensive study and came under some criticism. Well it might have, for the study itself was close to useless and no significant portion of its recommendations were ever adopted.

In those days the CAA was facing serious growth problems, and the in-house management analysis organization was splintered and poorly regarded. There was apparently hope that a study by a nationally renowned group would produce helpful solutions. Possibly because the guidance to the contractor was deficient, the report undertook to render advice in areas such as air traffic control

which were beyond the competence of those who prepared it. The result was a waste of time and money.

3. *As a means of circumventing personnel ceilings.*—Reliance upon personnel ceilings as a means of controlling the growth of the Federal bureaucracy, as John Corson previously pointed out, has often had the unintended effect of progressively starving in-house analytic units, for many managements tend to give priority to protecting the manpower involved in direct program operations. Especially vulnerable are the staffs engaged in making studies of the organization or management of the agency. Such staffs rarely enjoy a high popularity among program directors. Moreover, improving internal administration rarely brings much in the way of rewards to Federal executives, and top officials consequently find it difficult to resist the argument that "overhead must be cut" to save manpower for operations.

In both the Federal Aviation Agency and the Department of Transportation, I tried very hard to develop strong offices for management systems work. I can assure this audience that it was not easy to secure the initial manpower to do even the most pressing and potentially productive analytic work. It was also hard to retain it in the face of repeated budget cuts and curtailments of agency employment. Had it not been for the excellent relationships which I had with the Administrators and Secretaries under whom I served, the FAA and DOT would have been forced to turn to outside experts for studies best done in-house, simply because the staffs would have been too small to cope with the workload.

Management analysis staffs are at a disadvantage even in competing with other administrative units such as those concerned with personnel, budget, ac-

counting, and support services since each of these elements turns out products which are mandatory or more clearly essential to day-to-day operations.

Let me emphasize that I am not urging reliance on in-house staffs for *all* studies of agency management. What I am saying is that it is difficult, expensive, and disappointing under most conditions to be driven by personnel ceiling limitations to contract with outside experts to do things that are best handled by a permanent staff of agency analysts.

4. *As a tactic for avoiding decision-making.*—When a management is under pressure to correct conditions which have led to criticism but for some reason it wishes to avoid decisive action or to blunt the pressure for remedial measures, the management study may be looked to as an inviting excuse for delay. Defining the study, soliciting proposals, completing the competitive selection process, performing the analysis, reviewing draft reports, and securing comments on the product can consume enough time to ward off decisionmaking almost indefinitely.

This tactic may be used to outlast the tenure of officials demanding improvement in management, to reassure the Committees on Appropriations, to exhaust the energies of concerned citizens, and otherwise permit an organization determined not to change its ways to avoid or delay taking action opposed by its bureaucracy. The externally conducted study is always vulnerable to challenge, and since those doing the work have no continuing relationship with the organization from which they can demand action, the report can be successfully filed and eventually forgotten.

An in-house staff—especially if it has access to a strongly placed or skillful management official—can maintain the

pressure for overdue changes and eventually succeed in the face of initial resistance. The first studies of decentralization in the FAA were performed through analysts on the agency payroll, but they failed to win acceptance. This defeat turned out to be temporary, however, because the studies had been performed by the agency's own Management Analysis Division and had the support of key staff officials. Eventually an ambitious program of decentralization based on the original field organization review was successfully undertaken by the agency.

5. *As mistaken applications of Circular A-76.*—For many years it has been the policy of the Government to minimize competition with private industry when procuring materials and services. From time to time I have seen it contended that the OMB Circular (A-76) which sets forth this policy prohibits an agency from equipping itself to perform management analysis projects through its own staff. This is not the intent of the circular.

Modern organizations of large size and complexity must have at their disposal staff experts on management. Seeking to use external firms solely to avoid Government competition with private enterprise could result in expecting contractors to play roles in internal agency affairs for which external groups are not well fitted. Consultants have every right to compete for opportunities to assist public agencies, but the sophisticated ones understand that they are most likely to produce successful products for agencies with sufficient in-house competence to take action on the advice given and to cope with day-to-day workload.

Unskillful Use of External Assistance

Even when there is a good case for drawing upon external experts, it is not

rare for the results to be disappointing. There are a number of reasons why potentially productive efforts to draw upon such experts fall short of expectations, and several of these recur often enough to warrant comment.

1. *Failing to think through the job to be done.*—The role of the expert is to give advice helpful to the solution of problems in areas in which he has competence. The expert should not be expected to determine that assistance is needed or otherwise to exercise judgments which should be the prerogatives of a responsible management.

Generally speaking, consultants make their most successful contributions when an agency has a clear understanding of what needs to be looked at, why the study should be performed by outside experts, and how the results are to be utilized. Vagueness in task definition or expectations is unfair to those interested in assisting the agency, complicates the process of selection, reduces substantially the likelihood that the product will be useful, and raises doubts as to whether or not the management will be ready to act on the advice given.

2. *Deficiencies in the selection process.*—Because there are so many organizations seeking to provide expert advice to Government agencies, and they represent such a wide range of experience and capacity, the selection process may be critical in determining whether or not reliance on an external study will produce significant benefits.

The prevailing Federal procurement practices are not well adapted to the selection of experts. Representatives of management consultant firms have frequently complained at the large number of proposals which they are required to prepare in the effort to secure contracts with Federal agencies. Preparation of proposals, most of which do not cul-

minate in contracts, is a costly process adding to the overhead of the competing firms and thereby increasing the fees which they must charge when they are the successful bidders. This problem is so serious that the first question asked by many potential competitors concerns the real intentions of the agency. There is an understandable desire to get hard intelligence both as likelihood that a contract will be let and as to the genuineness of the competition.

We in Government should seek an end to dealing with the contracting for expert services as if we were procuring items of hardware. Management consulting is an area in which having the confidence of the employing agency is especially critical to the success of a contract. The background and sophistication of individual members of a firm may be the key determinants in the utilization of the firm—a factor which may lead to the simulation of competition rather than the real thing. John Corson and I both know that in the 1969 study of air traffic controller careers in the Department of Transportation, the DOT management selected an external firm exclusively on the basis of the impressive background of one of its senior officers and the expectation that he could work effectively with an advisory committee established by the Secretary.

I sympathize with the problems faced by small and inexperienced firms in securing opportunities to demonstrate their competence. I am also sensitive to the dangers that reputation or prior association might produce excessive reliance on a small number of prominent consulting organizations. I do not, however, feel that anybody is aided by the thousands of man-hours being devoted to the preparation of proposals which have no reasonable prospect of favorable consideration.

3. *Inadequate agency interface with experts.*—The successful use of external competence in the solution of management problems is dependent upon clearly understood in-house points of contact and liaison. Most agency heads are extremely pressed for time, and they are not normally able to give more than intermittent attention to how a study is progressing. The consultant must therefore look to some official to resolve questions of procedure, to have doors opened, to get access to records, to assure that an appropriate flow of progress reports reaches the appropriate managers, and to provide for the most effective presentation of the advice generated.

As I have previously indicated, an effective interface is materially aided when the agency has sufficient in-house management analysis competence to keep aware of the quality of the work being done, to assist in facilitating the data gathering, and to assume an effective role in following up on the implementation of what is proposed. If these arrangements function the way they should, the consultant is kept continuously aware of constraints upon the agency. The agency management is also informed of the nature of findings at significant stages so that it is not caught by surprise by the result of the experts' work.

4. *Lack of management commitment to action.*—I have previously commented on the use of management studies as a means of delaying decisionmaking or warding off demands for action. Closely related is the launching of a study involving the use of external consultants without a sufficiently firm determination at the right level of management that something will be done with the results.

Officials at secondary and tertiary echelons within an organization may waste money and effort by moving forward

with studies without making certain that the higher executives who must take action are fully aware of what is being done and the full range of decisionmaking which might be called for. The immediate sponsoring official should therefore keep in mind that most bureaucracies are resistant to change and that most externally prepared studies which call for change are in some degree resisted.

On the other hand, the full commitment of top management and the systematic involvement of potentially affected program officials can do much to pave the way for the translation of advice into action. Outside experts should encourage early meetings with top management to establish that there is an understanding of what is being done and to act on the findings of the study.

5. *Undue constraints on the experts.*—Federal managers sometimes seek the advice of consultants while hoping to limit their access to data sources or to the opinions of concerned officials. This happens when the sponsor of the study is fearful of creating apprehensions or resistance within the organization, and attempts to have the study conducted on a semiclandestine basis so as to avoid "stirring people up."

Such tactics can mean disaster for the study because the secrecy can rarely be maintained, especially if a good report is to be prepared. Apprehensions within the organization are increased rather than quieted by attempts at secrecy, and the consultants may be denied access to judgments and data with an important bearing on the quality of the advice to be rendered.

Much of what outside experts bring to management is drawn from ideas found within the agency studied. Shutting off, in whole or in part, access to such ideas

can not help but damage the quality and acceptability of the product.

6. *Failure to assure continuity of contractor effort.*—Once outside experts are enlisted for the conduct of a study and the development of advice, the full benefits may depend on assuring continuity of effort. It is not as easy for contractors to function on a stop-and-go basis as it is for in-house staff. The entire contract should therefore entail a commitment of funds sufficient to carry the effort to a stage which permits effective utilization by the agency. This approach does not preclude the phasing of a study as long as the units each contain products of material assistance to the management in coping with the problems which originally led to the decision to employ external expertise.

When contracts are entered into because the agency has confidence in certain contractor personnel or when the experts engaged in the study must spend much of their time becoming familiar with the institutional environment to which the assistance is being supplied, it is important to minimize turnover, reassignment, or other diversion of the professionals engaged in the study. Failure to assure such continuity will almost inevitably lead to inferior results and increase the costs to all concerned.

Concluding Observations

At the outset of these remarks I noted that in spite of the numerous limitations which operate to limit the efficacy of outside experts in helping modern managements to overcome their problems, there are situations in which it is realistic or even necessary to rely upon external help. I have noted that disappointments in the use of experts can be predicted when they are employed in the situations best dealt with by an agency through its own staff or in which a lack of skill in

working with consultants impedes the exploitation of a potentially productive relationship.

I will add that the experts are often more sinned against, than sinning. They should not be blamed if they are asked to undertake tasks better performed by in-house staff. They are in the business of selling their skills to those who would employ them, and it is not an easy thing for them to turn aside a contract simply because a prudent management should have taken a different approach. No agency should enter into any contract, be it for the procurement of hardware or for management assistance, without having determined that the contract is in the public interest and having made provision for its adequate oversight. If the agency fails on any of these counts the onus for the consequences should fall upon its management and not upon the experts.

It is vital that a manager get his own house in order, that he have his own advisers who will help him effectively and consistently in his use of experts. If he does these things, and if he is a man of courage who knows what he is seeking to do, then the outside expert may prove of great help in the total job of agency management.

Discussion

The academic training of experts is highly departmentalized. This seems to contribute to this conflict of professional roles within organizations. To what extent are colleges and universities addressing that problem?

Mr. Corson: I think colleges and universities are, to an unfortunate extent, emphasizing the same old specialties they have emphasized for years. I joined the Princeton faculty in 1962 with the un-

derstanding that I would be engaged with that faculty in framing a program particularly designed to train people for the public service. I left Princeton in 1966 when I had become convinced that that faculty was not interested in doing anything more than teaching the same courses in economics, the same courses in political science, that they always had taught. So it is, I think, with the education of consultants.

The really first-rate consulting firms do a rigorous job of selection. This fact was illustrated by yesterday's issue of *The Washington Post*; it contained a picture of eight young assistants in the White House. Out of the eight, four were from various consulting firms. That picture emphasized that the capacity of consultants rests in considerable measure on the skill and rigor with which the consultants are selected.

Then the consultant has a unique opportunity to learn on the job. The particular skills that he brings to his first assignment are not often substantial. But by moving from one assignment to another, over a period of time, the young consultant gains an understanding of organizations and of management processes that can be of unparalleled substance. He may have learned the rudiments in courses in economics, business policy, and management science in the graduate business schools, but it is from this succession of assignments that he gains a real and unique understanding of the functioning of an enterprise, whether it be a private business, or a governmental agency.

Mr. Dean: There are many kinds of bureaucracies, and the exposure I've had to those in the academic world show that they are frequently more rigid, by far, and much more resistant to change than are public agencies. This very much applies to departmental specialization.

I speak in part as a trustee of one institution of higher learning, and from having worked with Donald Stone and others in the public affairs and public administration areas of academic organization. In both cases we have had real concern with how to introduce interdisciplinary approaches in recognition of the external forces that are gradually compelling change in departmental specialization. The progress is uneven from one university to another. Factors such as tenure and prestige play a very strong role in universities, and make the progress in my judgment disappointingly slow. In another 15 or 20 years, however, those of you who have young children should find some improvement.

There seems to be a sizable opinion that some of the departments we have now in the executive branch are too large and the proposed ones would be even larger—so large as to become virtually unmanageable. I would like your views on that and also just what the role of the outside expert could be in contributing to good management in the proposed departments.

Mr. Dean: In my judgment, size is a very limited contributor to the frequency of poor management. Someone once said that if large size led to bad management, everybody would be driving Studebakers, Packards, and Reos. General Motors has managed, in spite of a size which dwarfs that of most of our executive departments, to achieve a pretty effective management system. Similarly, as you look at the agencies in the Federal Government, some of the most absolutely miserably managed are small. Nothing is as bad as a clique-ridden, poorly supervised small agency that no one is paying any attention to.

Many people point their fingers at the Department of Health, Education, and Welfare (HEW) and say, "See, it is un-

manageable." My response is that I do not think HEW is unmanageable because of its size. I think that we can lay out rather readily the reasons for HEW's past difficulties. These range all the way from the internal fragmentation of that Department, to the lack of unified machinery to assist in its management, to fixing of authority in subordinates through statutes, to a long tradition of interest group domination of some of the key activities, to the multiplicity of new programs—the Secretary can't even learn their names—that have been imposed on that Department in recent years. They are frequently overlapping and really adaptable to consolidation with other related programs.

I would respectfully say, now that I am no longer on its rolls, that the Department of Transportation, which is one of the largest civil executive departments, is, on the whole, pretty well managed. This is true partly because it inherited three of the best bureaucracies in this Government—the Coast Guard, the FAA, and the Federal Highway Administration. One of the problems I'm facing now is to persuade people that the Department of Transportation ought to be split between Community Development and Economic Affairs, because the Department has won a lot of friends in its less than 5 years of existence.

It is, therefore, quite possible to have a large executive department, and to have it perform effectively if you apply a few rules. I commend to all of you the compilation of papers relating to the President's departmental reorganization program—the so-called "gray book." It contains analytic reports describing how each of these four new departments will be organized and how it will function.

You will find it enlightening reading. You will discern in these papers how we have tried to draw from the best experi-

ence in the executive branch, and at the same time avoid the deficiencies of the existing departments and large agencies. You will see how we have supplied the Secretaries with the kind of authority they need, how we have devised a substitute for the traditional bureau structure, how we have borrowed from corporate organizations the concept of cross-cutting functional officials such as you find them in the headquarters of a diversified and decentralized industrial organization, and how we have devised a sophisticated approach to field organization and services. I am confident that these new four departments, if they are enacted in anything like the form we recommended them, will be more effective and will be better managed than any of the existing executive departments.

As to the role that consultants can play in such a reorganization, this is an instance where outside advisers made their contribution at a very early stage. I refer to the Ash Council on Executive Organization, which was an excellent commission of persons drawn from outside the Government. It was headed by Roy Ash of Litton Industries, and was assisted by a fine staff, some of whom were from Government, like Andy Rouse who had been with the Bureau of the Budget. The Council also entered into contracts with various management firms to support the study. The Ash Council built on the work of previous task forces, and on the whole, I consider this a highly appropriate use of an external group.

Once we began, through strictly internal task forces, to work on the implementation of the Ash Council's recommendations, we made many changes in the Council's recommendations. And we are continuing to revise and perfect the plans for the new departments. This is where the sustained continuity of the in-house staff makes itself felt. But the overall effort provides a good example

of combining the innovative assistance of external people knowledgeable in management and organization with followup and teamwork by in-house people.

Mr. Corson: I start by agreeing with Alan Dean that it isn't size that makes the management of a Federal executive department difficult. It is the diversity of programs a department must administer, and the multiplicity of constituent pressure groups associated with such programs that make the departmental management job difficult.

To answer your specific question as to what the outside consultant can do to help in the management of a multiprogram department, let me draw on 2 years' experience I had in trying to assist John Gardner and Wilbur Cohen when they served successively as Secretary of HEW.

The Secretary of HEW, if he really wants to manage the Department, has to develop a close, effective working relationship with the heads of the major units that make up that Department. Such a day-in and day-out relationship provides him the intelligence needed for decisionmaking and access to those that are in fact the Secretary's right arm.

Secretaries over there historically have tended to seek a close liaison with the people who head the big agencies—the Public Health Service, Office of Education, Social Security Administration, Food and Drug Administration, Office of Vocational Rehabilitation, and others. But the incoming Secretaries have been warned against the senior career people who have headed these agencies. Spokesmen for the national party committees have generally advised: "Be wary of those people, they are of the other breed. Don't trust them." Then the Secretary has customarily withdrawn. He has built around him assistant secretaries, and

specialized staffs that Alan would say contribute management information.

On the basis of 20 years' practice of this trade of management science, I have less confidence in such staffs than Alan does. As I see them they provide screens and blocks to the flow of operating intelligence as often as they provide help. In a large department such as HEW, there is no substitute for a close relationship between the Secretary and the guy who is really running the program. As an outside consultant I tried to help by making that relationship effective.

Does the increased and repetitive use of outside consultants and experts by agencies indicate a pattern of weakness of top management in decisionmaking capabilities?

Mr. Corson: It can, and it can indicate exactly the reverse. It can, if you are really not, as Alan suggests, simultaneously building up a strong professional staff within. Then you are depending too much on the outsiders.

On the other hand if you are using—and I would urge it be different consultants—don't get dependent on any one of them. If you are using a succession of outside consultants for particular prob-

lems, well-defined problems as Alan has said, and for progressive problems that represent a pushing forward of your program, then it does not reflect weakness at all: it reflects exactly the contrary.

I think Jim Webb's experience in the National Aeronautics and Space Administration (NASA) illustrates that. Jim used a good many consultants on a wide variety of problems. When he obtained such advice as he could from one, he used others to deal with other problems for he has the catholic curiosity I referred to earlier, but they always supplemented or countered, never substituted for, a strong permanent staff.

Mr. Dean: I pretty much agree with John's observations. Mere numbers alone are not an indicator of management effectiveness or the overuse of external experts. If any of the inappropriate uses which I have mentioned can be identified in a given case, then there are either too many consulting contracts in existence or they are poorly conceived. But Jim Webb skillfully used many consultants in NASA. He knew what he was doing and he was at the same time developing substantial in-house capability. In a new agency with a lot of challenges, relatively numerous contract studies might be appropriate or even necessary.



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The Brookings Institution and the Budget and Accounting Act of 1921

The enactment of the Budget and Accounting Act in 1921 culminated a 10-year effort to improve and modernize the Federal financial management system. This act created the General Accounting Office as an agency independent of the executive branch to carry out accounting, auditing, and other fiscal duties. At the same time, it created the Bureau of the Budget in the executive branch to perform centralized budget functions. The following article describes the contribution made by the Institute for Government Research, a predecessor of the Brookings Institution, to this landmark financial management legislation in 1921.

A small but dedicated group of activist scholars was headquartered at 818 Connecticut Avenue, NW., as the United States inched toward involvement in World War I. It operated as the Institute for Government Research—the first of Brookings' three antecedent organizations—and its impact on the Federal Government was large and lasting, both during the War and in the years immediately after.

Though its charter was broad in scope, a prime goal of the Institute in its ambitious research and action program was a major revamping of financial management in the national Government. History has shown that its efforts were seminally successful. The Institute served as both father and midwife to the Budget and Accounting Act of 1921 and to the two major agencies whose creation it authorized—the Bureau of the Budget (now the Office of Management and Budget) and the General Accounting

Office. The act remains the basis for today's Federal financial management system and is a landmark in the evolution of public administration in the United States.

Historical Perspective

A variety of forces combined to create this singularly effective influence on governmental development—the Institute for Government Research. In one sense, its origins could be traced to the muck-raker movement of the early 20th century and the public-spirited citizens who had successfully brought about municipal fiscal reforms in Cleveland, New York, and other cities between 1908 and 1916. But the Institute's more tangible beginnings are identified with the work of President Taft's Commission on Economy and Efficiency in 1910-12 and the events flowing from the Commission's reports.

In particular, the imagination and interest of those who were to found the Institute for Government Research were captured by the Taft Commission's report, "The Need for a National Budget." The report had recommended that a responsible budget and fiscal system be established in the national Government to replace the chaotic methods used in conducting the Government's financial activities. No unified comprehensive financial plan or program of activities existed. The Federal Government's budget, or annual financial plan, was simply compiled into a Book of Estimates by the Secretary of the Treasury from figures submitted by the individual agencies. This, in turn, was sent to Congress, where it was acted upon piecemeal by numerous committees at various times.

When Congress failed to act on President Taft's recommendations for establishing a scientific budget system for the national Government, the initiative was taken by a small group of persons identified with governmental reform, education, and business. In 1914 this group of citizens, many of whom were associated with the New York Bureau of Municipal Research which had fostered reforms in New York City, made an initial effort to organize an institute for promoting governmental improvement at the national level. But it was not until 1916 that the Institute became a reality.

Charles D. Norton, a vice president of the National Bank of New York and former assistant to President Taft whose efforts had been instrumental in organizing the Commission, was one of the group who took the initial steps leading to incorporation of the Institute for Government Research on March 10, 1916. The first board of trustees was headed by Frank J. Goodnow, President of the Johns Hopkins University, and its vice chairman was Robert Somers Brookings, an eminent retired St. Louis business-

man and president of the Corporation of Washington University. William F. Willoughby, a distinguished professor from Princeton University and a former member of the Taft Commission, was named director of the Institute on June 3 of that year. Offices were established on Connecticut Avenue, a staff was recruited from the academic world and Government, and by October 1 the challenge of governmental reform was being actively undertaken on a far-reaching scale.

The Action Begins

As a first step in its efforts for improved budgetary and financial management, the Institute offered a perspective and basic information on how other countries or jurisdictions had dealt with this problem. During the first year, it published *The System of Financial Administration of Great Britain* and a translation of René Stourm's *The Budget*, a description of the French budgetary system, and manuscripts were completed on "The Canadian Budgetary System," "The Problem of a National Budget," and "The Movement for Budgetary Reform in the States." The last two were written by Director Willoughby, who said in his first annual report to the trustees in 1917:

There can be no question that the greatest single reform to be accomplished in the system of administration of the national government consists in the adoption by that government of a scientific budget system. The desire to promote this reform undoubtedly constituted one of the strong motives leading to the creation of the Institute. I have consequently spared no effort to have the Institute do all that it could in this direction. • • •

Next he outlined the essentials for a Federal budgetary system: a well-designed administration, uniform account-

ing and reporting capable of producing data for budgetary purposes, a special Presidential organ for formulating and supervising the execution of the budget, a suitable legislative organization for handling the budget (including a revised and sufficiently flexible appropriation structure), and an effective mechanism for congressional audit of the results.

Although in 1917 and 1918 more than half of the Institute's efforts were devoted to assisting Federal agencies with wartime administrative problems, the Institute's research program continued to give special attention to Federal budgetary and financial reforms. In 1918, three manuscripts on this subject were published and a fourth, "The System of Financial Administration of the United States Government," was in preparation. Willoughby's book, *The Problem of a National Budget*, became a primer for those seeking budgetary reform at the national level. It analyzed the problem confronting the national Government and indicated the actions required for establishing a scientific budget system. But a most important job lay ahead: to generate support and get the national Government to act.

The Institute approached this problem from two directions: " * * * the education of public opinion so as to strengthen the demand for action by the government and the encouragement of members of the administration and of Congress to take action." Director Willoughby assumed leadership in both sets of activities. In 1918 his articles on budgetary reform appeared in three journals—*The Political Science Quarterly*, *Proceedings of the Academy of Political Science*, and *Nation's Business*—and these were buttressed by public addresses and press interviews. And both Dr. Willoughby and Frank Goodnow, chairman of the trustees, served on the U.S. Chamber of Commerce's Committee on a Na-

tional Budget, helping to guide its deliberations and actions.

Robert S. Brookings, vice chairman of the trustees and chairman of the Price Fixing Committee of the War Industries Board, also became deeply involved and spent much time meeting with members of President Wilson's Cabinet and the Congress in an attempt to persuade them to take the action necessary for the national Government to adopt a scientific budget system. Brookings had numerous discussions with the chairman of the House Appropriations Committee on establishing a special congressional committee to study budgetary reform and recommend specific means to accomplish it. This proposal was endorsed by the leader of the Republican party and by President Wilson, who cabled the chairman of the House Appropriations Committee from Paris indicating his approval. Brookings' personal relationships proved effective in his work with the administration and the Congress, and his efforts, complemented by those of Goodnow, Willoughby, and others, pointed at the end of 1918 toward ultimate success.

Congress Acts

Major events occurred in the following year. Chairman Good of House Appropriations secured the adoption of a resolution providing for the appointment of a Select Committee on the Budget to make a comprehensive report on the problem. The Committee held extensive hearings at which 37 witnesses, most of whom were suggested by the Institute for Government Research, appeared and more than 800 pages of testimony were recorded. As director Willoughby informed his trustees in the spring of 1920:

On the conclusion of the hearings the assistance of the Institute's Director was requested in the preparation of the bill to be reported by the committee and the re-

port to accompany it. This bill was almost immediately called up in the House for consideration and passed that body with only minor changes of a verbal character by the nearly unanimous vote of 285 to 3.

The Senate side of the Congress was also active. Under the leadership of Senator Medill McCormick, a select committee comparable to that in the House was established and hearings were held. Willoughby appeared as one of the witnesses and was subsequently asked by Senator McCormick to assist a subcommittee that had been appointed to draft a bill. He virtually rewrote the original subcommittee draft, and the bill, though slightly different from the House measure, subsequently passed the Senate in 1920 essentially as drafted. The Institute's pride was manifest in director Willoughby's report to his trustees in early 1920:

• • • It is therefore believed that there is every reason to hope that a fairly satisfactory budget bill will become law at the present session of Congress. If it does so credit for its enactment will be due almost wholly to the Institute. Not only has it, more than any other body, been responsible for securing action but its assistance has been sought throughout its consideration in both Houses of Congress. In making this statement it is not intended to carry the impression that either the House or Senate bill is precisely of the character that the Institute would like to see adopted. Both bills, however, are fundamentally sound in that they make definite provisions for the formulation and submission by the President of a budget, provide for a Budget Bureau to handle the detail work of examining and revising requests for appropriations and their compilation in budget form and call for the creation of an independent department of accounts to take over the work of auditing public accounts and reporting directly to Congress all cases where such examination shows that the financial affairs of the government can be more efficiently and economically administered.

But 1920 was to be a disappointing year. A bill was passed by Congress on May 27, 1920, but vetoed by President Wilson. Though he supported the idea of this major change in the system, Wilson objected to the provision governing the removal of the Comptroller General. He deemed it unconstitutional that removal could be effected only by a concurrent resolution of the Congress, an action not subject to Presidential review. An attempt was made to change the bill to meet the President's objections, but time ran out and Congress adjourned before the amended measure could be passed by both Houses.

The staff of the Institute remained optimistic despite this reverse, and with good reason. A new administration took office in March 1921, and it had indicated its intention to push enactment of the bill in a special session of Congress. A number of congressional supporters still held influential positions on Capitol Hill. And the interim was well occupied by the Institute in supporting a major change in the handling of appropriation bills by the House of Representatives and in preparing for implementation of the budget reform bill after it became law.

On June 1, 1920, the House amended its rules to provide that jurisdiction over all appropriation bills be concentrated in a single committee. This change—a somewhat radical move involving major shifts of power from other committees—made possible a unified examination of budget expenditures and was vigorously supported by the Institute. When the new Congress convened, an effort was made to return to the old system but, with the aid of the Institute and leading newspapers, it was defeated.

Looking toward implementation of the forthcoming budget law, the Institute began making detailed plans for the

structure of revenue and appropriation accounts, financial reports, and related matters. By 1921 these were substantially completed, and the Institute's staff looked forward to sitting down with the President, members of the new Bureau of the Budget, and the Comptroller General to discuss them.

The Institute's disappointment in the bill's failure to pass Congress was also made more tolerable by a little-known incident which took place in early 1921. Congressman Good wrote President-elect Harding suggesting an interview with Dr. Willoughby to discuss the work of the Institute and very generously praised it for the assistance it had rendered him. Although he suggested that budgetary reform be a subject of their discussion, he also recommended that the "whole problem of reorganization of the Government" be included. Early in February 1921 Dr. Willoughby met with the President-elect in St. Augustine and, as the former told his trustees: " * * * The President was exceedingly cordial, seemed to be greatly interested in the objects of the Institute and stated that he hoped that your director would not hesitate to come to see him whenever the Institute had matters which it thought desirable to take up with him. * * *"

The Bill Passes, Implementation Begins

The staff's optimism was finally rewarded on June 10, 1921, when President Harding signed the Budget and Accounting Act of 1921. It made three basic changes in governmental structure and operations that have altered the course of the Federal Government as much as, if not more than, any other piece of legislation. An executive budget system was adopted, a Bureau of the Budget was established in the Treasury Department to aid the President in managing his budgetary and related respon-

sibilities, and an independent Office of the Comptroller General was created. The issue of removal power over the Comptroller General was resolved by making him subject to removal by a joint—rather than concurrent—resolution of Congress, which requires Presidential approval. In a message to Congress on December 6, 1921, the President heralded the action as "the beginning of the greatest reformation in governmental practices since the beginning of the Republic." The Institute, for its part, " * * * gave the credit to Congress, and Congress, through the Chairman of the Appropriations Committee, gracefully returned the salute."¹

The first budget presented to Congress in December 1921 reflected painstaking efforts by the Institute's staff working with governmental officials. "Immediately upon the organization of this bureau [Bureau of the Budget], General Charles G. Dawes, who had been placed at its head, requested the assistance of the Institute in working out the technical problems thus presented * * * and a number of members of the Institute's staff were detailed for this work in the bureau * * *." Director Willoughby reported to his trustees. "These members were responsible for the determination of the whole form of the new budget * * *," he added, and presented a letter from the Bureau's Assistant Director, W. T. Abbott, expressing his appreciation for the work of the Institute's Henry P. Scidemann in compiling the necessary data and designing its presentation to Congress.

The Institute continued its assistance as the second budget was being prepared; it helped to improve the presentation of data and in fact prepared the entire part I of that document except for

¹ Herman Hagedorn, *Brookings: A Biography* (The Macmillan Company, 1936), p. 247.

the Presidential message, which appeared for the first time. It also developed a standard classification system used in presenting expenditure data on the basis of objects, a plan to which the Comptroller General readily gave approval. In succeeding years the Institute continued helping the Bureau as requested, though its involvement tapered off as the Bureau developed and the Institute's attention was directed to other interests.

The Institute and the GAO

In addition to aiding the executive branch in carrying out the new act, the Institute worked extensively with the Congress, and in particular the newly created General Accounting Office, headed by the Comptroller General John R. McCarl. This was a natural development, since its studies of the national Government had led to the conclusion that one of the fundamental improvements required was the establishment of an Office of Comptroller General. The Institute conceived of this organization as an instrument for supervising receipts and expenditures of public funds, giving Congress the information it needed to assure itself that Government agencies were properly and effectively performing their duties, and enabling the Congress to decide intelligently on future appropriations. When the Budget and Accounting Act of 1921 made this a reality, working relations similar to those developed with the Bureau of the Budget were established between the Office of the Comptroller General and the Institute's staff. Their basis was the Comptroller General's responsibility for the accounting and reporting system given him in the act of 1921.

A major task facing this newly created office was the improvement of accounting and reporting. In 1922 the Institute pre-

pared a lengthy analysis of the problem entitled "The System of Financial Reports of the National Government: A Description and Criticism of Existing Practices in Respect of Reporting Receipts, Disbursements and Condition of the Treasury of the National Government with Suggestions for Their Improvement." It was given to the Comptroller General who, with his chief subordinates, reviewed it carefully, concurred in its main recommendations, and asked the Institute to assist in implementing them. For several years, members of the Institute's staff worked with the GAO and the executive agencies in installing accounting and reporting systems. The Institute's "Manual of Accounting and Reporting for the Operating Services of the National Government" was approved by the Comptroller General and became the standard for Federal agencies to follow.

Later years saw continuance of the cordial working relations that characterized the mutual efforts of the GAO and the Institute to achieve the goals of the Budget and Accounting Act of 1921. The Institute assisted the Comptroller General in designing the system of accounts to be maintained by his Office, studied the feasibility of punch card accounting at the Comptroller General's request, prepared a "Manual of Machine Accounting," and performed numerous other services of a technical nature. One might well conclude that "those were good years!"

That the stamp of the Institute is firmly imprinted on the budget and financial management systems of the Federal Government is well recognized by those concerned with improved public administration. Indeed, none of the many achievements of this direct predecessor of the Brookings Institution contributed more to the public good than its efforts before, during, and immedi-

ately after the passage of the Budget and Accounting Act. As its historian, Charles A. H. Thomson, concludes: "Whoever looks at the fundamentals of those problems in financial administration * * *

will find the tool marks of the men of the Institute."²

²Charles A. H. Thomson, *Institute for Government Research: An Account of Research Achievements* (The Brookings Institution, 1956), p. 48.

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