REMARKS OF

Clay T. Whitehead, Director

Office of Telecommunications Policy
Executive Office of the President

before

The Conference Board

New York, New York

February 15, 1972

I am pleased to have an opportunity to meet with such a distinguished group of leaders from such a broad range of industries. I feel very strongly, as I know you do, that only through this kind of mutual cooperation and exchange between Government and the private sector can we meet the challenges and solve the problems facing us in channeling new technologies. We will be studying very carefully the "propositions" and "initiatives" that result from this Conference with just that in mind.

One of those propositions is that those with leadership and decision-making responsibilities must consider information as a major industry, a national resource and a source of economic and political power. I think the point of that proposition is well taken. You are taking a broad perspective and a broad definition of the information industry. The technologies -- computers, communications, film, etc. -- are diverse, as are the applications -- education, finance, government, transportation, and, of course, many others.

The direct impact of the information business is already sizeable and growing at a very rapid rate. Of course, the various parts of the information business will grow and develop somewhat imdependently, even though there are common technologies and common principles involved. But the indirect impact of the information business is even more pervasive, and it is there that the concept of an information industry is most important to understanding what is going on.

Almost without our realizing it, the American economy has become heavily organized around information and the utilization of information. The inputs to a productive enterprise are no longer the traditional capital and labor only, bur rather capital, labor, and information. And, within the general field of information, communication plays a vital role.

Communication is to the information business what transportation is to the industries dealing in goods and materials. Without good transportation, production would be scattered, decentralized and inefficient. Transportation creates large markets and permits efficient production. But it does more -- it has determined where and how we live. One only need consider the influence of rivers and harbors on population distribution to see this influence.

More and more of our national resources are engaged in the information business. Communications will be a major shaping force in this business. More and more it will determine where and how we live, how our businesses are organized, how large they become, and whom they serve. The impact goes beyond our economy. In our society, too, information technology in the forms of telephone and television have done much to change our social, political, and broad informational characteristics.

We have learned from our experience in other fields that regulation of communications has a tremendous impact on the underlying information that is communicated. In broadcasting, for instance, regulatory policies regarding the number of television channels, programming requirements, and advertising support, have heavily directed television toward programming for mass audiences and mass tastes. As a result, regulatory policy has increasingly gone to questions of content and quality of programs broadcast over the facilities. Why? Because regulation of transmission has shaped the economic incentives and disincentives involved in providing for the programs themselves, and because once regulation is established it tends to expand its purview.

The same is true in the common carrier field of communications where highly detailed regulation oriented around public telephone service inhibits the growth of specialized communications services. Consider, for example, computer/communications services. At the present time, computers are available in a wide variety of configurations and prices. Raw computing power and associated equipment and software for these services are provided in a competitive environment that is quite responsible to social and individual consumer needs. However, when information services draw on communications as well as computers, they must operate within an economic and technological framework that is oriented towards the more conventional forms of communications, and makes carriage of data more expensive and inflexible. Where we draw the regulatory boundary between computer services and communications will have a big influence on the services offered, the vitality and innovation in the business, and whether the incentives are to suit the technology, the Government, or the user.

So it is clear that government policies and regulatory concepts in the area of communications can have a profound effect on the evolution of the information business. Fortunately, much of the information industry is still young. If we are to guide this industry in a way that serves human ends, we must be prepared to back away from immediate problems and issues and to view things from their largest perspectives. We must trace our decisions back to fundamentals.

Some of these fundamental considerations derive from cultural values, including such issues as access, privacy and humanization. You'll notice that I phrased the last word in the positive: humanization, not <u>de</u>humanization. While I do not believe that information technology will achieve the utopian ideal, neither do I think that machines necessarily destroy basic human values. Information technology is a tool that we have placed in our own hands. We <u>can</u> use it to enhance our own abilities and potentials, rather than degrade them. Our stress should be on developing the kind of institutions for the technology that serve this positive function, and not on creating defenses to meet a conjured-up parade of horribles.

While it is difficult to predict with any certainty the rate of growth or the detailed composition of the information business of the future, the basic direction is clear: More information, more highly organized, more heavily dependent on technology, and more rapidly moved around. Who will have access to this emerging system of information -- access as a provider as well as access as a receiver? Will these forms of access be widely diffused or highly centralized? How will information access affect our social and political institutions? What will be its impact on the free enterprise system?

In seeking answers to these questions, we will have to recall the basic principles of variety and diversity that our society and our economy are founded upon. When we structure the information business, we structure the framework for the expression of ideas, for the exchange of information, and for the use of information in business. We will have to think of access that encourages diversity and quality in the sources of information, as well as in the way information is utilized; access that benefits individual human beings and small business, as well as large organizations and institutions; access that minimizes social polarization. Finally, we will have to think of structuring access so as to avoid the development a new class division -- the information-poor and the information-rich -- before that situation can arise.

It is obvious that there are many uncertainties in evaluating what is the best way of providing for access. The answer is neither easy nor readily available. Government cannot force people to be informed; it cannot ignore the realities and the freedoms of the marketplace; nor can it command the evolution of technology. Government can, however, search for the public policies that will foster an industry and market structure that will encourage the applications and the technology to grow naturally in the most desirable directions.

Another important issue is privacy -- in its widest sense -- including related issues such as the integrity and autonomy of the individual. As our society grows more complex, and we become more independent, we are learning that privacy -- or the capability of controlling who knows what about you, and why, -- is fundamental to all human relations. There is a basic interest in privacy which society must not overlook. However, it is also true that the individual's interest in privacy is frequently offset by his own interest in disclosure, since disclosure is often an indispensable means to achieving another desired good. Millions of consumers, for example, disclose personal information about themselves in order to obtain commercial credit. There is also a broader social interest in disclosure. There may be times when society must obtain <u>some</u> private information in order to act knowledgeably for the solution of social problems. If we absolutely prohibited all data acquisition, more would be lost in terms of foregone social capability than would be gained in terms of greater individual privacy.

I do not think there can be monolithic principles to guide decision on privacy. There are certain kinds of information, or perhaps "zones" of privacy, which should be protected from all intrusion. Beyond that, individual choice should prevail. There is no single best resolution of the competing interests of privacy and disclosure that applies for each individual or situation. But, Government can assist in shaping utilization of information technology so that once an individual or societal decision is made, there is an effective mechanism for carrying it out.

The new technologies and the new problems that come about will not necessarily require new institutions. Indeed, I think the basic objectives of diversity, choice, access, and privacy are likely to be more fully achieved in our system of private rights and legal procedures for enforcing them than through any new or expanded Federal bureaucracy.

In addition to considerations of access, privacy and humanization, the information business must be structured to achieve a degree of economic efficiency consistent with other goals. The question is how to do this. Much of our trouble in the present communications industry stems from two assumptions made years ago when we enacted the Communications Act of 1934: First, that a good part of the communications industry is characterized by natural monopoly; and secondly, that extensive regulation is necessary to prevent resulting monopolistic abuses. In many ways, the wheel is coming full circle. Instead of natural monopoly, we find that more and more communications enterprises can be competitive in nature. And, in such an environment, we find that regulation affords not just consumer protection, but also uncertainty, delay and expense. What is the proper balance? Is the substitution of regulation for the marketplace really best -- really justified -- or is it only due to the force of habit? Can the marketplace really be made to work effectively in such a complex and rapidly changing area?

There are no ready answers for these kinds of questions. We cannot afford to abandon the marketplace; we cannot afford to give up the choice, the diversity, and the freedom that it offers, nor can Government pretend that laissez-faire is an acceptable public policy. Rather, we will have to create new mechanisms and units of exchange which enable market incentives to operate. To illustrate this point, consider the mechanism of copyright. Presently we rely on copyright laws both to give authors the incentive to produce and to establish a unit of exchange in the market system. Once an author copyrights a book, he obtains the exclusive right to sell, publish or copy it. From the proceeds of the sale or licensing of this right, the author is compensated for his labor.

But what will happen if library services come to be provided by a computer based network which feeds information right into the home? The computer permits easy change in the form of information, including the selection of parts of several original works to produce a wholly new product. Copyright laws pertaining only to the form in which an idea is expressed do not cover the situation I've described, where only the underlying information of the idea is used, and not the expression of the idea. Without a broadening of the copyright concept, our author would starve in his garret and the flow of new ideas would dry up. Those of you who have had experience with copyright can add to this list or problems -- for example, the difficulties of adhering to the procedural requirements of our 63-year old copyright law, like affixing copyright notice to information inserted in a data base. You can ponder over whether an evanescent display of information on a CRT is a "copy" or not.

My point is this: We could strain present copyright laws to accommodate new information technology. But there is a limit to how effective present copyright concepts can be in an environment that is so foreign to it. For the most successful operation of the market, I believe we must find a new kind of property right in information. It should serve the same underlying purposes that present copyright does, but be suited to the use, value and form of information in the newer systems of communication. This is only one example of the kind of changes we must be prepared to make to effectively utilize the marketplace to achieve our purposes.

Let me not keep talking, for I will inevitably get into more and more of the things you have been discussing already. What I have tried to do today is to pull out of the complex issues you have been considering some that seem more important for public policy. Government will have to deal with these problems and your choices as leaders in your institutions will be shaped heavily by what Government does. Similarly, what Government has to do will be shaped by what you do. It is perhaps trite to observe that Government and industry must learn to work together more closely, but I can think of no area where it is more important, for information is now a major factor in the growth of our economy -- in the growth of your industry -- and policies for the exchange of information always have been a major concern of Government. The importance of all this is matched only by its excitement. We look forward to having the results of this Conference and to continuing to work with you in this exciting field.

ITINERARY FOR
CLAY T. WHITEHEAD
NEW YORK, NEW YORK
FEBRUARY 15, 1972

Tuesday, February 15, 1972:

8:30 a.m.	Leave Wash., D.C., via AA #381.	
9:26 a.m.	Arrive New York, LaGuardia Airport.	
10:00 a.m.	Wall Street Journal--30th & Broad St., 6th Floor. Meet with Managing Editor, Fred Taylor, and Broadcast Reporter, Jim McGregor.	(212) 422-3115
12:00 p.m.	Conference Board Speech--Waldorf Astoria.	(212) 355-3000
3:00 p.m.	Steve Scheuer--one hour television show-- Municipal Bldg., Studio A, 25th Floor.	(212) 566-2118
5:00 p.m.	Tentative meeting with John J. O'Connor, New York Times. (Place to be decided on morning of 2/15.)	(212) 556-1234
5:30 p.m.	Leave LaGuardia, New York, via AA #377.	
6:32 p.m.	Arrive Washington National Airport.	

Speaking engagement: Conference Board: 2/15

June 16, 1972

Mr. W. J. Arnold
Editor-in-Chief
The Conference Board Record
845 Third Avenue
New York, New York 10022

Dear Mr. Arnold:

Mr. Whitehead has asked me to thank you for forwarding a copy of the June issue of the Conference Board Record.

The article is a valuable addition to an increasingly important subject.

Sincerely,

Brian P. Lamb
Assistant to the Director

HHall:kmj:6/16/72
cc:
DO Records
DO Chron
Lamb (2)

Information Technology: The Revolution Reconsidered

Hope T. Ludlow
CB Record Staff

A synopsis of some of the implications we must face in moving into the Information Society of the 70's and 80's

---

Women dialing kitchen computers for recipes for old-fashioned cornbread . . . . coaxial TV cables bringing 20 to 40 channels full of information into every home and business office . . . . systems managers joining professors on college faculty rosters in order to expedite and expand the flow of knowledge to students.

Politicians with detailed access to more and more sectors of the voting public through finely tuned computer research centers feeding out of central data banks . . . and, at the same time, John and Mary Voter learning more about the ins and outs of politics and the issues of the day, wired in to Capitol Hill through a complex of newfangled telecommunications equipment.

Add a number of the new, relatively informal "open universities" to give employees the chance to combine on-the-job learning with television seminars at home . . . and the possibility that more and more businesses will be taking over the job of public education. In such a post-Sesame Street world of electronic classrooms and automated libraries, we might even expect that the information services business would become a public utility.

If all this begins to sound like scientific fiction come true, some might also be reminded we are only a dozen years from Orwell's "1984." Whether we look to the Promised Land or wait the approach of Doomsday, there's no doubt now that fantasy and reality are fast merging in the world of the computer. For we are, as a recent Conference Board gathering of top executives in business, government, and education heard, moving into the Information Society. It's a move which the conferees were told may prove as momentous a change as the revolution that transformed us from an agrarian to an industrial society during the last century.

Descriptions of the coming Information Society varied from speaker to speaker at the two-day conference, but there was general agreement that we must recognize the existence of a major new resource called information technology. This technology—comprehending the collection, storage, processing, dissemination and use of information—carries with it a power far different, and perhaps far greater, than anything we have yet harnessed to human use. Its implications for the individual—changes in our perceptions, attitudes, values, and capabilities —will, we are told, bring about significant changes in the way we deal with our external world and with each other.[1]

Nor is there much time, the conference urged, to deal with the potentials of this new resource. As individuals and as institutions we must be willing and ready to adapt to the new developments, meantime learning how best to shape the new technology to our needs.

In the quotations excerpted on the following pages an effort has been made to group the comments of a large number of panelists as they bear on several different major areas of interest. While expert opinion of course varies, emphasizing one or another set of implications which might be anticipated to flow from the increasing application of information technology (and these differences are reflected in the remarks reproduced below), the thoughts reproduced here are drawn from the entire conference and should not be read as a transcript of a specific, actual discussion.

Is this revolution really necessary?

Michael: It does us no good at all to talk about that wild blue yonder out there 20 years from now. What that looks like will depend on how we get there, and it's how we get there that is our personal responsibility and burden and excitement.

For the next 20 years information technology will be immature as a system. Society will be plagued with endemic

[1]A description of the Board's program in definition of information technology, and of an initial report on a study of its implications, may be found in Charles M. Darling, "Confronting the Information Society," *The RECORD*, March 1972.

The Contributors

. . . noted and quoted in this synopsis of opinion and comment on the information technology revolution

George Bennett
Consultant
The Boston Consulting Group, Inc.

Warren G. Bennis
President
University of Cincinnati

Henry M. Boettinger
Director
Management Sciences
American Telephone & Telegraph Company

William D. Carey
Director
Public Affairs Center
Arthur D. Little, Inc.

Emilio Daddario
Senior Vice President
Gulf & Western Precision Engineers Co.

Edward E. David, Jr.
Director
Office of Science and Technology
The White House

Melvin S. Day
Head
Office of Science Information Services
National Science Foundation

Eugene Fubini
E. G. Fubini Consultants, Ltd.

J. E. Goldman
Senior Vice President
Research and Development
Xerox Corporation

Thomas F. Green
Co-Director
Educational Policy Research Center
Syracuse University

Marcia Guttentag
Director
Harlem Research Center
City University of New York

Richard Harwood
Assistant Managing Editor for National Affairs
The Washington Post

Ulric Haynes, Jr.
Senior Vice President
Division of Public and Institutional Affairs
Spencer Stuart & Associates

Roger Heyns
President
American Council on Education

Harold Howe, II
Vice President
Division of Education & Research
The Ford Foundation

Roger W. Jones
Consultant
Office of Management and Budget
Executive Office of the President

John McHale
Director
Center for Integrative Studies
State University of New York
Binghamton

Donald N. Michael
Program Director
Institute for Social Research
University of Michigan

Thomas O. Paine
Vice President
General Electric Company

Mayford L. Roark
Director, Systems Office
Ford Motor Company

Terry Sanford
President
Duke University

James E. Webb
Treasurer
The National Academy of Public Administration

Clay T. Whitehead
Director
Office of Telecommunications Policy
The White House

James Q. Wilson
Chairman
Department of Government
Harvard University

distrust—for as far ahead as any of us can see. There will be a multiplicity of values and of priorities developing as we get the kind of differentiation that we're familiar with—a differentiation that will increase, partly aided and abetted by information technology, and partly aided and abetted by the development of voluntary agencies and groups.

An additional factor in these next years will be a growing preoccupation with self: Who am I and what are my rights and privileges as an individual, my expressive rights, my occupational and leisure rights—regardless of color, race, sex, life style, or what have you. And we will see the progessive obsolescence of effective forms of government. All of this means very heavy personal burdens if we expect information technology to be a humane and enlarging activity.

It means each of us has to live with much higher levels of uncertainty, of knowing we don't know. We're not used to doing that. It means that we're going to have to learn to differentiate between information and knowledge.

Information is not knowledge. Knowledge has to do with effective understanding of society and what can be done about it. Information technology provides a basis for greater knowledge. The ethical issues that are intrinsic to information technology are profound and overwhelming. They are in so many ways disconnected from the available ethics that we have that anybody with self-respect will have to struggle with them deeply.

Goldman: I would like to suggest that in thinking about initiatives to cope with this information revolution, we should not allow ourselves to become overly preoccupied with the information industry as an end in itself. I think it should be significant to all of us—to the country at large, and to all of us as individuals—that the information industry is a means to an end—an end that improves the quality of life, that improves our productivity, that extends our industry, that enables us to pattern and profile the economy of the future adequately and properly divided between the service sector and the industrial sector.

It has to be *not* something that we hold up on a pedestal and say, "That is an industry that we'll hitch our wagon to," but rather, "That's the horse that can lead the wagon." It is a means rather than an end.

McHale: What might be new and critical about this topic is the externalization of what were kinds of internalized information processes. We've externalized our own personal software into hardware tool systems.

These systems perform all kinds and types of information processing for us at greater speeds with much greater precision and clarity, much greater capacity to deal with vast quantities of information than our unaided human senses.

We are then faced with the emergence of a new fusion of capabilities which quite simply amplifies our capacity to deal with our environment—but which by its very function begins to reshape the information content and the ways in which we perceive our society and our physical environment surrounding it.

Day: It is my assessment that the United States will not necessarily go to pot if it does not immediately launch into a broadly based, tough-minded program of formulating national policies for the information societies of the Seventies and the Eighties—but I will insist that failure to undertake this task may well result in one of the most costly and irresponsible mistakes we can possibly make.

We are the leader in technology today. We will be the leader tomorrow if we make this program our national goal and bend all of our energies to retain the lead.

Webb: Many advances in information technology were necessary to make projects like Project Apollo possible, and while such systems were being developed in the United States, no other country was providing such a stimulus. In the United States, responding to this kind of stimulus, individual scientists and engineers and many industry, university and quasi-governmental teams were extremely innovative. American accomplishments in computers, communications and related fields are now acknowledged throughout the world, but we are now into the 1970's and governmental sponsorship of the kind of projects that produced such advanced systems has been greatly reduced.

It is important to recognize that the basic scientific knowledge in this as in most fields is widely known in the international community. Through cross-licensing and information-sharing contracts, other nations such as Japan have recently gained competence in a number of areas of American-developed technology. Some are now allocating public funds to assist and encourage their industries to increase research and development in this field.

No one doubts that the present United States position is impressive, yet any consideration of the information world of the 1970's and the 1980's must take account of plans and programs in other nations.

Day: Last October, at a UNESCO conference in Paris, more than 80 nations agreed to a resolution asking the countries of the world to participate in the creation of a worldwide scientific and technical information-sharing program called UNESIST.

It is an open secret that a number of countries have sought to appraise their information needs and to adopt communication information policies that would serve them in an era of change. One of these countries is Japan, another is the USSR. The entry of Japan into the arena of modern communications has been considerable because it goes well beyond the field of consumer electronics and computers. For several years Japan has been assessing its information needs and its information practices. Moreover, it has been carefully appraising what is going on in the rest of the world.

Perhaps the best way to describe Japan's interest in obtaining the world's best technological information is to point out that in 1971 that country announced its intention to establish a small West Coast information brain factory using surplus U.S. aerospace scientists and engineers to winnow through our technological bank for useful information that might be brought to Japan for exploitation there.

Fubini: It is interesting to observe that great merchant countries either have the wisdom to accept, or the means to create, orderly ground rules for their own protection and perpetuation. I believe that we will see the creation of supernational systems of rules and institutions which will permit world markets to thrive, bringing about the organization and amalgamation of at least one and very likely two major computer companies of a poly-national character. This, I feel, is essential because in my opinion there is a size that is necessary to survive in the so-called computer-oriented businesses. Our opinion is that this is 700 million dollars annually.

Now, the market size that will eventuate by 1980 will be some 29 billion dollars. The United States' share of this market will decline from 45% in 1970 to some 31% in 1980. The Soviet bloc will roughly double its current percentage of this market. So we must address ourselves to the question as a nation: What is the best way to participate in this arena? Should we politically sponsor an international formation to address the international market? Or do we block our companies from doing so? I firmly believe in the future importance of poly-national companies and I am firmly convinced that the U.S. government should provide policies and directions to permit U.S. participation.

How are we going to manage it?

Paine: A most important initiative is to create a nonprofit center which is capable of formulating an alternative national policy on such critical questions as privacy of information, regulations, standards, ownership rights, and ethics. This center should draw upon research being done in other research centers, and it should be assisted by experts in government, business, and education.

Day: To help accomplish our most important objectives, we must get on with public discussions involving a widespread spectrum of our citizenry in order to map the information communication topology of the next two decades. While it is evident that Johnny Q. Citizen has in his home a telephone, a television set and a radio, and has become familiar with the advantages of these and other technologies, it is not necessarily true that he comprehends the potential cost and the effects of grafting the new and more powerful information handling technologies and techniques onto the already conventional ones at hand.

It seems to me that if we are going to tinker with his information environment, and in a way that may change the way he will live, somehow he ought to be involved in the discussions which will lead to consensus of national policy. It would be folly to disregard the feedback signals we are already receiving such as distrust of the electronic media, invasion of privacy concern, worry about freedom of information, apprehension about computers and the like.

The importance of planning in management in this field can hardly be overestimated. The management I am referring to does not include management of the content of the information and data that passes through the information conduits in various forms—inkprint, electronic, photographic, or micrographic. But it does involve an infinite number of decisions that have to be made about the selection of equipment, the operation and control of the information apparatus, who pays for the purchase and upkeep of the machinery and the data it stores and disseminates, the proper mix of conventional and unconventional machinery to be used, when to undertake the employment of networks, and how to work out the myriad agreements needed to structure regional and international information sharing systems and subsystems.

Michael: We've got to develop far more effective interpersonal skills, group-process skills, than we typically use now. Furthermore, we have to be prepared for organizational restructuring. We know a great deal now from the field and from the laboratory and from observing all kinds of organizations. There is no hope at all that we will make a humane go of information technology by laying it over the traditional hierarchical, pyramidal organizational structures that characterize all bureaucracies and most governmental and corporate agencies. This means that any organization concerned with effectively using and responding to information technology in a humane way, has to be prepared to make itself over, member by member, structure by structure—from the chairman of the board and the president or the secretary of the agency right on down through. It's painful, hard work, and it's threatening, but if we don't do it, information technology will destroy us, our values, our life style.

David: To the degree that information systems are imbedded in the operations of a company or a government, the quirks and the idiosyncracies of those systems are going to impact the style of operation of that entity. These information systems are created by programmers, and those programmers, because of the difficulty of managing them, are coordinated only to a modest degree in most cases. In creating the systems, the programmers are the people who determine what the idiosyncracies of those systems are. And, in effect, the programmers by their programming activities are making company policy, or government policy.

Many people are afraid that management particularly middle management, is going to be replaced by information systems and automating techniques. However, the replacement will not be by machines; it will be by programmers. Well, what criteria should we apply when we look at a management information system or an information system of any kind? How will we determine whether or not it's going to create inflexibilities, or whether it is going to be something that will be of net advantage to the operations of the company or government?

Daddario: I believe we've lost sight of one very important factor in our thinking about information technology. We simply must replace our existing ad hoc policy on science and technology with a definitive national policy on science and technology without which our country's goals and objectives cannot be achieved. It would be within that national concept that information technology would then find its place as an important factor in the accomplishment of those objectives.

Because a democracy depends on the slow process of education and public choice to make the system work, it is important for us to understand the full painful complexity of the conflicts which are developing between technology and democracy and which can be improved through such a policy.

Carey: Do you think that the Congress perhaps could set itself up in some respects to buffer the society against the more extreme impacts of new information technologies, to serve as an educative or social critic—a kind of interpreter or early warner—to help the public understand? I say this because this is an extraordinarily complicated area of change. It sneaks up on people. The technology overwhelms them; it's marketed, it's there, and they move to take it before they understand it. Is there a political responsibility in the Congress as you see it?

Daddario: The Congress, as I see it, has the most important responsibility because it's there where the public has an opportunity to have its voice heard. It is hoped that with the passage of a Technology Assessment bill there will be created a group which will be responsible for looking into technological matters, for seeing where the legislative process can be improved, where the impingement of technology upon the everyday activities of life can be beneficial and not harmful. It is important to develop a legislative mechanism that will get as much information as possible before the public through Congressional debate, so that technical matters can be better understood at the earliest possible stage.

It's a bill which says, among other things, that emergent national problems—physical, biological, and social—are of such a nature and are developing at such an unprecedented rate as to constitute a major threat to the security and general welfare of the United States. It spells out that these problems spring from increasing pressures of population, the rapid consumption of natural resources, the deterioration of the human environment, both natural and social. It then admits that the present mechanisms of the Congress do not provide the legislative branch with adequate, independent, and timely information concerning the potential application or impact of such technology, particularly in those instances where the Federal Government may be called upon to consider the support, management, or regulation of technological applications.

The role of the media—and of government

Wilson: The principle government body that grapples with the problems information technology poses is, of course, the Federal Communications Commission, whose statutory authority was set down in an act of Congress in 1934—a time when the chief concern of most people when they thought about the electronic aspect of information sources was to insure that one broadcaster would not electronically interfere with another broadcaster.

That statutory peg, plus a good deal of loose language surrounding it, have provided in subsequent years an opportunity for the courts and various commissions to expand their range of interest to a point where now we have a very substantial intermix of government constraint and regulation on the one hand, and private initiative on the other hand.

This act and the equally dated copyright act of 1902 pose intereststing problems in that neither of these pieces of legislation anticipated the technological realities of today. I hope that during the next decade we can take a clearer look at the regulatory structure we have and ask how—by more precise language, better practice, and new modes of departure—we can insure that the public obtains maximum advantage from the new technologies that are before us.

Haynes: The superb job of news coverage done by the media without much coverage of hopeful solutions of the problems they report must contribute to individual and social turbulence.

As a result of information technology there has also been a dangerous increase in the amount of vicarious or secondhand knowledge available to the individual. The resultant lack or decrease of firsthand experiential knowledge causes the individual to deal with many important problems and decisions in a detached manner—to the detriment of what I would consider good judgment based on the realities of the situation and on the sensitivity that is born of involvement.

Whitehead: We have to realize that when we structure the information business, we also structure the framework for the expression of ideas in our society and the use of information in our economy. We'll have to think of access that encourages diversity and quality in the sources of information, as well as in the way the information is utilized—access that benefits individual human beings and small businesses as well as large institutions, access that minimizes social polarization rather than aggravates it, access that avoids development of a new class division between the information poor and the information rich before that kind of division can occur. It is obvious that there are many uncertainties in evaluating what is the best way of providing access of all these kinds.

Harwood: One characteristic of the news industry from the print standpoint is that, with the exception of very few communities, most newspapers have achieved a monopolistic position in their local markets. I see nothing in the way of technology that is likely to change that situation, but by their nature these local papers are labor intensive enterprises that require substantial revenues to function and there's simply no technology in the offing that is going to change that character.

News broadcasting, on the other hand, is characterized by considerable local competitiveness, which CATV will intensify. And with regard to the question of access, I would venture to say that we probably have more diversity of information in this country than in any country in the world. And that access is increasing as we develop, particularly in the periodical field or in broadcasting, more and more special interest units.

Conversely, it seems to me that in their efforts to maintain mass markets, local newspapers and networks are being forced by various social pressures to broaden the range of their coverage, and are becoming more open and accessible to all elements in the population.

I think there is no indication at the present time that limitations on access by the print media are sufficiently severe to have generated strong public pressures for governmental intervention or for the enactment of access legislation. The FCC, I think, is moving in the other direction, toward more regulation of broadcasters and to more severe interpretations of the fairness doctrine. One development that will affect access and the problem of diversity, I believe, is a growing interest on the part of the news industry in some concepts of self-regulation, concepts of professional standards that are being developed as an alternative to access legislation.

The impact of information technology on education—and vice versa.

Day: As the systems proliferate nationally and globally—and the process is well under way—their day-to-day management, and the development of interconnections between them to permit intermingling in the employment of diverse information, demands knowledge and skills that are in short supply today.

No university anywhere to my knowledge has undertaken programs to train men and women in the requisite skills to operate the teleprocessing and international networking systems. But these are the complex aspects—the technical aspects, the social aspects and the political aspects. At this stage, however, we have hardly made a dent yet in finding ways to solve the problem of measuring performance and determining the cost benefits of information services.

Howe: I think young people typically leave colleges or schools rather uninformed and uninitiated as far as the whole communications revolution is concerned, and I think they need to learn not only about these instruments but they need to learn to use them. If you look at Dartmouth College today you will find that over 50% of the students at that institution are using computers as a tool for learning while they go through college, and they come out of there not just having used those computers, but having some sense of what the computer means in modern society. That should happen to more youngsters, in high schools as well as colleges. I suspect that the making of movies, the making of television programs—this kind of experience as a part of the learning experience—needs to be increased.

Paine: Education should start early and there is already evidence that this is happening. In an experimental program at Stanford University, children of both preschool and school ages are taught advanced mathematics and other complex subjects far faster and more efficiently with computers. Similar programs are being conducted by the Navy for training midshipmen. But these examples are only a tiny beginning. There's no national plan. I think we need to establish, for example, a clearing house that would bring together raw information, design overview reports, publish and circulate them; a bibliography of studies, books, and conference proceedings could be developed.

By 1975 we will need nearly 2 million people in the computer field, dwarfing the number of lawyers and scientists needed, for example. This clearly represents a major shift in our professional workforce in the future.

We need to design and introduce into management development programs in universities, corporations, and government, appreciation of the scope and potential of information technology—as a resource, as a tool for policy formulation and resource allocation, and as an industry. Permanent courses must be designed, more timely transmission of knowledge achieved, and adequate funding developed to train the talent required to manage information technology.

Haynes: In the area of education, I am concerned about the emergence of a new class of pseudo-information technicians in our schools, who, paradoxically, by contributing to the dehumanizing of the educational process by relying on the techniques of the teaching machine and closed-circuit television, are also contributing to the de-individualizing of the education process.

In graduate education many students regard information technology's advances—the computer and microfilm, for example—as devices to make the job of research easier. The individual student does not see these as advances freeing him to apply more time and energy to the development and use of his own analytical ability, his own creativity and innovativeness in problem-solving. Graduate student theses today are all too typically a mass of undigested facts. They, the embracers of the technology, therefore become inadequate when it comes to the use of the technology, and the professor ends up with stomach trouble.

This point has broader ramifications as a threat to social stability. Information technology can help the individual to define and to understand his own and society's problems, but because information technology is not at present really oriented or capable of working toward problem-solving, there's a great imbalance between, on the one hand, knowledge and understanding of data, and on the other hand, how the data should be used to solve problems.

Green: The point is not to find educational uses for information technology, but to find the ways in which the technology can serve educational ends better than it has in the past. I'm suggesting that within the last decade in this country we have lost sight of what the education ends are up through the secondary school.

In this country we have just about reached the point at which any expansion of the secondary system is goining to come to a halt. We have used the elementary and secondary system as a means of access to upward social mobility, and we've been doing it for 60 years. But if 85 to 90% are going to be finishing secondary school, one of the results will be that this will no longer be a means of upward social mobility.

Indeed, the reason we have a dropout problem in this country is not that there are so many of them—there have, in fact, been fewer and fewer every year—but that education has become so comprehensive and so universal that being a dropout is now for the first time in our history a disaster.

We've created this problem by the expansion of the educational system. So we can't talk about how to make use of the information technology in order to attain educational purposes because we don't any longer know what the purposes are. And this is becoming a problem of crisis proportions in the lower sectors of the educational system. We no longer know how to make use of the educational system as an instrument of continuity.

Heyns: In the next two decades I believe there'll be a greater variety of institutions involved in learning, in education—a greater variability in the socio-economic class, and age groups from which students come. There will be more dropping-out and dropping-in, more transition training, more continuous education, less preoccupation with training the young, greater use of informal instruction and practical experience, both simultaneously and successively, and a marked increase in the individualization of instruction both as to pacing and as to content. I also see an increase in accountability testing to see if our pedagogical practices are indeed effective.

The question in my mind is not whether these changes will occur, but how rapidly will they occur and what can we do to increase the incentives toward these changes and how can we reduce the resistances.

I believe there are at least three reasons behind the resistance to change in educational practices. First, the claims for the new technology as it relates to education have been highly exaggerated, with the result that the failures along the way have disappointed the users of the new kinds of apparatus. Secondly, the new materials have been time-consuming to develop and costly to install. Thirdly, teachers and others connected with the innovative materials have felt threatened by them.

Bennis: Perhaps the busing issue will become obsolete in the information society. We'll no longer have to bus people to the schools, we'll instead deliver the educational services to the people. And perhaps the packaged materials that we deliver will be less vulnerable to degradation.

Howe: I think the educational institutions will continue to change at a slow rate, but the fiscal problems of education, both in elementary and secondary and in higher education, may force the educators into some reluctant changes. I suspect that it is because of fiscally competitive reasons that private business has gotten so adventurously into the computer and other types of technology. I think that the competitiveness of education to capture the public dollar has led toward some vague concept of efficiency, and that the communications revolution may catch on to some degree through that competitiveness.

I was told the other day, for example, by the president of Michigan State University that his beginning economics classes there are taught in large part by a closed-circuit television apparatus; he would have to have an economics faculty about twice the size if it were not for this.

Heyns: Information technology can release the teacher to do the educational tasks for which there is really no readily available technical substitute: setting standards, motivation, evaluating, providing practice in the use of concepts and the evaluation of data. If in the process of encouraging the use of technology we recognize the existence of these other objectives and make room for them and the pedagogical methods that seem to be related to them, then we will get much more rapid, appropriate applications of technology. At the same time, I believe that my colleages in education need to be helped to realize that we cannot continue to get money and political and social support primarily from testimonials.

Bennis: The information society also means that there'll be a movement of some educational personnel from employment in the public sector to employment in the private sector, as commercial organizations become larger participants in the educational process. And it means, too, that we'll have to think about the role of the teacher-professor changing from a content specialist or professional representing psychology or astronomy or x-ology to an agent or coordinator, a manager of educational resources. So education will be progressively less dependent on place and on building, and I think, personally, that the data computers and so forth will possibly be more helpful to the admiministration and running of universities in the next 15 years than they might be for learning and teaching.

Howe: It seems to me that we've been trying to bring communications to education backwards, trying to bring about major systems of change rather than infiltrating from the bottom level—the classroom—and doing something about that classroom teacher's attitudes. We have been very vigorous about providing all sorts of workshops, seminars, institutes, and so on for teachers and professors to perfect their knowledge of their subject fields, but have not been vigorous at all about providing ways for them to learn the use of the new communications technology.

There is, however, now going to be more and more communications technology all about us. And this is going to pull education out of the institutions to some degree. Therefore, as education begins to take place in homes, during leisure time, or in business hours, and while we're sitting on trains or airplanes, there's going to be an increasing gulf between expensive, institutionally oriented education on the one hand, and noninstitutionally oriented and less formal education on the other. And unless education institutions pay some attention to that gulf, they are in some danger of becoming obsolete.

A new kind of man may be needed

Boettinger: In his latest collection C.P. Snow has a brilliant essay called "The State of Siege,"[2] in which he says no matter where you go in the world one comes across a similar paradox: We know so much but we feel we can do so little. It is a complete inversion of the hopes and the glory of the information technology. The old Apocalypse once said that the truth will make you free. I say that may be true, but the facts constrain you. Information is not free and information limits your imagination. As Whitehead said, "fools act on imagination without knowledge, but pedants act on knowledge without imagination." And what we need is a bit of synthesis between the two.

Also, in a period of information overload, there is a psychological reaction in which people will turn inward. They will turn to smaller and smaller in-clubs where they can be comfortable. Sometimes it's a politics of nostalgia; other times it is the formation of a congenial club mentality.

In this particular situation, with a tremendous potential of the amounts of data available, and with the need to simplify that data in order to take a positive course and explain things to wide varieties of people, we see, I think, the emergence of a new type of person in business hierarchies. It is that of the intelligence officer—without the usual penchant for secrecy, weapons, or espionage.

It would seem to me that the role of the intelligence officer is, in this context, to structure the shape, to actually shape the information requirements and the outputs of the various operational data processing systems. Because there

[2]C.P. Snow, *Public Affairs* (New York, Charles Scribner's Sons, 1971).

is a difference between information, which is merely unpredictable events, and intelligence, which is patterning that information in a form congenial for decision.

Haynes: Through technology we are bombarded with masses of unevaluated and often conflicting data. There is too much for the individual to digest and to put to productive use. As a result he feels socially impotent: he rejects all information, he distrusts the uses to which information is put, and ultimately he retreats or withdraws from his social role.

Michael: Information technology presents to decision-makers at all levels the burden of coping with extra-rational needs that become extremely intense and that need to be dealt with in an uncertain and ethically ambiguous world. These needs include trust in oneself and in others, confidence in one's intuition and in one's ability to express feelings about one's value. These are all needs which our society has been appallingly successful at displacing from the conduct of effective rational activity.

It turns out, fortunately, that partly through information technology there are additional technologies available for enhancing one's self-knowledge: sensitivity training, therapy, meditation, biological feedback—many techniques that allow an individual to look far more deeply into himself than most do. Without that deep look, we won't be able to make it humanely in the information society.

Will it mean more freedom for all —or more power for some?

Wilson: Information occupies a curious, indeed, paradoxical place in theories of democratic society. On the one hand we believe that information is an essential perquisite to freedom—that the free citizen is a person who can choose from as diverse a variety of information sources as possible. On the other hand, information is also regarded as an essential element by which governments or other instrumentalities can control society. How to reconcile the value of information as a source of control is a crucial question.

McHale: All of our other resources in the environment, both human and physical, are dependent upon information and knowledge for their evaluation and utilization. Thus information and knowledge in themselves are not like other material resources. They're not reduced or lessened by increased use or wider sharing. They tend to gain in the process of sharing. In fact, very often we can end up with more than we started with.

That sort of change obviously has very great repercussions throughout the society. You're dealing now with a resource which doesn't obey the same kinds of laws as other kinds of material resources that society has hitherto depended upon. Most of our ways of valuing and structuring our interactions are very often dependent upon the scarcity of material means. And here, really for the first time in a large, organized way, is a resource that changes that entire way of thinking.

Our older forms of power are still based on possession or control over physical assets. The new kind of information environment creates new kinds of assets, new kinds of property. It tends, in a sense, to create a new and powerful property class.

Guttentag: The problems multiply for those who are now the elite, those people with power, but these problems at the same time provide those on the other side with great opportunities. Those without power simply have more information available than ever before, and fewer skills are needed to use this information. Also, it is possible to have instant constituencies in the information society. Styles and ideologies are transmitted with incredible speed across the country. For example, one of the things that social scientists learned from Woodstock was that it was possible for an enormous group to establish very common norms and values with limited face-to-face contact. Groups which don't have sophisticated means of communicating with each other are nevertheless able to obtain power and cohesion because of the media. They can also very quickly learn methods of protest that give them an even greater opportunity to grab a share of the power.

Jones: I do not think that information technology is going to create elites. Without any doubt, it will create the possibility for new kinds of groupings. But I think I should take a more relaxed, more philosophical approach to the problem and give a little historical perspective to the matter.

Since the Federal government began to respond to the personal problems of the individual in a massive way, as it did following the Great Depression of 1929, there can be no doubt that there has been an ever-increasing demand for information of all kinds—to which our information technology has responded in rather full measure. Lately we began to turn to the problems of Mr. and Mrs. America per se in our central government organization, and government created the departments of Health, Education and Welfare, of Housing and Urban Development, of Transportation—and I think others will be coming down the road as time goes on.

But this move to concern itself with Mr. and Mrs. America, I do not believe, has concentrated power in any kind of elite because the individual belongs to many different groups. He moves in and out of them, and he joins them in rough coalitions of power to deal with problems that affect him as an individual.

After all, we must recognize that in all of this the growth of information does of course depend on technology, but technology alone neither determines its nature nor its own uses. Our greatest protection against the growth of these power elites within the democratic system, in my judgment, is the fact that we still adhere to the concept that reason is a political asset. And that it is never destroyed by unreason, or even by the unreasoning use of technology under certain circumstances.

Nothing about information technology or the formation of these elitist groups determines in the last analysis the common good. It's put through a much larger screen of public response, public communication, public intervention, if you will, through the process by which our laws are made.

Information technology without doubt will help us in the long run to collect the kind of information upon which to base the major decisions that a democratic state must make as to what is socially, politically, economically and fiscally feasible. Information itself can't do that, nor can any combination of special elites using information technology. They're just not pervasive enough.

Bennis: It seems to me that many people are operating on the assumption that we are seeing a radical shift from the Marxian notion that power stems from property to a new notion that power stems from information. I question that assumption. I think that information may be the least influential source of power in society. One example of this is that a person who has probably served on too many task forces sees that the task forces seem to get better all the time and the problems seem to get worse. My two-culture gap is not C.P. Snow's, between science and humanity; it's between those men who have power and no knowledge, and those men who have knowledge and no power, and it seems to me that the assumption about an elite is a little bit premature.

Can we protect individual privacy and still promote social growth?

Haynes: Is there any need to protect the legions of people who are part of the revolution of information technology —but don't know it? I'm talking about the unwitting victims of commercial advertising in its broadest sense, of violence in film and TV, the perpetration of socially deleterious stereotypes in some of the media.

Paine: Priority efforts should be made to reduce the literacy gaps which exist in information technology between top management and technologists so that communications do not break down between today's experienced management who use empirical judgment to solve problems and the emerging management generation who will increasingly substitute decision models for experience; between producers and users of information technology; and between experts and the public so as to dispel myths, reduce threats (real or imagined), and prevent unwarranted antagonisms against information technology.

Roark: We've been talking as if the computer had somehow the qualities of leadership, as if the computer could take us somewhere—to a new utopia, maybe. The computer, of course, is nothing of the sort. The computer is what I like to call the great multiplier. It can take whatever we're inclined to do and multiply its effectiveness. And if, in corporate life, our management is one which tends to be uncertain and indecisive, then the management armed with computers can be 10 times as uncertain and indecisive. So the computer has no qualities of its own. It's a great neutral. Our problem, therefore, in business and industry is going to be trying to bring selectivity, order and structure into the use of these information technologies.

Paine: The computer is merely a tool, like the pen or the typewriter, but in the wrong hands it can inflict hardship, even oppression, with ruthless efficiency. Society must resist any erosion of rights as confidential data are computerized and merged into huge national information systems. The initiative here is to determine those areas where regulations can be privately or self-administered and those where they may be publicly administered by government.

Haynes: I think there are dangers, by far the greatest being the impact of information technology on the traditional right of individual privacy. With or without the consent of the individual, information technology permits more organizations to amass more personal data on individuals, and it similarly permits others to use those data for ends that are often detrimental to the individual. I'm speaking specifically of personnel data banks, law enforcement agencies, consumer credit organizations, banks, insurance companies, government, the armed services, hospitals, licensing agencies, schools, and so forth. Do individuals no longer have the right to withold information about themselves or to determine to whom it should be given?

Daddario: The basic data needed to support social legislation and to establish national policy are accumulated every 10 years by the Census, and are included in income tax returns, Social Security information, etc. We recognize that there is national and Congressional opposition to using this data because this information is considered an invasion of privacy. The Congress and the people don't trust the agencies of the government; they don't believe that if this information is made available that individuals will be protected. That is, of course, a major problem, and yet if we are unable to utilize such vital information and protect individual privacy as we do so, our society will be unable to meet the complex demands placed on it, and our rights as individuals will be in jeopardy because of that inability.

Bennett: I think that if, in fact, the various data bases that exist within the country today were linked by some data transmission schemes, it would be fairly simple conceptually, although reasonably difficult physically, to have policy-makers have access to all of the data in any way necessary for policy decisions and yet maintain the individual's privacy.

There would need to be rules. For example, it could be made a Federal felony to transmit Social Security numbers, say, and other data related to individuals in the same basic transmission, because then one computer system or center could thus identify individuals to another center. Instead, the data requested could be returned, but without identifying numbers. With that one simple rule, and without the construction of any centralizing switching force that would let a given individual collect the data in one place, there should be no objections.

With that one rule, it would be possible to establish a network among the Federal agencies in such a way that for policy-making decisions the data could be integrated, but in fact the potential for invasion of privacy would be virtually nil and the potential for some ominous force from outside the U.S. to come in and have access to all our data would not exist—because the data, in fact, would be separated.

Michael: In order to keep information technology from taking a monstrous course we're seeing some innovations. One kind is by deliberately infiltrating an organization for a few years until one has the information necessary to leak that might demonstrate how that organization has been misrepresenting itself. The Pentagon and the Food and Drug Administration have experienced this, and I'm certain we'll see more of it simply because there are more people who are associating themselves more with the problems of society rather than with the survival of the organization they are affiliated with.

I don't mean to suggest that the only way the individual's access to information can be protected is at the expense of the organization by invasion, infiltration and so forth. What I want to point out is that all organizations operating in conventional ways, government agencies as well as corporations, set their own survival ahead of the welfare of the environment they are presumably related to. And that survival, if we follow the usual procedures that have been successful, is one in which information is restricted for the use of the organization and the aggrandisement of its effective control over its environment.

If one of the devices that comes to be used is to attack and go in and get that information, then I would hope that over time such action might encourage some organizations to see a virtue and a necessity in soliciting feedback and putting out information, rather than equating survival with the restriction of information.

Whitehead: There is a basic interest in privacy which society must protect. However, it is also true there is a broad social interest in disclosure. There may be times when society must obtain *some private information* in order to act knowledgeably for the solution of social problems. If we absolutely prohibited all data acquisition about individuals, more would be lost in terms of foregone social capability than would be gained in terms of greater individual privacy. There cannot be a single monolithic guide to privacy.

There are certain kinds of information, or "zones" of privacy which should be protected from all intrusion. But beyond that, there is no single best resolution of the competing interests of privacy and disclosure that applies either for each individual or each kind of situation.

Government, however, does have a role in assisting in shaping the utilization of information technology so that once an individual or social decision is made, there is an effective mechanism for carrying it out. I think it's important to note that this will not necessarily require new institutions. Indeed, the basic objectives of diversity, choice, access, and privacy are more likely to be achieved in our system of private rights and legal procedures for enforcing them than they are through any new or expanded Federal bureaucracy. We should pay attention to how to update existing systems and to enhance our capabilities to meet the new situation.

Sanford: I don't think information technology is going to make Congress or government any more effective of itself. Nor do I think it's going to make government more repressive or coercive. I would suggest that it might make it less coercive and less repressive as it gives us the tools for more people to know what's going on.

I certainly believe that it will not of itself create more elites, and if it does, this is nothing new in American society. We've had elites all the time from Revolutionary days throughout the history of this nation. Far from developing this, we might very well now have the tools to spread out the power of decision-making to a greater extent than ever before.

A self-renewing government with the capacity to bring together information to monitor what's going on in all of the various programs gives us again a capacity to have the kind of government that keeps up with the problems and even anticipates them. We've now put together, for example, what normally would have been called a library at the Duke Medical Center. We are going to call it a Communications Center. It gives us a new capacity in the delivery of health care throughout the whole southeastern part of the country. Again, ten governors have joined what we call the Southern Growth Policies Board, organized for the first time because of this new technology. We can find out and plan not to make the same mistakes the cities of the North have made.

Because we've got this technology, we can find out what those decisions should be, and we can help educate the people to support that kind of decision. So I don't see us moving to an elitist, repressive, coercive society. Rather, I see all of this new technology leading to the kind of federalized, open, reorganized, revitalized, self-renewing government that we ought to have.

Whitehead: While I don't believe that information technology will bring about any utopian ideal, neither do I think that machines necessarily destroy human values. It's people who destroy human values.

Information technology is the tool that we have placed in our own hands. We can use it to enhance our own abilities and our own potentials to enhance the importance of the human individual. We can use it for all those constructive things just as easily as it can be used to degrade them. To do so, our stress should be on developing the kind of institutions for the technology that serve this positive function, and not on creating defenses to meet a conjured-up parade of horrible possibilities.

9/8/72

Called the New York Conference Board
and talked with Mr. Worssam's
secretary, Mrs. Cetani, to tell her
that I had discovered no one had written
or note or called Mr. Worssam or
Mr. Trowbridge to thank them for
the lovely clock which they sent to
Mr. Whitehead after he spoke to
the Conference Board on February 15, 1972.

Apologized for the long delay but
appreciated the clock very much.

She will relay the me ssage.

Eva

OFFICE OF TELECOMMUNICATIONS POLICY
EXECUTIVE OFFICE OF THE PRESIDENT
WASHINGTON, D.C. 20504

March 8, 1972

To: Eva Daughtrey

From: Ken Robinson

Subject: Clock

This is in response to your request of Thursday, March 2, 1972, for advice regarding one Jefferson Electric "Golden Hour" electric clock (a now-discontinued stock item) forwarded to Mr. Whitehead by Messrs Alex Trowbridge and John Worssam on behalf of the New York Conference Board, following an address to that broadly-based businessman's group February 15, 1972.

As you know, Executive Order No. 11222 of May 8, 1965 (3 CFR 306 (1964-65 comp.)) generally precludes the acceptance of any gifts by Government employees, except as individual agency regulations may provide. OTP's standards of conduct regulations (36 F.R. 25414 (December 31, 1971)) provide that no employee of the agency may accept any gift from persons who may be affected by agency actions; gifts of minimal value, however, may be accepted from such persons.

The gift in question was forwarded by an organization with little, if any, stake in the actions of this agency. Moreover, it is of marginal value--estimated less than $15.

I conclude that Mr. Whitehead legally may retain the item and you may so advise him. As we discussed, I believe a telephoned acknowledgement by you would be more appropriate.

3/2/72

Ken Robinson didn't think there was a problem with accepting the clock -- didn't feel it was worth more than $5.00 wholesale.

Mr. Whitehead asked that we let Ken know that he'd better be careful or he would add appraiser to his job description.

3/3/72

Gave Mr. Robinson the message and he said he's already that.

Told him that I had checked a jeweler this morning to advise that when they sold that particular clock about a year ago it retailed for $38 to $40 -- probably wholesale, $20 to $22.

Ken doesn't feel it is worth that and will check and give us a note.

Speech 2/15/72

Spd
2/15/72

March 14, 1972

Miss Ina Liss
Public Information
The Conference Board
845 Third Avenue
New York, New York 10022

Dear Miss Liss:

Since Mr. Whitehead is out of town, I am replying to your letter of March 9 discussing the air date for the tape of the luncheon session at the Conference Board's Conference on "The United States in the Information Society of the 70's and 80's."

I appreciate very much your letting us know when the tape will be aired. We will be looking forward to hearing about it. Many thanks for taking the time to keep us posted.

Sincerely,

Linda K. Smith
Special Assistant
to the Director

cc;
DO Chron
DO Records
Whitehead (2)
Eva
LKS Subject
LKS Chron
Lamb
LKSmith:jem

845 Third Avenue
New York, N. Y. 10022
(212) 759-0900

5

THE CONFERENCE BOARD

March 9, 1972

Mr. Clay T. Whitehead
Director
Office of Telecommunications
  Policy
The White House
Washington, D. C. 20500

Dear Mr. Whitehead:

Just a short note to let you know that New York City radio station WNYC-AM (830 ks.) has scheduled for broadcast a tape of the luncheon session in which you participated at The Conference Board's "United States in the Information Society of the 70's and 80's" conference on February 14. Air date is scheduled for Thursday, March 16 at 12 noon.

While we realize that WNYC does not transmit too far beyond the New York City area, we thought nevertheless that you'd like to be aware of the broadcast.

Thank you again for your participation and please don't hesitate to call should you have any questions.

Sincerely,

Ina Liss

Ina Liss
Public Information

agenda

united states in the information society of the 70's and 80's

february 14-15, 1972

the waldorf-astoria

THE CONFERENCE BOARD

about this conference

A new resource of strategic national and international importance has been developed. Some refer to it as the information sciences, others as the information process, still others as communications. By information technology we mean the collection, storage, processing, dissemination and use of information.

"Within two decades," says Max Ways, "these new information technologies have become an indispensable part of the web that holds society together. If society had to get along without these technologies, the business life of the United States would be imperiled to the point of disaster. The new ways of handling information have brought about fundamental changes in governmental and political processes. They have altered the psychological and cultural attitudes of hundreds of millions who have only the haziest notion of how the new technology works."

Today, information technology provides us with the capabilities for formulating and ordering our goals, for increasing management's effectiveness, for freeing man to participate in broader and more meaningful activities, and for narrowing the gap between the haves and have-nots. If we fail to recognize this potential we may drift in another direction. We may create and strengthen the power of management elites, circumscribe the freedom of man, and create a new kind of rich-poor gap between those, regardless of economic status, who know how to command the information technology and those who do not.

"The next 20 years," continues Max Ways, "will be the critical period when the quality of our response to information technology will be disclosed."

A panel of 42 experts, under the direction of The Conference Board and the sponsorship of its Senior Executives Council, has just completed a major overview of this important subject. It is entitled — *Information Technology; Some Implications for Decision-Makers,* and it will be available in January 1972.

The Conference Board has invited a distinguished group of citizens to take part in a conference that examines some of the most important conclusions in this study and what they should mean for us today.

This conference is intended primarily for those in and moving into leadership positions in business, government, education who are concerned about the problems and opportunities moving swiftly in our direction, and who want to understand their implications and leadership options for today.

Alexander B Trowbridge

Alexander B. Trowbridge
President

monday, february 14, 1972

9:00 A.M. – Starlight Roof

MANAGING CHANGE

A New Imperative

A. B. TROWBRIDGE, President
The Conference Board

9:15 A.M. – Starlight Roof

CHANGING INFORMATION ENVIRONMENT

A Powerful Resource Emerges

JOHN McHALE, Director
Center for Integrative Studies
State University of New York

9:50 A.M. – Starlight Roof

NEW MEANINGS FOR TRADITIONAL INSTITUTIONS

Government

Moderator: WILLIAM D. CAREY, Senior Staff Consultant
Arthur D. Little, Inc.

Discussants: EMILIO Q. DADDARIO, Senior Vice President
Gulf & Western Precision Engineers Co.

ROGER W. JONES, Consultant
Office of Management and Budget
The White House

TERRY SANFORD, President
Duke University

Education

Moderator: WARREN G. BENNIS, President
University of Cincinnati

Discussants: ROGER W. HEYNS, President
American Council on Education

HAROLD HOWE, II, Vice President – Education & Research
The Ford Foundation

THOMAS F. GREEN, Co-Director
Educational Policy Research Center
Syracuse University Research Corp.
Professor of Education
Syracuse University

continued . .

monday, february 14, 1972

Business

Moderator: ROBERT O. ANDERSON
Chairman of the Board and Chief Executive Officer
Atlantic Richfield Company

Discussants: HENRY M. BOETTINGER
Director of Management Sciences
American Telephone & Telegraph Company

W. ROBERT WIDENER
President
Information Management International Corporation

MAYFORD L. ROARK
Director, Systems Office
Ford Motor Company

12:30 P.M. – Empire Room

GET ACQUAINTED LUNCHEON

2:00 P.M. – Starlight Roof

REGULATIONS FOR DEVELOPING INFORMATION TECHNOLOGY AND PROTECTING THE PUBLIC

Moderator: JAMES Q. WILSON
Professor of Government and Chairman of the Department of Government
Harvard University

Discussants: RICHARD HARWOOD
Assistant Managing Editor for National Affairs
The Washington Post

JOSEPH M. KITTNER
McKenna, Wilkinson & Kittner

EUGENE V. ROSTOW
Professor of Law
Yale University

continued . . .

ANTITRUST ANALYSIS

Nightmares — Opportunities —
New Building Blocks of Analysis

Moderator: FREDERICK M. ROWE
Kirkland, Ellis & Rowe

Discussants: ANDREW AINES, Senior Staff Associate
Office of Science Information Service
National Science Foundation

BETTY BOCK, Director, Antitrust Research
The Conference Board

ALLEN C. HOLMES
Jones, Day, Cockley & Reavis

JESSE W. MARKHAM
Professor of Business Administration
Graduate School of Business Administration
Harvard University

THE INDIVIDUAL

Enriched or Impoverished?
Master or Servant?

Moderator: ERWIN D. CANHAM
Editor-in-Chief
The Christian Science Monitor

Discussants: MARCIA GUTTENTAG, Director
Harlem Research Center
City University of New York

ULRIC HAYNES, JR., Senior Vice President
Spencer Stuart & Associates

DONALD N. MICHAEL, Program Director
Institute for Social Research
University of Michigan

tuesday, february 15, 1972

9:00 A.M. – Starlight Roof

COMPETITIVE POSITION OF U.S. IN TOMORROW'S INFORMATION WORLD

Moderator: JAMES E. WEBB, Attorney – Treasurer
The National Academy of Public Administration

Discussants: ISAAC L. AUERBACH, President
the Auerbach corporations

PAUL BARAN, Consultant
Institute for the Future

EUGENE FUBINI
E. G. Fubini Consultants, Ltd.

MANAGING THE RANKING RESOURCE
International Trends
U.S. Policy Quest

Moderator: EMILIO Q. DADDARIO, Senior Vice President
Gulf & Western Precision Engineers Co.

Discussants: GEORGE B. BENNETT, Consultant
The Boston Consulting Group, Inc.

MELVIN S. DAY, Head
Office of Science Information Service
National Science Foundation

JAMES E. WEBB, Attorney – Treasurer
The National Academy of Public Administration

TODAY'S LEADERSHIP INITIATIVES
Decisions That Can't Wait

Moderator: **THOMAS O. PAINE, Vice President**
General Electric Company

Discussants: **EDWARD E. DAVID, JR., Director**
Office of Science and Technology
The White House

JACK E. GOLDMAN, Senior Vice President
Xerox Corporation

EDWARD S. SAFFORD
Corporate Vice President—Planning
Cahners Publishing Company, Inc.

12:00 Noon
RECEPTION – Hilton Room

12:30 P.M.
LUNCHEON – Empire Room

Chairman: **A. B. TROWBRIDGE**
President
The Conference Board

Speaker: **CLAY T. WHITEHEAD**
Director
Office of Telecommunications Policy
The White House

THE CONFERENCE BOARD
845 THIRD AVENUE, NEW YORK, N. Y. 10022 (212) 759-0900

THE CONFERENCE BOARD

WHO'S WHO

AT

The Conference Board's Meeting on

"U.S. in the Information Society of the 70's and 80's"

Waldorf-Astoria
February 14-15, 1972

ANDREW AINES

Senior Staff Associate, Office of Science Information Service, National Science Foundation; received B. B. A. from Boston University in 1937, M.S. in experimental psychology from the University of Maryland in 1951, M.A. in international affairs in 1961. At the conclusion of his military service, Mr. Aines became a regular army officer and remained in this status until he retired from active service as a colonel in 1967. Mr. Aines followed his dual career pattern as a military scientist and as a senior logistician. The last three years of his career in the military were spent as a technical assistant to the Director of the President's Office of Science and Technology. From 1967-1971 Mr. Aines spent in the same capacity as a Federal civil servant specializing in science communications, computers and related fields.

ROBERT O. ANDERSON

Chairman of the Board and Chief Executive Officer, Atlantic Richfield Company; graduate of the University of Chicago. Mr. Anderson was elected to the board of directors of The Atlantic Refining Company (now Atlantic Richfield Company) in 1963 and was named chairman of the company's executive committee in 1964. He assumed his present position in 1965. Mr. Anderson is owner of the Lincoln County Livestock Company and a director of numerous business, civic, charitable, educational and cultural organizations. He served from 1961 through 1965 as chairman of the board of the Federal Reserve Bank of Dallas, Texas.

(o v e r)

ISAAC L. AUERBACH

President, the Auerbach corporations; received BSEE degree from Drexel University and master's degree in applied physics from Harvard University. Upon completion of his military service, Mr. Auerbach became a member of the design team for the first commercial electronic computer, the UNIVAC. As division manager with Burroughs Corporation, he was responsible for organizing and directing Burroughs' defense and space research and developments efforts. Following this, Mr. Auerbach founded the Auerbach corporations. He is an advisor and consultant to both government and industry in the international computer community.

PAUL BARAN

Consultant, Institute for the Future; received B.S. in electrical engineering from Drexel Institute of Technology in 1949; M.S. in engineering in 1959 from University of California at Los Angeles. Prior to joining Rand Corporation in 1959, Mr. Baran was employed for 10 years in engineering system design on radio telemetering, radar data processing and computers. In 1968 he left Rand and helped establish the Institute for the Future where he has served as secretary-treasurer and vice president. Mr. Baran resigned from the Institute in 1971 to work independently but continues a close relationship to the Institute as special consultant.

GEORGE B. BENNETT

Consultant, The Boston Consulting Group; received B.S. degree from West Virginia University and his master's and Ph.D. degrees from the Graduate School of Industrial Administration, Carnegie-Mellon University. During his graduate studies, Dr. Bennett conducted research at the Danish Technical University in Copenhagen, Denmark, and at Handelhogskolan in Gothenburg, Sweden. He has worked as a consultant for the American Bankers' Association and the Stonier Graduate School of Banking since 1968 and has been a member of the Boston Consulting Group since 1970.

(o v e r)

WARREN G. BENNIS

President, University of Cincinnati; received B.B.A. from Antioch College; attended the London School of Economics; received Ph.D. in social sciences and economics from M.I.T. Dr. Bennis assumed his present position in 1971. He was previously academic vice president of the State University of New York at Buffalo and chairman of the Organizational Studies Group at M.I.T.'s Sloan School of Management. He has taught at Harvard University; the University of California; Boston University; IMEDE; has been associated with the University of Lausanne; and served as director of a new school of management sponsored by M.I.T. and the Ford Foundation in Calcutta, India. Presidents of both political parties have appointed Dr. Bennis to advisory posts.

BETTY BOCK

Director, Antitrust Research, The Conference Board; received Ph.D. in 1942 from Bryn Mawr College. Since 1956 Dr. Bock has served with The Conference Board. She was formerly a member of the American Bar Association Commission to Study the Federal Trade Commission; member of the economic staff of the Federal Trade Commission; liaison between the Federal Trade Commission and the Attorney General's National Committee to Study the Antitrust Laws; economist, Office of Small Business, United States Department of Commerce; managing editor, Antitrust Department, Research Institute of America; research economist, Buffalo Foundation; instructor, City College, New York City; occasional consultant on antitrust problems.

HENRY M. BOETTINGER

Director of Management Sciences, American Telephone and Telegraph Company; received bachelor of engineering degree in 1948 from Johns Hopkins University, attended New York, Michigan and Pennsylvania Universities. Mr. Boettinger began his Bell system career in 1948 and assumed his present responsibilities in 1971 with AT&T. Prior to assuming his present position, he held a number of administrative posts with The Chesapeake and Potomac Telephone Company of Maryland, Michigan Bell Telephone Company and AT&T in New York. Mr. Boettinger's early business career included employment as a draftsman, surveyor and electronics testman. Mr. Boettinger is currently adjunct professor of management philosophy, Pace College.

(o v e r)

ERWIN D. CANHAM

Editor-in-Chief, The Christian Science Monitor. Mr. Canham received his B.A. degree from Bates College and in the same year became a reporter for the Monitor. He took a three year's leave of absence as a Rhodes Scholar at Oxford University and received B.A. and M.A. degrees there. Between college terms, he was assistant Monitor correspondent at League of Nations assembly sessions in Geneva. In 1930 he covered the London Naval Conference and began service as the Monitor's Geneva correspondent. From 1932-1939 he was chief of the Monitor's Washington bureau and then went to Boston as general news editor. Mr. Canham became the Monitor's chief editorial executive with the title of managing editor in 1942 and in 1945 became editor. In 1964 he assumed his present position.

WILLIAM D. CAREY

Senior Staff Consultant, Arthur D. Little, Inc.; received A.B. from Columbia University in 1940, an M.A. in government from Columbia in 1941 and an M.P.A. from Harvard University in 1942. Prior to assuming his present position, Mr. Carey served with the Bureau of the Budget, from 1942 to 1969, in the Executive Office of the President and was assistant budget director from 1966 to 1969.

EMILIO Q. DADDARIO

Senior Vice President, Gulf & Western Precision Engineers Company; received B.A. degree in 1939 from Wesleyan University; graduated from the University of Connecticut Law School with a bachelor of law degree in 1942. Mr. Daddario is a member of the Connecticut and Massachusetts bars. He served as Mayor of Middletown, Connecticut, 1946-1948; Judge of Middletown Municipal Court, 1948-1950; and member of U.S. Congress where he served as chairman of Subcommittee on Science, Research & Development and Special Subcommittee on Patents and Scientific Inventions, 1958-1970. Besides his present post with Gulf & Western, he is also a senior partner in the law firm of Daddario, Slitt, Jacobs & Sullivan. Since 1971 Mr. Daddario has been a visiting professor at M.I.T.'s School of Political Science.

(o v e r)

EDWARD E. DAVID, JR.	Director, Office of Science and Technology, The White House; received B.S. degree in electrical engineering from Georgia Institute of Technology in 1945; S.M. and Sc.D. from Massachusetts Institute of Technology in 1947 and 1950 respectively. Prior to coming to Washington, Dr. David was executive director, research, Communication Principles Division of the Bell Telephone Laboratories. He joined Bell Labs in 1950. Dr. David has had many academic associations. He is the orginator of "The Man-Made World," a new course for high school students concerning the principles behind technology.
MELVIN S. DAY	Head, Office of Science Information Service, National Science Foundation; received B.S. degree from Bates College in 1943. Mr. Day joined the Manhattan Project as a chemist in 1943. Upon completion of his military service, he transferred to the U.S. Atomic Energy Commission. He served with AEC from 1946-1960 rising from chemist in the Technical Information Division to director, Division of Technical Information. In 1960 he joined the National Aeronautics and Space Administration as deputy director of the Office of Technical Information and Education Programs, then as director of the Scientific and Technical Information Division and was promoted in 1966 to the position of deputy assistant administrator of NASA. Mr. Day assumed his present responsibilities in 1971.
EUGENE FUBINI	E. G. Fubini Consultants, Ltd.; attended Technical Institute at TURIN from 1929-1931, received doctorate in physics from the University of Rome in 1933. Dr. Fubini became a private consultant to both industry and government in 1969 when he resigned from IBM as a vice president and group executive. From 1963-1965 he served as Assistant Secretary of Defense and Deputy Director of Defense Research and Engineering. Dr. Fubini has also held positions with the Airborne Instruments Laboratory which became a division of Cutler-Hammer Corporation; a research associate of the Harvard University Radio Research Laboratory, an engineer with Columbia Broadcasting System; and the National Institute of Electrotechnics in Rome, Italy.

(o v e r)

JACK E. GOLDMAN

Senior Vice President-Research and Development Xerox Corporation; graduate of Yeshiva University and received master's degree and Ph.D. in physics from the University of Pennsylvania. Dr. Goldman was director of Ford Motor Company's scientific laboratory from 1962 to 1968 when he joined Xerox as group vice president, research and development. He has served on the faculty of Carnegie Mellon University where he headed the laboratory for magnetic research. He was also visiting Edwin Webster Professor at Massachusetts Institute of Technology.

THOMAS F. GREEN

Professor of Education, Syracuse University and Co-Director, Educational Policy Research Center, Syracuse University Research Corporation; educated at the University of Nebraska, B.A. and M.A. degrees in philosophy and political science; received Ph.D. in philosophy from Cornell University. Dr. Green has been professor of education at Syracuse since 1966 and has been co-director of the Educational Policy Research Center since 1970. He has previously served on the faculty of Michigan State University and the South Dakota School of Mines and Technology. He has written numerous articles in the fields of psychology, anthropology and public policy related to education. Dr. Green has also served as a consultant to the OECD, the Office of Education and other local and national government authorities.

MARCIA GUTTENTAG

Director, Harlem Research Center, City University of New York; received B.A. degree from the University of Michigan and Ph.D. in psychology from Adelphi University; attended University of Freiburg, Germany, as Fulbright scholar; attended Yale and Harvard Universities. Dr. Guttentag has served with City University of New York as associate professor of psychology and director of the Harlem Research Center since 1970. She has previously served on the faculty of Queens College, State University of New York (Stony Brook), C.W. Post College and Adelphi University.

RICHARD HARWOOD

Assistant Managing Editor for National Affairs, The Washington Post; received A.B. from Vanderbilt University in 1950; Neiman Fellow Journalism, Harvard, 1955-56; Carnegie Fellow Journalism, Columbia, 1965-66. Mr. Harwood joined The Washington Post in 1966 as a national correspondent. Prior to assuming his present position in 1971, he served as national editor, 1968, and assistant managing editor, 1970. Mr. Harwood has also served with the Nashville Tennessean, Louisville Courier-Journal and Times.

(o v e r)

ULRIC HAYNES, JR.	Senior Vice President, Division of Public and Institutional Affairs, Spencer Stuart & Associates; received B.A. in 1952 from Amherst College and LL.B. in 1956 (John Hay Whitney Fellowship) from Yale University Law School; attended Cornell University School of Industrial & Labor Relations and Harvard University's Advanced Management Program. Mr. Haynes has occupied his present position with Spencer Stuart since 1970 and has been a visiting lecturer at Harvard's Business School since 1968. He previously held positions with Management Formation Incorporated (now part of Spencer Stuart & Associates), the National Security Council, the U.S. Department of State, The Ford Foundation, the United Nations and the Department of Commerce.
ROGER W. HEYNS	President, American Council on Education; received A.B. degree from Calvin College in 1940; from the University of Michigan received master's in clinical psychology in 1942, Ph.D. in 1949 and an LL.D. in 1967, LL.D. from the University of San Francisco in 1971. Prior to assuming his present responsibilities in 1972, Dr. Heyns served in various academic capacities with the Universities of Michigan, Harvard and California at Berkeley. He has also served as consultant to the Carnegie Corporation.
ALLEN C. HOLMES	Partner, Jones, Day, Cockley & Reavis; received A.B. degree in 1941 from the University of Cincinnati and J.D. degree in 1944 from the University of Michigan. Mr. Holmes has been associated with Jones, Day, Cockley & Reavis since 1944.
HAROLD HOWE II	Vice President-Education & Research, The Ford Foundation; received B.A. from Yale University in 1940 and M.A. from Columbia University in 1947. Mr. Howe assumed his present position with The Ford Foundation in January, 1971. For two years starting in January, 1969, he served as advisor on education to the Foundation's office in India. Mr. Howe was United States Commissioner of Education from 1965 through 1968 when he resigned to accept his appointment with the Foundation. He previously held a number of academic positions.

(o v e r)

ROGER W. JONES

Consultant, Office of Management and Budget, The White House; received A.B. degree from Cornell University in 1928 and M.A. from Columbia University in 1931. Prior to his appointment in 1971 to the Office of Management and Budget, Mr. Jones held a number of posts with the Bureau of the Budget. He was appointed by the President as chairman of the U.S. Civil Service Commission in 1959 and in 1961 was appointed Deputy Under Secretary of State for Administration.

JOSEPH M. KITTNER

McKenna, Wilkinson & Kittner; received B.S. degree in 1937 and LL.B. in 1939 from the University of North Carolina. Mr. Kittner was admitted to bar, 1940, North Carolina; 1945, U.S. Supreme Court; 1947, Court of Appeals, District of Columbia. Mr. Kittner has served as Assistant to the General Counsel, Federal Communications Commission, 1948-51; Assistant Chief, Broadcast Bureau (1951-55) and Safety and Special Radio Services Bureau (1955-56), Federal Communications Commission. From time to time he has also served as advisor, U.S. Delegations to Regional and Worldwide Communications and Broadcasting International Conferences.

JESSE W. MARKHAM

Professor of Business Administration, Graduate School of Business Administration, Harvard University; received A. B. degree from the University of Richmond and master's and doctorate degrees from Harvard University. Dr. Markham has been at Harvard since July, 1968. He previously taught at Princeton University (1953-1968), Vanderbilt University (1948-1953), and Harvard College (1947-1948). Dr. Markham also served as director of the Bureau of Economics, Federal Trade Commission from 1953 to 1955.

JOHN McHALE

Director, Center for Integrative Studies, State University of New York. Dr. McHale was educated in the United Kingdom and in the United States and holds a Ph.D. degree in sociology. He has published extensively in Europe and in the U.S. on the impact of technology on culture, mass communications and the future. As an artist and designer, Dr. McHale has exhibited widely in Europe since 1950. Dr. McHale is presently director of the Center for Integrative Studies in the School of Advanced Technology at the State University of New York at Binghamton. The Center is concerned primarily with studies in the long-range social and cultural implications of scientific and technological developments.

(o v e r)

DONALD N. MICHAEL	Program Director, Institute for Social Research, University of Michigan; educated at Harvard and the University of Chicago. After receiving his Ph.D. from Harvard, Dr. Michael taught at Boston University and did research on teaching from audiovisual aids on contract to the Air Force. From 1953 until he assumed his present position, Dr. Michael held positions with Weapons Systems Evaluation Group of the Joint Chiefs of Staff, the National Science Foundation, Dunlap & Associates, Inc., The Brookings Institution and the Peace Research Institute. He has also been a resident fellow of the Institute for Policy Studies.
THOMAS O. PAINE	Vice President, General Electric Company; received A. B. in engineering from Brown University in 1942, M.S. and Ph.D. degrees in physical metallurgy from Stanford University. Dr. Paine worked as a research associate at Stanford University prior to joining General Electric's research laboratory. At General Electric he held positions as manager, Meter and Instrument Department Laboratory; manager, Engineering Applications; manager of TEMPO, GE's Center for Advanced Studies. Dr. Paine assumed his present responsibilities in 1970. President Johnson appointed him in 1968 as Deputy Administrator of NASA and later that year appointed him Acting Administrator. In 1969 President Nixon appointed him Administrator of NASA.
MAYFORD L. ROARK	Director-Systems Office, Ford Motor Company; received B.A. degree in 1940 and M.S. degree in 1942 from the University of Colorado. Mr. Roark joined Ford Motor Company in 1952 and managed several financial departments prior to assuming his present position. He previously served with the U.S. Bureau of the Budget, U.S. Weather Bureau and the Colorado Department of Revenue.
EUGENE V. ROSTOW	Professor of Law, Yale University; received A.B. in 1933, LL.B. in 1937 and A.M. in 1944 from Yale University, M.A. in 1959 from Cambridge University. Mr. Rostow was admitted to New York State Bar in 1938. He has been a member of the faculty at Yale since 1938. He has served as professor of law since 1944 and was dean from 1955 to 1965. Mr. Rostow served as Under Secretary of State for Political Affairs from 1966 to 1969.

(o v e r)

FREDERICK M. ROWE

Kirkland, Ellis & Rowe; received LL.B. in 1952 from Yale Law School. From 1952-1953 Mr. Rowe served as law clerk to Mr. Justice Tom C. Clark, U.S. Supreme Court and from 1953-1955 was conferee on Antitrust Policy in Distribution, Attorney General's National Committee to Study the Antitrust Laws. He has also served as chairman, Council on Antitrust and Trade Regulation, Federal Bar Association, 1966-1969; chairman, Section of Antitrust Law, American Bar Association, 1969-1970; and member, ABA Commission to Study the Federal Trade Commission, 1969.

EDWARD S. SAFFORD

Corporate Vice President-Planning, Cahners Publishing Company, Inc.; received B.S. degree in industrial engineering from the University of Kansas in 1939. During the war, Mr. Safford served as contract administrator for Beech Aircraft Corporation and following the war served as director of sales at Beech Aircraft. In 1950 he formed Loadcraft Corporation which was later sold to Allied Products, Inc. Mr. Safford served as president of the Denver Division of Cahners Publishing Company from 1960 to 1971 and has just recently assumed the new responsibilities of long-range planning for the parent corporation.

TERRY SANFORD

President, Duke University. Prior to assuming his present post, Mr. Sanford served as president of Urban America, Inc., 1968-1969; and served in the North Carolina State Senate, 1953-1955. Mr. Sanford has served as a partner in the firm of Sanford, Cannon, Adams and McCullough and has been director of "A Study of American States," a Ford Foundation and Carnegie Corporation financed project to study and recommend ways in which state government can be more effective.

ALEXANDER B. TROWBRIDGE

President, The Conference Board. After graduating from Phillips Academy in Massachusetts, Mr. Trowbridge entered Princeton University where he was a student in the Woodrow Wilson School of Public and International Affairs and was graduated in 1951. Mr. Trowbridge's career included five years with the California-Texas Oil Company in New York and the Philippines and six years with affiliates of Standard Oil Company (New Jersey) in Cuba, Panama, El Salvador and Puerto Rico. He was also President and Division Manager of the Esso Standard Oil Company (Puerto Rico) in San Juan. From 1965 to 1967 Mr. Trowbridge served in Washington as Assistant Secretary of

(o v e r)

Commerce for Domestic and International Business and served as Secretary of Commerce from February 1967 until March 1968. Prior to his election as President of The Conference Board in September of 1970, Mr. Trowbridge was President and Chief Executive Officer of the American Management Association.

JAMES E. WEBB

Attorney-Treasurer, The National Academy of Public Administration; graduated from the University of North Carolina and studied law at George Washington University. Mr. Webb's governmental experience includes service as secretary to the Chairman of the House Rules Committee, U.S. Congress; assistant to the Under secretary of the Treasury; Director, U.S. Bureau of the Budget; Undersecretary of State; and administrator, National Aeronautics and Space Administration. His business experience includes service as personnel director, secretary-treasurer and vice president of Sperry Gyroscope Company; president of Republic Supply Company; director of McDonnell Aircraft Company and of Fidelity National Bank (Oklahoma City).

W. ROBERT WIDENER

President, Information Management International Corporation. Mr. Widener graduated from the University of Miami and began his business career with a New York advertising agency. In 1963 he formed Information Management International. Mr. Widener's interest in management communications and computers began in 1962 when he was retained by the American Telephone & Telegraph Company to develop a presentation for senior executives to explore the future impact of computers and communications on management decision-making processes. The result was the Bell System Business Communications Seminar now in operation in Chicago and New York.

JAMES Q. WILSON

Professor of Government and Chairman of the Department of Government, Harvard University; received B.A. degree from the University of Redlands in 1952; Ph.D. from the University of Chicago in 1959. Dr. Wilson has taught at the University of Chicago and since 1961 has taught at Harvard University. From 1963 to 1966 he was director of the Joint Center for Urban Studies at M.I.T. and Harvard. Currently, Dr. Wilson is vice chairman of the Board of Directors of The Police Foundation and has recently served as a member of the Sloan Commission on Cable Communications.

THE CONFERENCE BOARD

RECORD

REPORTING TO MANAGEMENT ON BUSINESS AFFAIRS

November 1970

Vol. VII No. 11

An economic upturn is sighted

BUSINESS IN 1971

Speculating on information systems and business institutions

ANTITRUST AND EMERGING INFORMATION TECHNOLOGY

also see page 35 Saffardi's article.

An analysis of outlays and receipts

FOREIGN ECONOMIC AID IN THE 1970's

And in *Consumer Markets*

THREE STANDARDS OF LIVING IN AMERICA

$3

A complete table of contents IN THIS ISSUE . . . Page One

THE CONFERENCE BOARD
RECORD
REPORTING TO MANAGEMENT ON BUSINESS AFFAIRS

Published monthly by The Conference Board, Inc., Alexander B. Trowbridge, President. 845 Third Avenue, New York, N. Y. 10022. Printed in New York, N. Y. Second class postage paid at New York, N. Y.

Subscription rates: CB Associates, $15 annually; single copies, $1.50. Available to qualified non-Associates, $30 annually; single copies, $3.00.

Available reprints of RECORD articles: 1-6 copies, $1.00 each; additional copies 7-100, .80 each; 101-1000, .50 each. (To CB Associates, 50% discount.) Larger quantities, price quoted on request.

Please address all correspondence to:
Managing Editor
The Conference Board RECORD
845 Third Avenue
New York, N.Y. 10022
(Tel. 212/PL 9-0900)

ON THE RECORD

The increasing interest of the business community in public affairs, and the concern of all citizens for the social responsibility of business, suggests that no better occasion for the introduction of the new chairman of The Conference Board to readers of The RECORD could be devised than his statement of this problem to the employees of his own company. C. W. "Tex" Cook is also chairman of General Foods Corporation. I have taken the liberty of abridging his specific references to the company because I believe his thoughts on the proper posture of business will recommend themselves to all executives.

In These Changing Times

Business has accomplished a great deal in the field of social responsibility in recent years. But clearly there is more to be done. And our company, like industry generally, has much to learn about how far it should go and what it can best do.

As we become increasingly involved, we need to keep ourselves aware of what our motives and objectives are. It is too easy to support a variety of efforts just because they seem to be "Good Causes," without clearly understanding why we are doing it and what contribution we hope to make.

As I see it, we have three reasons for becoming actively involved in the area generally labeled public affairs. First, our company must necessarily and legitimately interest itself in any imminent government actions that will bear upon the conduct of our business.

Second, we have an enlightened self-interest in the continued *general* health and prosperity of the society in which we function. It is self-evident that a society in turmoil cannot provide a profitable marketplace for the purveyors of any goods and services.

And third, and not least by any means, we have the simple obligation of citizenship. For a corporation is, in effect, a citizen of the Republic, and our neighbors and their elected representatives have the right to expect good citizenship of us.

In all we do, we have to keep in mind that we are a profit-making institution. Earning a fair return on our investment and our expenditure of human resources and talent remains our primary objective, and our public service activities must fit in with and relate to that goal. It is self-evident that the time and resources we assign to nonbusiness social improvement efforts are limited by our requirement to earn a fair profit.

Wise balance, I think, is the key to this apparent conflict. If we remain a healthy business—creating jobs, satisfying consumer wants effectively, and paying taxes to our government—we shall be making a very important contribution to social progress, and we must not lose sight of that basic truth.

But clearly, as we look around us at the world today, we can see that the business of business is no longer just business in the old-fashioned, narrowly interpreted sense. And the future undoubtedly will bring further change. In recognition of that fact, we shall continue . . . to work toward a better society. That is our *commitment*.

Alexander B Trowbridge

President, The Conference Board

IN THIS ISSUE

THE CONFERENCE BOARD
RECORD

NOVEMBER 1970

Business in 1971

An Economic Upturn Is Sighted

Kenneth M. Plant
CB Economic Research

An overview of the business outlook for 1971

At The Conference Board's 54th annual conference on the "business outlook," a clear consensus emerged on the prospects for 1971. This is in contrast to the current discussion as to whether the recent economic slowdown constitutes a recession or merely a pause in a long-term pattern of expansion.

Forecasters this year face a double problem. They must not only project 1971's business trends, but also try to call the turning point in the current economic slowdown. While there was substantial agreement on the overall outlook at the Board's recent conference on business in 1971, differing opinions emerged as to whether the economy had turned up. Since third quarter GNP estimates are not yet available, and probably will be accompanied by revisions in the second quarter figures, the turning point remains in doubt.

If the second quarter pick-up in real GNP survives revision, and is further strengthened in the preliminary third quarter data, a strong case can be made for the economy having already turned the corner. However, many other economic indicators remain soft. The FRB Industrial Production Index has been essentially flat since May. The Department of Commerce Leading Indicator Series has not shown any firm upward movement, and the Coincident Series has remained essentially stable for the last four months. Unemployment continues high, the average week is declining and the rate of increase in personal income has noticeably slowed.

Beryl Sprinkel, vice president and chief economist of the Harris Bank, following the monetarist school, estimates that the lag between a significant change (either increase or decrease) in money supply and subsequent change in overall economic activity is six to nine months. He noted that the money supply began increasing in March, and that the upward movement in the economy could be delayed until as late as the fourth quarter of this year.

While the exact turning point may still be in doubt, there was general agreement that economic growth would be at a moderate rate. No forecaster deviated significantly from a 4.0% improvement in real GNP for 1971. While current dollar GNP forecasts were in short supply at the annual meeting, an estimate of about $1,050 billion would be representative. Assuming 1970 GNP will be between $975-980 billion, and that the real rate of growth will be about 4.0% next year, price inflation will be continuing in 1971 at around 3.0-3.5% rate. This rate, while below that experienced in the last 18 months, would still exceed the 1½% per year rate in the early 1960's, which is often cited as a period of relative price stability.

The possibility of bringing the rate of inflation below 3.0% next year seems very remote. Labor union wage settlements will continue to be in the neighborhood of 7-12% per year, reflecting more the past rise in prices than current or future price rises. Another factor indicating a continuation of upward pressure on prices is the potential size of the fiscal deficit. While the official estimate for fiscal 1971 is for a deficit of only $1.3 billion, unofficial estimates place the shortfall of revenues at $10 billion or more. Arthur Okun, senior fellow at the Brookings Institution, argued, however, that a deficit of even this magnitude would not represent a "particularly" expansionary fiscal policy. The prospective fiscal 1971 deficit will be *"slump-induced," i.e.*, will be caused by a decline in revenues accruing to the government because of the current economic slowdown. The opposite of a slump-induced budget deficit is a boom-inducing deficit, which occurs when expenditures are substantially increased without corresponding increase in revenues, or taxes are cut without a corresponding modification in expenditures. An example of a boom-inducing policy was the fiscal 1968 budget when a deficit of $25 billion was imposed on an economy already at full employment.

The unemployment rate currently exceeds 5%.

Monetary policy has changed from restrictive to stimulative. The movement of the budget from surplus to slump-induced deficit is also a movement away from a nonstimulative policy. To reduce unemployment and increase real output, it was necessary to alter monetary and fiscal policy. The main question is whether the past economic slump has been sufficient to bring a halt to the rampant inflation which has characterized the U.S. economy in recent years.

The speakers at the annual meeting and the latest available price statistics give an affirmative response. Industrial materials prices, an especially volatile indicator of upward or downward price pressure, have been declining since February. The Wholesale Price Index showed a slight decline for one month while the Consumer Price Index showed an increase of only 2.4% annual rate, down from 3.6% annual rate the previous month. All of these price indexes will probably show month to month variation, but there is a clear trend toward deacceleration of the rate of inflation.

Just one year ago the economy was exhibiting signs of decline in real output while the rate of price inflation was accelerating—the worst of all possible worlds. But now it appears the decline may have ended, or shortly will, and the rate of inflation is being significantly reduced—a better, if not the best, of all possible worlds. And with the money supply now growing at about a 5% annual rate, the question is—Will the better, or best, of all possible worlds be maintained?

Two monetary experts, Sidney Homer, partner, Salomon Brothers and Hutzler, and Beryl Sprinkel believe that a continuation of the current monetary policy will permit rising real output while not refueling the fires of inflation. A key factor in this assessment of the 1971 picture is the assumption that business spending on new plant and equipment will show only a moderate rate of gain. Corporate illiquidity, low rate of capacity utilization, and the modest rate of gain in real output are all factors which will tend to hold down corporate spending.

Another factor dampening the rate of recovery is the strike at G.M. A long strike, lasting well into the fourth quarter will have a substantial impact on the GNP (as much as $8-12 billion in the fourth quarter seasonally adjusted level) while a relatively short stoppage will have only a minor impact.

Financial and money markets: continued improvement

While the economy has been experiencing a mild slowdown, the financial and money markets have undergone a substantial upheaval within the past nine months. In the equity market, stock prices plunged dramatically in May and in the bond market, interest rates recorded post-W.W. II highs in the second quarter. Equity prices have recovered somewhat, but there does not appear to be a new bull market developing until (1) the surge of inflation has been definitely brought under control, (2) the economy shows firm signs of resuming growth, and (3) corporate cash flow and earnings improve. Within the bond market, yields have come down considerably despite a substantial volume of new offerings, indicating a firm market.

The prime rate has been reduced twice in the last six months. Since the interest rate represents the price of money, a decline in price means an increase in the quantity supplied or a decrease in the quantity demanded, or both. In the case of the money markets, both changes are occurring. Money supply has been increasing at about a 5% annual rate since March, and this has resulted in an 8-10% annual rate of gain in bank credit. The increase in supply of credit has been accompanied by a softening in demand for business loans. Corporations have been in the process of reducing planned outlays for new plant and equipment. Business has also been instituting cost saving procedures to improve internal cash flow, which had been severely affected by the economic slowdown. By reducing credit requirements and building up cash flow, corporations will be able to regain some of their lost liquidity.

Both Eli Shapiro, professor of finance, Graduate School of Business Administration of Harvard University, and Leif Olsen, senior vice president and economist of the First National City Bank, noted that corporations have been altering their credit acquisition mix. In 1970, corporate borrowers are reaching out for substantially larger amounts of longer-term debt while reducing their usage of shorter-term credit. This shift, plus the softening of business demand for loans has resulted in the sharply lower interest rates which have precipitated the reductions in the prime rate.

Professor Shapiro forecast that corporations will endeavor to lengthen their debt maturities during 1971. This will be a continuation of the trends developing in 1970. Since the supply of credit to commercial banks has been increasing while corporate borrowers are seeking fewer loans, the banks will have credit available for other potential borrowers. Mr. Olsen noted that commercial banks acquired about $9 billion in state and municipal securities in 1968, but only $1.5 billion in 1969. Through the first half of the current year, however, purchases have regained the 1968 level and are forecast by Olsen to be even higher in 1971.

Economists have been focusing their attention on the problems of inflation and of resuming stable economic growth. Consequently, the substantial deficits in the U.S. balance of payments in the first half of 1970 have gone almost unnoticed. Peter Kenen, provost, Columbia University, suggested that the lack of concern was also caused by the fact that at the start of the year U.S. holdings of foreign currencies were very large, and the deficits were financed without affecting the U.S. gold stock. However, this process cannot be continued indefinitely without resulting in gold losses and consequent speculation about the price of gold. While the economic slump will tend to check the increase in imports and a reduced rate of inflation may make U.S. exports more competitive, the near-term outlook for the balance of payments is for continuing deficits.

Construction outlook mixed

The easing of conditions in the financial sphere has greatly improved the outlook for residential construction. Declining yields on Treasury bills have made time deposits and saving certificates more competitive. The sharp surge in personal savings in the second quarter (up to 7.5% of disposable income) has also increased the flow of money into mortgage lending institutions.

John Stafford, vice president and director of research of the U.S. Savings and Loan League, stated that the turn-around in savings flows at S&L's began in March and has been sustained through August. March was also the month when the Fed began to significantly increase the money supply. Mr. Stafford noted that uncertainty caused by a lower level of economic activity, growing unemployment and sharp price rises, had contributed to the consumers' desire to save more.

The increase in social security payments, higher pay for Federal employees, and the sharp skid in equity prices also appear to have had a beneficial impact on savings inflow. Many of these factors represent a "one-shot" response which was reflected in the unusually high second-quarter savings rate. Stafford projected an $8 billion increase in savings at S&L's during 1971 about the same gain recorded in 1968, and up from the $4 billion gain in 1969. The turn-around in savings inflow has already been felt in the building industry. Conventional housing starts in the first quarter, on a seasonally adjusted annual rate, totaled 1,252,000 units. During the third quarter, new housing units were started at an annual rate exceeding 1,500,000.

The outlook for conventional housing in 1971 is for a continued upward trend, but not a stirring surge. An $8 billion gain in S&L savings in 1968 supported 1.5 million housing starts in that year. Currently, government agencies such as Federal National Mortgage Association and Federal Housing Authority are advancing substantial funds directly to the mortgage market. Since the government has espoused a goal of 26 million new homes in the decade of the 1970's, it can be assumed that these agencies will continue to pump funds into residential construction activity. On this basis, housing starts in 1971 should be between 1.6-1.7 million, up from an estimated 1.4 million for 1970.

The mix between single family and apartment construction is undergoing substantial change. Apartments constituted only 35% of starts in 1965, but in the first half of 1970 equaled 44%. Roy Wenzlick, president of Wenzlick Research Co., suggests that the high and rapidly increasing cost of free-standing houses is one of the main reasons why multi-family structures are becoming more popular. He also cites the fact that a larger percentage of married women are now gainfully employed outside the home, and therefore seek to minimize the amount of housekeeping that must be undertaken after working hours. Apartment living is one way to accomplish this goal.

While residential construction activity will be increasing in 1971, nonresidential contract awards will be declining for the second consecutive year, according to David C. Wright, director of planning and policy at U.S. Gypsum Co. Major areas of weakness will be in manufacturing buildings, education and science buildings, and office and bank buildings. The only category of nonresidential construction to show a gain in 1971 will be stores and mercantile buildings.

Consumers expenditures: poised to take off

The consumer is not likely to maintain a 7.5% savings rate over a long period of time: the average savings rate during the last two decades is close to 6.0%. When the consumer decides that personal and household liquidity has been restored to desired levels, retail sales volume will surge ahead. The latest Conference Board Survey on Consumer Buying Intentions indicates that consumer sentiment may be in the process of becoming more optimistic.

For the last twelve months, the growth in retail sales has been almost entirely accounted for by price inflation with very little improvement in terms of volume gain. Thus, when the consumer does decide to loosen the purse strings, actual volume of consumer goods will benefit from a period of "catch-up" spending as well as the return to a normal spending-saving pattern. The acquisition of durable goods is the most easily postponable of the consumer purchases. Outlays for durable goods in 1970 will probably be only $92 billion, up a scant 2% over 1969 outlays. But William Tongue, professor of economics and finance, University of Illinois, and Walter Couper, director of economic research, Federated Department Stores, foresee durable good expenditures rising to the $101-103 billion range in 1971, an increase of 10-12%. The projected increase in housing starts in 1971 will boost demand for home appliances and home furnishings. Auto sales should also improve, especially in the intermediate-lower price and compact lines.

The consumer is in a good position to finance his durable goods purchases. Banks will have more credit available for this purpose in the last half of 1970 and in all of 1971. The consumer has also been reducing the burden of debt repayment, down to 14½% of disposable income in the second quarter of 1970 from 15¼% in the spring of 1969, according to Daniel Brill, senior vice president of the Commercial Credit Co. Debt repayment has averaged 15% of disposable income during the last four years.

Nondurable, or soft goods should rise from $264 billion in 1970 to $280 billion in 1971. Mr. Couper foresees a resolution of the current fashion uncertainty with respect to hemlines, and whatever the result, clothing sales will benefit from the fact of a resolution. Staple items such as food, medicine and fuel will continue to grow. Consumer expenditures on services will total about $263 billion in 1970, and $285 billion in 1971.

In short, the major thrust in the economy for 1971 will come from the consumer.

Capital spending: a year of uncertainty

Investment in plant and equipment has been increasing substantially since 1961, growing at a rate of almost 10% per year through 1969. The current year will show a more modest rate of increase, on the order of 2-3%, and this rate will probably be repeated in 1971. Several factors are holding down the level of new investment: The rate of capacity utilization has declined to 78%, the lowest level since 1961. Production, as measured by the FRB Index has been declining or relatively stable for over one year. Defense outlays are being cut back, causing a sharp reduction of new investment in the capital intensive defense industries.

There will be some plus items: rising corporate profits (+5-10%), increasing real output, and a continuation of the substitution, where possible, of capital for labor. David Grove, vice president and chief economist of IBM, noted that corporate profits, before taxes, are closely correlated with new orders for producers capital goods; the former showed a 12% decline in the last 12 months, resulting in a 7% decline in the latter over the same period. With some pick-up in profits forthcoming in the next 18 months, capital spending will, on balance, be a contributing factor to GNP growth.

One factor aiding the recovery of profits is the resumption of productivity gain. Output per manhour was virtually unchanged from the third quarter of 1968 until the first quarter of 1970, when it dropped significantly. Productivity rebounded in the second quarter, rising at a 3.3% annual rate. George Cloos, vice president and senior economist of the Federal Reserve Bank of Chicago, estimates that "with reasonable freedom from strikes and Acts of God," output per manhour should rise by "at least 3, and possibly 4%" in 1971.

Business inventories were kept in line with sales throughout the last 12 months of economic pause. As sales volumes begin to pick up inventories will also rise. The inventory/sales ratios in the summer of 1970 were only slightly above last summer's figures, indicating that business successfully managed production schedules and inventory levels.

A longer term perspective: the early 1970's

The major problem confronting economic policy decision-makers in the coming decade is that of controlling inflation while maintaining growth in output of goods and services. The fires of inflation had been fueled by large Federal budget deficits and periods of expansionary monetary policy. Even when the budget moved into a surplus position and monetary policy became restrictive, prices continued to rise because of the "inflationary psychology" deeply imbedded in the expectations of businessmen, labor, and consumers. The economic slump of the last 9-12 months appears to be finally undermining this inflationary psychology.

Can the rate of inflation in the early years of the 1970 decade be brought down to the 1½% per year rate of the early 1960's? Professor Robert Turner, of Indiana University's Graduate School of Business, believes that while the rate of inflation will continue to moderate, we are not likely to return to only 1½% per year. Some of the reasons he cites are as follows: (1) the past inflation has been incorporated into many wage contracts extending several years into the future, (2) policy-makers desire to hold unemployment around 3.5%, considerably below what it was during the early 1960's (about 4.8%), and (3) the increasing share of consumer expenditures going to services, where the labor content is 100% or very close to it.

Will the Federal budget reinforce these factors, or will it be nonstimulative? Gardner Ackley, formerly chairman of the Council of Economic Advisers and now professor of economics at the University of Michigan, thought the total budget would grow about $11 billion a year between now and 1975.[1] This estimate contained a decreasing share for defense spending, but no new government programs beyond those proposed in the 1971 budget. This budget would not require any tax increase and would have a $23 billion surplus in 1975, and would clearly be noninflationary.

The past inflation has caused major distortions in the financial and money markets. While the near-term outlook is for calm financial waters, what about the longer-term? Tilford Gaines, vice president and economist of the Manufacturers Hanover Bank, foresees a cumulative demand for long-term funds in the 1971-1975 period of about $418 billion, and an estimated supply of such funds at about $325 billion. A short-fall of such a substantial magnitude would certainly involve continuing upward pressure on interest rates.

[1] Based on *Setting National Priorities: The 1971 Budget* by Charles Schultze. Published by the Brookings Institution, 1970.

High and rising interest rates have resulted in a shortage of funds flowing into the residential mortgage market. Over 40% of the projected requirements for long-term funds represent residential mortgage financing needs. Residential construction activity was depressed more in the 1966 credit crunch than in 1969 because government agencies substantially increased the amount of money pumped directly into the mortgage market last year. If private mortgage funds are not sufficient to meet the need during the early 1970's, the government will have to continue the massive infusion.

R. Bruce Ricks, chief economist of the Federal Home Loan Bank System, argued that a possible redesign of the mortgage instrument to include variable interest rates and variable balances would make the mortgage instrument more competitive in the open market. Another innovation is the issuance of bonds directly to the capital market backed by pools of mortgages. Also, the Federal Home Loan Mortgage Corporation has been established to conduct a secondary market in conventional mortgages, FHA and VA mortgages. These, and possibly other innovations, will be necessary if mortgage financing is to successfully compete for funds in tomorrow's capital market.

Fiscal Policy: Prospects and Perspectives

Arthur M. Okun

A Brookings colleague insists that a realistic forecast of the budgetary outcome for fiscal 1971 requires only a minor revision of the Adminstration's last official estimate of a $1.3 billion deficit. That modest revision consists merely of shifting the decimal point one place to the right.

The suggestion is only partly facetious. Most of the plausible ways of combining probable actions by the Congress and the Administration, the path of "uncontrollable" outlays, and the economic outlook add up to Federal deficits of $10 million or more. This reality is fully appreciated by budget number watchers, but it still has not been widely recognized by the informed general public. It is better for the nation to know now than to be surprised later. It is even more important for the nation to understand the significance and character of this deficit.

The key fact is that a deficit between $10 and $15 billion for fiscal 1971 does *not* represent a particularly expansionary fiscal policy. And thus it provides no basis for expecting the developments—good or bad—that might result from a strongly expansionary fiscal policy. No matter how one weights the economic effects of budgetary actions (and I have never been accused of understating them), the fiscal 1971 budget is not likely to fuel a vigorous economic recovery, much less a renewed inflationary boom. Nor will fiscal policy prevent the Federal Reserve from "doing its thing," as the saying goes—whatever that thing may be. The Federal Reserve will not be saddled by an added burden of restraining inflation nor by an obligation to generate undue liquidity in order to support Treasury financing.

Dr. Okun is senior fellow of the Brookings Institution. His paper was prepared for the September meeting of The Conference Board on Business in 1971. The views expressed are the author's and are not necessarily those of the officers, trustees, or other staff members of the Brookings Institution.

Slump-induced vs. boom-inducing deficits

These judgments reflect the fact that the prospective deficit for fiscal 1971 is a *slump-induced* deficit, as I shall explain in detail below. The difference between a boom-inducing and slump-induced deficit may well be the most critical and (still) the least understood distinction in fiscal policy. The Federal budget works on a thermostat. The fiscal furnace can go into operation because of an economic chill or because the thermostat has been turned up. The chill does it automatically by curtailing tax receipts as private incomes are depressed and capital losses are incurred; and by swelling some outlays, such as unemployment compensation benefits. The higher setting of the thermostat reflects decisions to increase expenditure programs or to cut taxes. If one is concerned about the economic temperature, it makes a world of difference whether the furnace has gone on automatically to offset the chill or whether it has been turned on by a higher setting of the thermostat.

The difference is clarified by a brief look back at the two periods of post-Korea history when the Federal budgetary impact was most inappropriate—1959-61 and 1966-68. The severe recession of 1957-58 generated a huge deficit in fiscal 1959 by clobbering profits and personal incomes. That $13 billion deficit was 3% of GNP—relative to the size of the economy, it was equivalent to $30 billion today. Because that deficit was misread as "irresponsible" or dangerously inflationary, it led to a determination to balance the budget in fiscal 1960, come hell on high water. The budget was balanced and was followed by hell and high water. With the fiscal squeeze compounded by a severely tight monetary policy, the nation got its second bitter taste of 7% unemployment rates—and all the attendant economic miseries—in three years.

The surplus of fiscal 1960 was miniscule. How could it have done so much damage? A budget balanced at that depressed level of economic activity represented an extremely restrictive fiscal policy; the thermostat was set such that the budget would have been in surplus by 2½% of GNP in the first half of calendar 1960, if the economy had been at full employment. After that lesson, slump-induced deficits were tolerated for the next few years, but the fiscal policy was not shaped appropriately to support expansion until taxes were cut early in 1964.

Fiscal policy did not stay on track for long, unfortunately. We got the 1966-68 case study of how fiscal policy can go astray in the boom-inducing direction. Starting in the second half of 1965, Vietnam expenditures swelled the Federal budget, and inadequate action was taken to offset their economic stimulus. The fiscal 1966 budget was an engine of inflation. Bnt you can't tell that by looking at the historical bookkeeping records. The unified budget deficit was $3.8 billion, a little smaller than the average of the 1961-65 period. Moreover, that deficit was entirely attributable to Federal lending: the receipt-expenditure account of the unified budget and the national income accounts budget were both in the black for that fiscal year. What happened, of course, was that the boom-inducing budget actually generated sufficient inflation of incomes to swell Federal receipts and thus mask its own inflationary impact.

How could that little deficit do so much harm? I remember being asked that question at lunch in White House Mess early in 1966 by a sophisticated lawyer on President Johnson's staff. He had seen some of the CEA memoranda to the President and he knew our views. He simply couldn't understand why the Ackley Council—as he put it, the very guys who had convinced the President that deficits were okay—had become so exercised about deficits. I shuddered then (and still do, in retrospect) because the question revealed that our message had not come through. The deficits we had condoned and indeed recommended were slump-induced deficits. The 1966 deficit was a different and dangerous matter—reflecting expenditures which outran Federal revenues even at full employment. It turned the thermostat up to the overheating point.

Expenditures continued to outrun full-employment revenues from mid-1965 through calendar 1968. And the economy was overheated except when monetary policy was used with great force as an offsetting cooling system.

This message is so old that I am almost embarrassed to repeat it. The Committee for Economic Development recognized it and used it constructively in its policy statements as far back as 1947. In the spring of 1962, President Kennedy devoted his famous Yale commencement address to the subject of budget myths. My only excuse for another sermon is that the old message remains relevant, because the old fallacies are still alive on Pennsylvania Avenue in Washington and on Wall Street in Manhattan. Against this background, I see great significance in the President's statement of July 18: "expenditures must never be allowed to outrun the revenues that the tax system would produce at reasonably full employment." "Never" is too strong for my academic tastes, but I will not fuss. The key principle is that expenditures should be compared with "revenues at reasonably full employment"—not with the revenues of slump or boom.

The educational job nevertheless remains to be done, and businessmen can help. It really isn't hard to understand these twin propositions: (1) In a period of slack or slump, one should expect the budget to be substantially in deficit; unless it is substantially in deficit, it is highly restrictive—almost surely too restrictive; (2) In a period of boom or full employment, the budget should be expected to have a substantial surplus; if it does not, it is highly expansionary—almost surely too expansionary.

The relevance for 1970

Fiscal misunderstanding was particularly rampant at the beginning of this year. The Administration's budget estimates showed small surpluses for both fiscal 1970 and fiscal 1971. Moreover, the budget surplus was advanced as a necessary condition for curbing the inflationary exuberance of the economy. On Wall Street and Main Street, nobody had the slightest hesitancy about second guessing the official arithmetic, and the skepticism was well-founded. But most of the skeptics on arithmetic remained true-believers of the principle that red ink in the budget meant an overheated economy. Yet the very reason the red ink appeared was that the boom was so thoroughly halted—indeed thrown into reverse.

Instead of the predicted surplus of $1.5 billion for fiscal 1970, the budget had a deficit of $2.9 billion. That deficit emerged because revenues were $5.5 billion below the January estimates—not because of any action by the Congress or by the Administration but because the slump pulled down tax collections. Obviously if the January revenue estimates had been realized, the budget would have yielded a comfortable $2.6 billion surplus. Indeed, the budgetary dials for fiscal 1970 were set such that, at full employment, the budget surplus would have been nearly $5 billion.

Was the fiscal 1970 deficit bad for the nation? If you're sorry that real GNP and profits bottomed out (rather than declining further) in the second quarter, or if your bones or your computer tell you that a dangerous new inflationary boom is on the way, you should be sorry that no action—either raising tax rates or slashing expenditures—was taken to save the surplus. If that's not the way you feel, then you should offer a small cheer for the slump-induced deficit. Moreover, if you would have liked the realization of the January official forecast of a 985 GNP, $89 billion of pre-tax profits, and 4.3 unemployment better than the way 1970 is actually turning out, you must regret that supportive fiscal-monetary action wasn't taken sooner and more decisively.

The recent swing in the budget is also put into perspective by comparison of the Federal sector in the national income accounts for the first half of 1969 with the first half of 1970. (Half-years help to smooth out some of the quarterly bumps—the second quarter of 1969 was loaded with retroactive receipts from the tax surcharge, while the second quarter of 1970 had swollen expenditures because of the retroactivity of both the Federal pay increase and the enlarged social insurance benefits.) On the half-year basis, the budget shifted from a surplus of $11½ billion (annual rate) in 1969 to a deficit of $8 billion in 1970, a swing of nearly $20 billion. Almost $15 billion of that swing is attributable to the shift in the economy, from a position above potential GNP in the first half of 1969 to $35 billion below potential in the first half of 1970. The remainder of about $5 billion came from fiscal policy actions—the sum of expenditure increases and net tax reductions over the year exceeded the normal trend growth of Federal revenues by that amount. This is a fiscal shift of some significance; and it put relatively more restraint on the still-ebullient economy of the first half of 1969 and less on the sluggish economy of the first half of 1970. But the better measure of the stimulative shift is $5 billion rather than $20 billion.

The outlook for fiscal 1971

Looking ahead, I will stick to the national accounts basis for the budget, since that framework is most congenial to economists, and facilitates half-year and quarterly estimates.[1] The difference *between these budget* numbers and the unified budget is smaller by far than the margin of error in any projection of either.

Based on recent official statements, the Administration's program seems to imply expenditures of $208 billion for fiscal 1971. Also in the program are proposals for new tax legislation worth $3 billion in this fiscal year; these involve taxing leaded gasoline and speeding up estate and gift tax collections. Revenues at full employment under existing law would be $215 billion. With the proposed measures, full-employment revenues would be $218 billion.

To translate these figures into an estimate of the prospective actual deficit requires an economic forecast. Let's try a pair of illustrative alternatives:

• First, suppose real GNP rises 2% between mid-1970 and mid-1971. The GNP gap for fiscal 1971 would then approach $55 billion. As a rough rule of thumb, the corresponding revenue shortfall would be 30+% of the gap, or about $17 billion. Given the Administration program, that leaves $201 billion of revenues (218-17) against $208 billion of outlays, or a $7 billion deficit. But the deficit would be shrinking during the course of the fiscal year, and the budget would not be far from balance in the second quarter of 1971, even though the unemployment rate would then probably lie in the zone of 5½% to 6%.

• Alternatively, suppose real GNP grows as much as 4% from mid-1970 to mid-1971. The gap would then be held at $40 billion and the budgetary shortfall at about $13 billion. Given the Administration program, the resulting deficit might then be as low as $3 billion, with revenues of $205 billion. By next spring, the budget would be running clearly in the black.

Obviously, the Administration program is not likely to be enacted without alteration. Congress has shown little enthusiasm for the two tax proposals—that is a $3 billion issue. On the expenditure side, the House has enacted a strengthened social security program which would add $1½ billion to fiscal 1971 expenditures; on balance, perhaps $500 million is at issue in Federal grants, subsidies, and other transfer payments; and finally Federal pay scales may be raised again before the end of fiscal 1971. Roughly, the total of taxes and outlays in doubt adds to $6 billion.

Suppose now that all these uncertainties are resolved in the expansionary direction. Full-employment revenues of $215 billion would still exceed outlays of $211 billion. To be sure, if that budget program is combined with the 2% growth forecast and its $17 billion budgetary shortfall, the deficit would reach $13 billion. Still the full employment surplus of $4 billion in fiscal 1971 would be only modestly smaller than that of fiscal 1970. The setting of the thermostat would be essentially the same as it was last year.

None of these contingencies suggests that Federal expenditures in fiscal 1971 are likely to outrun the revenues that would be forthcoming at full employment. That is *not* the issue between the Administration and the Congress. Rather the issue seems to hinge on *how far* expenditures should be held below full employment revenues. The Administration's program, in effect, calls for a $10 billion full employment surplus, while the Congress seems to be headed toward $4 billion.

To judge which of these two programs would be more desirable for the nation is not an easy matter. One must decide: (a) what path of economic activity seems ideal—recognizing the importance of both economic recovery and disinflation; (b) how strongly

[1] What follows leans heavily on Nancy H. Teeters, "Budgetary Outlook at Mid-Year," *Brooking Papers on Economic Activity, 2:1970* (Brookings Institution, 1970).

private demand is likely to rebound, and (c) what monetary policy is likely to do. All I can hope to do is to summarize my personal conclusions. If I assume the Administration's fiscal program, my forecast of the economy to mid-1971 is close to the 2% real GNP model used above.

In my view, the nation needs a better recovery than that and can have a better recovery without endangering the process of disinflation. The recovery I should *like* is more vigorous than the recovery I realistically *expect*, given the current fiscal-monetary posture. Hence, in my opinion, fiscal (and monetary) policy should be offering more support to demand. An increase of social security benefits in January would help a little. On the other hand, taxing leaded gasoline and speeding estate and gift taxes (despite their merits on other grounds) would harm the overall economy a little. Similarly, presidential vetoes of funds for social programs push in the wrong economic direction.

In short, my views of the outlook and my values about economic performance lead me to prefer a $4 billion full employment surplus to one of $10 billion. This year, our political process may result in a reasonable fiscal policy—expansionary enough to contribute a little to recovery and yet restrictive enough to guard against an inflationary upsurge.

A brief preview

This slight note of optimism about the fiscal 1971 budget even extends into fiscal 1972. If the economy grows normally, Federal revenues will advance by at least $15 billion during fiscal 1972 under present tax laws. That increase would cover all Federal built-in commitments with a margin to spare. Combined with further cuts in defense, it would permit some additional Federal efforts in high priority social areas.

Suppose expenditures are raised by $15 billion. If real GNP then grows by 4%, keeping the output gap unchanged, the deficit for fiscal 1972 would essentially match that of fiscal 1971. We would have another year of slump-induced deficit. If real GNP grows more rapidly, however, the deficit would be cut significantly and balance could come into view.

In either event, it is hard to see an economic case for a tax increase next year. Why should the fiscal 1972 budget put more restraint on the recovery than this year's budget? Or why should the assignment of promoting expansion be thrust entirely on monetary policy?

To be sure, major new social initiatives for the cities and the environment might require a tax increase. As a citizen, I'd be delighted to see such a program (and willing to pay the extra taxes). As a fiscal policy prognosticator, however, I am not counting on it. And barring that possibility, I regard tax increases next year as unnecessary, undesirable, and unlikely.

Monetary Policy In 1971

Sidney Homer

It seems certain that monetary policy in 1971, whatever it may be, will be severely criticized by a massive chorus of economists. Such dissent seems inevitable because our most vocal economists today are divided into two schools: one concentrates on the supply of credit and the other concentrates on the demand for credit—and the Fed will not confine itself to the prescriptions of either school.

Far be it from me to attempt to resolve such a profound academic cleavage with the simple observation that the money market, like most other markets, is subject to both supply and demand. A given supply of new credit can presumably produce near-term ease or stringency depending on the demand and a given demand for credit can presumably produce ease or stringency depending on the supply. Fortunately for all of us, our Federal Reserve Board, as presently constituted, seems well aware of this dualism in the market for which they are responsible. Therefore, their actions next year are going to arouse the loud criticism of both schools.

Another certainty: our present Federal Reserve Board has one outstanding advantage over its predecessor, having vividly before it the one great lesson of the last two years—the power of expectations. Expectations have always been considered an important economic force, but I believe almost everyone, two and three years ago, underestimated their overriding power. Certainly our fiscal and monetary authorities did.

Mr. Homer's article is based on his address before the annual outlook meeting of The Conference Board in New York City, September 24, 1970. The author is a partner at Salomon Brothers & Hutzler.

The great boom of the 1960's lasted so long and overcame so many widely advertised obstacles that it inevitably created widespread expectations, I might almost say certainties, that it would last forever. While our Government, including the Fed, was as usual obsessed with short-range economic problems, our great businesses were more than ever before making long-range projections. And these projections, often based on extrapolations of automatic growth factors like population and technology, almost always forecast a vast growth for years ahead in both physical demand and in costs and prices. If so, brief economic slowdowns such as our authorities proposed from time-to-time, and which were advertised to be virtually painless, could be ignored by any entrepreneur with sufficient liquidity or who could obtain the credit to expand. Also, during recent years, new vast programs of future social expenditure were proposed and generally accepted and these alone seemed to make rapid growth and more inflation a certainty regardless of transient official restraints.

For these reasons, business and consumer optimism brushed aside a heavy shift to fiscal restraint in 1968: If the Government would borrow and spend less, business, with the aid of the Fed, would borrow and spend more. Likewise in 1969 business for almost a year brushed aside the big shift to monetary restraint; business credit in 1969 rose faster than ever before and many concerns and institutions financed new high record growth by reducing liquidity. Indeed, most firms planned even larger growth in 1970. It was not until 1970, when the unexpected fall in earnings, the fall in stock prices and especially the severe liquidity problems occurred, that business began some modest retrenchment.

Credit policy

There were, of course, many other factors at work during these recent difficult years, but I strongly suspect that the unprecedented intensity of optimistic business expectations was the dominant cyclical force, especially because it induced liberal institutional lending policies and a lowering of credit standards. Given this experience of the past years, I am sure our Federal Reserve is now well aware of this formidable, nonstatistical, almost overriding force and that shifts in business psychology will go a long way towards molding monetary policy in the year ahead.

For example, if there are to be more big bankruptcies (overt or subliminal), or a further decline in stock prices, or continued low earnings, business expectations will deteriorate further. This will mean that credit standards as loaning institutions, which are a dominant component of business expectations, will remain conservative. If so, monetary policy can be much more expansive than otherwise, at least in near-term effects. Conversely, if liquidity problems are localized, and earnings and stock prices improve, business sentiment will turn optimistic, lending standards may relax again, and, if so, monetary policy will have to be more cautious.

Thus, by analogy, there seems to be a watershed formed by business and banking sentiment—unseen, unmeasurable, but real nevertheless. On one side of this watershed, surplus new money created by the Fed flows into bricks and mortar and inflation, while on the other side the same amount of new money flows, near-term at least, largely into restoring liquidity. I suepect that at about the time of the Penn Central bankruptcy, we passed over the peak of that watershed, and that a rapid rise in credit standards got underway. If so, this has helped prime borrowers and indeed has helped reduce pressures on the money market while it has compounded the difficulties of marginal borrowers.

Liquidity and inflation

There was some confusion in the press a few months ago on the meaning of the term "liquidity crisis": it was used interchangeably for a breakdown in the money market for prime credit instruments and for a breakdown in the market for risk credits. There is some overlap, but the distinction is basic. In the days before the Federal Reserve system, we did, indeed, have crises in the money market where borrowers who did not enjoy the best banking connections could not for a day or two obtain credit at any price even on prime securities. Our Federal Reserve system, with, in fact, infinite resources, renders such a crisis impossible today. But new Federal Reserve money injected in an emergency does not automatically flow to those risk borrowers who need it most. It can only flow to risk borrowers if a private credit institution is willing to take the risk, or Uncle Sam guarantees the loan. Today our very real liquidity crisis is confined to marginal borrowers who are overextended or faced with operating losses or with deteriorating assets. Such a selective environment aids the money market because investors seek to crowd into the prime credits. And it aids the Fed in its battle with inflation.

This brings me to another certainty for 1970: Inflation will, alas, continue to be a major problem for monetary policy. I have no reason to argue with the official prediction that the rate of inflation will come down. If so, this will, no doubt, help bring down prime interest rates. But such a partial victory in the battle against inflation could prove temporary. With such a severe recent experience with a high rate of inflation and with such almost universal expectations that inflation will continue or resume, there will be a sustained danger that any smart business recovery will be followed quickly by an upturn in the inflation rate. In the light of the vigorous two-year battle against inflation, any sign that our authorities will accept failure and settle for a high rate of inflation will in time lead to an even higher rate of inflation. I very much fear that we are not immune from the so-called South American type of inflation or even worse. With our vast productivity such a calamity seems unlikely, but our authorities should be alert to such catastrophic possibilities.

In 1971, then, it appears that monetary policy will again be heavily influenced by four problems: unemployment, inflation, illiquidity and business expectations (either optimistic or pessimistic). These are mostly long-range problems which invite conflicting solutions and harmful trade-offs. Since they promise to be with us indefinitely, at least as potential dangers, I hope and expect some long-range solutions to these conflicts will be sought.

In considering the policies for 1971 of the new chairman of our Reserve Board, we can look for them to be knowledgeable and defensible, even though in at least some particulars we will all probably disagree with them, especially with the benefit of hindsight.

What can we say about Fed policies since Arthur Burns became chairman that may give us some clues to 1971? In the first place, monetary policy this year so far has been traditional. No important deviations from historic monetary techniques have been proposed or adopted. The Board has relied largely on open market operations, and the discount window, and reserve requirements. There has been no attempt at qualitative credit policy such as was suggested in the famous letter of 1966 even though credit is still being diverted away from high priority projects. There have been no more attempts at disciplining the lending operations of banks or restricting their access to nondeposit funds. In 1966, 1967, 1968 and 1969, the Board attempted many innovations, but not in 1970. It may merely be too soon for the new chairman to innovate, but what evidence we have points to primary reliance on traditional monetary tools.

Secondly, the monetary shifts which have taken place in 1970 suggest a policy of day-to-day pragmatism rather than adherence to a fixed policy. At first, there was a shift to very gradual easing. However, in two transient crises the Fed acted quickly by injecting large new funds into the market in a manner seemingly at variance with its own monetary preferences at the time. The initial policy of gradualism early this year was not a fixed preference but rather was probably a mirror image of the gradual and ambiguous flow of economic statistics which, while on balance declining or decelerating, revealed no sharp downturn. The gradualism may also have been in part due to the wish of the new chairman to avoid drastic action until he could secure a better feel of his new responsibilities or (more likely) he could conduct some new analyses. However, this gradualism has since been replaced by more aggressive easing which may bring down the discount rate.

Thirdly, the techniques of open market operations have apparently changed. More attention has been paid to monetary aggregates, but not to the exclusion of other objectives such as market pressures and rates. Since monetary aggregates near-term are very hard for open market operation to control (because uncontrolled demands fluctuate autonomously), there has apparently been active experimentation with new trading techniques and objectives leading once or twice to serious unwanted market pressures. As a result, the trading desk has asked for and received wider latitude. Open market operations have also at times embraced a wide area of coupon issues suggesting a desire to maintain a good market for long-term prime bonds. Also, the discount window has been used very aggressively to relieve specific liquidity problems.

Fourthly, the Board has demonstrated its determination to relieve liquidity problems in the market for prime obligations. Such relief by the lender of last resort need not extend to risk borrowers although it can be of marginal assistance. Risk problems are left largely up to private lending institutions.

Fifthly, the modification of Q and the failure to follow up on controlling bank commercial paper rates suggests that the Board may be moving gradually towards relaxing or abandoning the policy of ceiling rates.

Sixthly, the new chairman has apparently managed his political affairs well. There has been no serious split visible with other members of the Board. There has been no overt split with the Administration on monetary policy. He seems to have maintained good relations with the Congress in spite of the usual differences of opinion. These political successes are all the more impressive since this is an election year and the Congress and the Administration are of different parties.

Policy in 1971

With this background, what can we expect of monetary policy in 1971? In the first place, in medium-term operations there will probably be a strong effort to cling to the traditional formulae of contracyclical monetary policy: If the economy turns up vigorously and inflation is still strong, we will see a return to restraint, and this time the leaks will probably be dealt with promptly. If the economy remains flat and inflation eases, and especially if business expectations become more adverse, we will see a policy of aggressive ease. I doubt that anything like a stable rate of growth in the monetary aggregates regardless of the economic climate is in prospect.

These economic alternatives, however, are black and white, boom or depression, and the real problems for monetary policy will arise if the economy pursues a middle course—let us say gradual recovery in real economic activity, a disappointingly small decline in the rate of inflation and in unemployment, a recovery in business expectations and a continued high level of interest rates. Cynics may say that in such an ambiguous environment the Board will seek to follow that famous straight and narrow path which some call the straight and narrow path between right and wrong.

I am not quite so cynical. Such an environment will probably not be passively accepted as a normal state of affairs, with the only alternatives an inflationary boom or a depression. Inflation and continued unemployment would seem like uncomfortable fixtures. Large credit demands from business and a policy of monetary neutrality would again keep the housing market from its long-postponed boom and would again starve states and municipalities. Under such circumstances I would expect monetary and fiscal innovations by the Fed—a long-range effort at providing new tools to meet an apparently insoluble conflict of national objectives. And while I have suggested that the Federal Reserve Board will probably cling to traditional tools near-term, I would not be surprised if they provide leadership in long-range innovations.

For example, there may be a beginning at enlarging the control of the Board beyond bank credit to include nonbank commercial paper, or to coordinate bank credit policy with the volume of credit extended by other institutions. There may be some further moves towards credit priorities for socially desirable credit in periods of credit scarcity. There may be some attempt to coordinate unused bank credit lines with potentially available funds. There may even be some modification of the system of reserve requirements. The discount window may be used much more aggressively as a tool for selective credit allocation. Open market purchases could for the same reason be extended to include Federal agency securities.

There are many other possible innovations and I have made no attempt to weed out those that look desirable from those that look undesirable. My point is that the present Board and the Administration, in a period of economic stalemate, will very likely propose long-range innovations rather than passively accept unemployment, or inflation, or distorted capital markets, or all three as a permanent way of life. Furthermore, 1971 will not be an election year, and this fact might provide an opportunity for basic and controversial legislation. In any event, political pressures on the Board should be less than in 1970.

Although I have suggested that the Board will not follow any dogmatic monetarist policy, it is probable that a great deal of attention will be paid to the monetary aggregates, particularly in an attempt to improve the data, to understand its significance and to develop better ways to influence the numbers near-term. Possibly also new attempts will be made to coordinate and use the data on all near-money credit instruments.

Finally, the Board will pay major attention to the trends and fluctuation of business expectations, and especially that component of expectations with which it is directly concerned, namely, lending standards. This extremely powerful economic force, however, is hard to measure because it is nonstatistical in character. It shows up after the fact in the behavior of borrowers and lenders.

Today, general liquidity is so low, and so many marginal enterprises have overborrowed, that the trend of institutional lending policies will be a major influence on economic trends. If over the next few months lending policies remain highly conservative, even though economic statistics improve, this lender conservatism will reduce the volume of effective credit demands by excluding a sizable group of demanders. This will be a good substitute for monetary restraint. Therefore, in such a psychological environment, the Fed will probably be much more accommodating to the market than otherwise.

A median economic model

Let me arbitrarily assume a median economic model for 1971. This will involve slow but sustained real growth with the inflation rate declining, but still too high and with not much improvement in the rate of unemployment.

This model implies in terms of GNP analysis that the recession of 1969-70, if it deserves that name at all, has been extremely mild. Historically, however, GNP cyclical analysis has often understated big financial swings. In terms of financial markets and credit problems, the crisis of 1969-70 has been of major proportions, more severe surely than any since 1937. In financial terms, the distortions and perils of 1970 have been far more severe than during any of the small inventory recessions of the postwar period. Analyses of 1970 which merely add up GNP demand factors underestimate the serious financial dislocations which are with us and will be with us for some time to come.

Therefore, it seems probably in such an environment that business expectations will not soar, in spite of slightly better earnings, because disappointment and impatience and credit problems tend to cumulate with the passage of time and because the credit difficulties of marginal borrowers will be relieved only very slowly. If so, lending policies will remain conservative. Again, with slightly higher retained earnings and slightly lower capital expenditures, long-term financing demands by high-grade companies will be a little lower, while marginal borrowers will continue to be shut out of the capital markets. Also, the great wave of refunding which has been a feature of 1970 should not be repeated in equal volume. On the other hand, in such an environment there should be large credit demands from the Treasury and its agencies and from local governments.

With this hypothetical backdrop, it seems likely that monetary policy will continue to ease well into 1971, or perhaps through the year, provided the rate of inflation continues to ease. Most likely in this setting the Board would prefer gradual, disciplined easing, but three conflicting factors will upset such an objective: First, there will probably emerge renewed liquidity problems in the market for marginal credits. In such an event, if the money market is challenged, I would again expect larger provisions of new Fed credit, at least for temporary periods. Secondly, the demands of the Treasury will from time to time require Fed help and receive it. Third, the international money market can create serious dollar problems, especially if U.S. interest rates decline too much in the face of an adverse balance of payments. Since almost all central banks abroad seem to desire lower interest rates as a long-term objective, it seems possible that continued international cooperation may find techniques to permit a reasonable rate decline here under the assumed environment.

If the Fed does in fact pursue such a policy of ease, it seems likely that it will implement that policy less with open market operations and more with other tools such as reserve requirements and the discount rate. By these means it might achieve lower rates without as large an increase in the money supply.

How long can such a policy of monetary easing last? At the risk of being repetitious, I would answer that question in terms of business psychology: The Fed can continue to ease the credit markets as long as business expectations are sober and lending standards are conservative, and especially if there is important unemployment.

Any signs of a return to speculative exuberance and aggressive lending will be met with a prompt shift towards monetary restraint. Large Treasury demands, if they coincide with large business demands, will not be financed by easy Federal Reserve credit. At such a point, which may be distant, I would not expect a simple repetition of the rugged market rationing of 1969. Instead, I would expect innovations in the direction of selective credit priorities in a determined effort to avoid another round of massive credit distortions.

Bank Credit: The Changing Picture

Leif H. Olsen

Few interest rates receive so much undeserved publicity and such universal misunderstanding as the prime commercial bank rate. It is popularly regarded as a rate that automatically triggers changes in other rates. This is a myth. The prime rate is one element in the broad spectrum of interest rates, and it changes in response to changes in demand and supply of credit generally. Indeed, historically, the *prime rate has generally been a laggard—responding after other rates have changed.* It has sometimes moved coincidently with changes in other rates. It has never been a leader, although sometimes it has declined more than would be fully justified by reductions already evident in other rates.

Like all rates, the prime rate is sensitive to changes in the cost of competitive sources of credit in the open market—such as commercial paper and intermediate-term and long-term bond rates. It is also sensitive to changes in cost of funds to banks.

Mr. Olsen is senior vice president and economist, First National City Bank, New York. This article is adapted from his speech before the annual meeting of The Conference Board at the Waldorf-Astoria, September 24, 1970.

There is no structural linkage to describe some automatic drop in other rates as a result of a drop in the prime rate. A few recent illustrations flatly contradict the popular mythology: In September of 1968, the prime rate was reduced. Open market rates, however, continued to rise. By December, prime rates had to jump twice to catch up with the rapid increase in both long- and short-term rates. Last March, prime rates were reduced from 8½% to 8%. Shortly thereafter both long- and short-term interest rates began to rise once again. Long-term rates briefly exceeded their previous peaks before beginning to decline once again this past summer.

I am not suggesting necessarily a repetition of these events, but it is naïve to assume that prime rates convey some major force to significantly influence other rates. The important basic factors influencing interest rates deserve close attention. These include principally Federal Reserve monetary policy, inflationary expectations, and effective demands for credit.

Federal Reserve monetary policy has an important influence on interest rates, but not in the way most people believe. It is true that when the Fed accelerates the growth of the money supply, short-term interest rates will be subjected to some downward pressure for a few months. But the more pervasive and more lasting influence will be upward, and the upward pressures usually will begin to appear within six to nine months. As the money supply grows faster, so too do spending and credit demands. These credit demand effects ultimately predominate, especially if the faster growth in money supply imposes upward pressures on prices and price expectations. In the long-term rate area we cannot even be sure that there is any significant short-run downward effect on rates when the Fed becomes expansive. But there certainly is a longer-run upward effect in these long-term interest rates.

Bank credit—how much and to whom in 1971—In the first half of this year, the extension of credit of all forms to both corporations and households has been growing significantly more slowly than during 1969. Yet at the same time, the Federal Reserve has enabled banks to enlarge the flow of bank credit.

Corporations have reduced their use of short- and intermediate-term credit this year, compared with last year, while, at the same time, they have reached out for larger amounts of long-term credit in the bond market. In addition, instead of cutting back on the accumulation of liquid assets, as they did last year, corporations this year have sharply increased their holdings of Treasury bills and other liquid assets. Because corporations have been borrowing less short-term money and because they have been piling up more short-term securities, they have been contributing to the rather sharp decline in short-term interest rates. The heavy volume of bond issues has also been one factor moderating the decline in long-term interest rates.

To digress slightly, the diagnosis of a liquidity crisis in June was far wide of the mark. In the classic sense, a liquidity crisis or shortage would send short-term interest rates skyward. The inability to obtain short-term credit would apply to all borrowers, strong as well as weak. The idea of a shortage of liquid funds may have been more applicable to June of 1969 when Eurodollar rates raced up to 13%. Of course the label may stick, but what happened should be understood. What did happen this spring was that a number of companies found themselves with considerably less internal cash flow than they had budgeted for earlier. That shortfall was due, of course, to the sharp decline in profits in the course of an economic recession most companies had not foreseen. Many companies were caught at an unfortunate time, for all during 1969, they had been trimming their liquid assets, borrowing as short as they could, and dipping into corners of the credit market—such as the commercial paper corner—where they were relatively inexperienced. They were often hypnotized by their inflationary expectations and their high profit expectations. One reflection of this was the reluctance of many managements to cut costs, since they believed that the inflationary boom would continue indefinitely and justify operating under a full head of steam.

When the effects of last year's restrictive monetary policy finally slowed down production and sales, cash flows and profits fell more for some than others. Among those whose profits suffered more were many who were living heavily on short-term debt. The markets began to distinguish between "have" and "have-not" companies. The "have-nots" found their ability to repay crippled, and their credit-worthiness under a cloud. Lenders had plenty of short-term money to lend—this was evidenced by the big increase in commercial paper outstanding in the first half and by the stability of short-term interest rates—but they suddenly became very choosy about whom to lend it to. June of 1969 should be remembered as the time when a liquidity squeeze occurred with very little increase in the cost of short-term credit. To be sure, there are many companies still troubled by the extent to which their budgets went astray this year, but the liquidity fears have now faded. They have faded not only because the Federal Reserve became so expansive during the summer months, but because, more basically, there never was a liquidity shortage in the market, but instead a profit or cash flow shortage. Now the damage done by budget miscalculations is being repaired, and it may well go on well into 1971. Commercial paper, excluding that issued by banks, is growing. The volume will probably accelerate in the months ahead. Investment in inventories is growing slowly, fixed investment—plant and equipment—is trending lower. Costs are still being trimmed in corporate areas.

The changing pattern of commercial bank credit— The increase in commercial bank loans, particularly those to business borrowers, began to slow down earlier this year. During the first half of 1970, bank loans to nonfinancial corporations rose only half as much on a seasonally adjusted basis as in the last half of 1969 and only one-third as much as they had in the first half of last year. So far, however, corporate loan demand has been stronger than during previous recessions. A good part of this stems from needs to cover a shortfall in corporate cash flow and income. Some is a result of cost overruns on new construction projects. From now on, however, bank loans to business are likely to slow down further, and they are likely to remain sluggish into the first half of 1971. This is simply a part of the smaller use of short- and intermediate-term credit by corporations as they continue to extend debt maturities, increase equity financing, and curtail expenditures for real assets, such as inventories and plant and equipment. It will also reflect increased use of the commercial paper market by some borrowers as an alternative to bank credit.

I have deliberately used figures sparingly so far, but I think some numbers are now in order. For the first nine months of 1970, total seasonally adjusted commercial bank credit increased by about $19 billion. But looking more closely, the increase ran roughly $1 billion per month during the first six months of the year and $4-5 billion per month since monetary policy became more expansive late in June.

Assuming that the increase during the last three months of 1970 will run about $4 billion per month, the growth of total commercial bank credit this year should reach $30-35 billion—or $35-40 billion if we include possibly $5 billion in loans sold to bank holding companies and others are included. This would give an increase in total bank credit of approximately 8 to 10%, probably slightly exceeding the Federal Reserve's target set early in the year of 6 to 8%.

Now, what about next year? Normally, a 4 to 5% growth in the money supply—assuming for the moment that is the goal—would translate into an increase of 8% or so in total bank credit. However, because this is a period of transition in the liability and asset composition of banks, this moderate growth in money supply might be expected to produce another increase of as much as 9 to 10%.

For comparison, let me point out that total bank credit in 1967 and 1968 grew by roughly 11% in each of these years. (And market rates and the prime rate rose rapidly despite the large increase in availability of bank credit.) In 1969 the Federal Reserve's restrictive monetary policy was successful in holding the growth in total bank credit to about 3 to 4% (depending on how one treats asset sales to bank holding companies)—or less than $15 billion.

The net flow of bank credit to business borrowers in 1969 exceeded the growth in total bank credit, and consumers borrowed an additional $8 billion. To meet these demands, the banks virtually dropped out of the municipal bond market and sharply reduced their holdings of Treasury and agency securities.

The picture is now changing. The growth of credit to consumers is now beginning to pick up. This will become more marked in 1971, and the rate of increase in credit to consumers will outpace loans to business. This kind of cyclical shift in the extension of credit by the banking system was readily foreseen as far back as last year when the Federal Reserve was applying restraint and when it appeared as though business borrowers were unfairly receiving large amounts of credit.

The unusually strong demand for credit by business last year was largely attributable directly to the excessively expansive monetary policies in 1967 and 1968. This year, the smaller demand for bank credit by business is the result of the restrictive policy of last year which has slowed down the economy, reduced inflationary pressures, and created an environment where less credit is needed and less credit is demanded by business. Consumers are now to become more aggressive borrowers at the same time that more bank credit becomes available. A word of caution: If we were to once again pursue an extended period of, say, six to twelve months of excessively expansive monetary policy, we could risk a return to the conditions of 1969, perhaps in 1972 or 1973.

The smaller demand for business loans at the same time that bank reserves are growing rapidly has already begun to lead banks to increase their purchases of municipal bonds. It has been one of the major factors in bringing about a rather dramatic decline in municipal bond rates in recent months. Commercial banks, in both 1967 and 1968, purchased approximately $9 billion of state and local securities. In 1969, a restrictive monetary policy, in the face of an increase in demand for loans, forced banks to hold their purchases of these securities to only about $1½ billion. Through the first half of 1970, purchases have once again been running at about a $9 billion annual rate, and may run higher in 1971.

The Federal Reserve now has produced the result it was seeking impatiently during 1969, namely a slowdown in business spending and borrowing. It was unrealistic to expect a reduction in capital investment last year, and it was predictable that success would be achieved in the second half of this year after a recession.

Now we seem to be at least most of the way through that recession. The shortfall in national output, the so-called GNP gap between potential and actual output, has climbed to about 5%. This is a materially smaller gap than at the end of the 1958 or 1960 recessions, but about the same size as the 1954 gap. Price inflation and wage inflation are responding to that gap—as they always do. We still have a long way to go to eliminate excess inflation, and it will take even longer to wipe out expectations of high rates of inflation. But the progress so far justifies confidence in the potency of monetary restraint.

Unfortunately at this moment of emerging success, there are more and more voices calling for still faster expansion than we have had in the past nine months. Last year there was a good deal of impatience over getting the economy to slow down in response to monetary restraint. Now we seem to be getting impatient about stepping up the pace of economic growth. For instance, I assumed that the Fed would hold to a noninflationary 4-5% average rate of growth in money supply next year. Suppose the extreme expansionists win out. Suppose that the money supply grows by 7, 8, or 9% next year. I need hardly say that this would imply an increase in bank credit of some 12 to 15% and a reawakening of inflationary pressures. Interest rates, instead of responding to moderating inflation expectations, would be under upward pressure by the end of next year. The inflation premium, that now amounts to such a large portion of interest rates, could become even larger. Business credit demands would be rekindled by inflationary prospects. Once more it would become sensible to build capacity or add to inventories far ahead of need in order to beat a rise in prices. Once more we would hear that business borrowers were crowding out consumers and municipal borrowers. Once more the Federal Reserve might be tempted to bind the banks and the economy in a hair shirt of controls.

To be sure, it is early to raise a cry of alarm about excessive monetary expansion. A few months of such growth need not establish a long-term pattern. And I am sure that the relatively few voices of protest that were raised when the Fed became too expansive in 1967 and 1968 would become a loud chorus if the monetary authorities made the same mistake again. Such a repetition could not be ascribed to confusion about goals or ignorance of the consequences; it would be deliberate and visible.

Reordering National Priorities: The Carrot or the Stick?

Nat S. Rogers

Banks are, of course, "where the money is," as the notorious bank robber Willie Sutton used to say—but in a very special sense. Banks deal with other people's money. Ninety-two percent of all our bank assets, and 100% of all our trust assets belong to someone else.

By any measure, the total is impressive. First, there are well over $500 billion of bank assets, acquired for the most part with depositors' funds. Then banks, acting as fiduciaries, manage almost $300 billion of trust assets, in the interest of a wide variety of beneficiaries. It begins to look as if Mr. Sutton's observation was correct.

Since bankers are entrusted with huge fund management responsibilities, the problem they constantly face is the proper allocation of these assets which belong to others. To what uses shall they be put so as to best serve our owners and the nation?

In theory—and to a considerable degree in practice—we bankers are mere middlemen. As intermediaries, we mobilize monetary resources, drawing in funds from every segment of the public. The correlative responsibility is to allocate these monetary resources to areas where their productivity is greatest. Banks do not de-

Mr. Rogers, president of the First National City Bank of Houston, is also president, the American Bankers Association. His address before The Conference Board's September meeting on the business outlook for 1971 is the basis for this article.

termine the total volume of funds available. Primarily, that is the task of the Federal Reserve. But banks of course compete intensely among themselves for portions of the total which is predetermined by the central bank.

Banks have several options as to the manner in which they seek to obtain funds, and the ways in which they invest. Yet these options are not as broad and flexible as the public or the Congress like to think. In attracting funds, ingenuity and salesmanship are useful tools, but they are no substitute for attractive rates and top quality service. The latter are essential requisites for the retention of deposit balances.

Similarly, bankers are not free to decide capriciously who will and who will not receive credit. Since the money belongs to others, there is a plethora of regulatory officials, both Federal and state, who insist upon the maintenance of reserve, keep a close eye on liquidity, and examine the quality of loans and investments. Apart from this, bankers must also rely upon a traditional market mechanism—the interest rate—to assist in the allocation of credit.

It is well to remember that the general level of interest rates is beyond banker control. It is, instead, a function of the total supply of loanable funds and the total demand for credit. Neither can be determined by an individual bank or even by the entire banking system. If money is plentiful and demand slack, rates will decline, and there is little any banker can do about it. Conversely, strong demand exceeding the available supply of loanable funds will drive the price up. But high rates, supposedly the darling of bankers, fail to benefit lenders when access to loanable funds is absent. It was just such a situation in which many banks found themselves during the recent credit stringency and disintermediation.

Nonetheless, the shifting pattern of interest rates plays a significant part in the allocation of credit. An upward movement of a particular rate will tend to remove marginal potential borrowers from the market, while a decrease will have precisely the opposite effect. In any given context, of course, the banker must exercise discretion regarding the liquidity and soundness of particular credit extensions. Nevertheless, interest rates are highly important in determining which of the competing needs for capital will be fulfilled.

A major public policy question is whether those potential credit seekers who are eliminated from the market in a period of high rates are more deserving than others who remain to pay the going rate. Orthodox economic theory postulates a direct correlation between the economic usefulness of credit and its profitability to the borrower. Hence, the ability of preferred borrowers to pay will tend to be highest, and funds will flow automatically in their directions.

Satisfying social needs

The theory fails to satisfy those who would supplant the market mechanism with a system of resources allocation on the basis of social priorities. They ask: "How can you be certain that adequate capital will flow to housing in periods of tight money?" "Whether money is easy or tight, will funds flow in sufficient quantities to the ghettos?" "What assurance do we have that private sources will automatically commit the necessary capital and credit to cope with massive environmental problems?" In short, the key issue is whether the market system will facilitate the flow of funds to satisfy demonstrable needs. Or is it possible that urgent social demands are incapable of effective economic expression through the market mechanism? The obvious answer is that the market system alone cannot accomplish the entire job of resources allocation. It must be aided by public policy.

Since that which is most efficient, economically speaking, may be inacceptably deficient in responding to social, political, and moral goals, what compromises are in order as we reassess our national objectives? Here perhaps are the knottiest questions facing us today and in the future.

The traditional solution is one which avoids basic interference with the workings of a free market. Government simply shifts resources from one section of the economy to another, preferably using the tax system, but regrettably on occasion resorting to inflationary financing. Hopefully the bitter lesson of inflation will serve to insure a more intelligent reallocation of resources by government in the future.

However, recent years have seen a growing disenchantment with the ability of government to solve problems in this manner. Both liberals and conservatives have begun to realize that massive Federal government is not always best equipped to determine the proper allocation of funds according to needs. Moreover, bureaucracy inevitably results in a loss of funds as they are transferred from one segment of the economy to the other. Accordingly, much attention is now being given to alternate devices designed to make funds available to states, localities, and individuals who might otherwise be unable to compete effectively for the amount of credit available.

Some of these devices have been used for many years. One is the attempt to achieve certain housing goals by providing competitive advantages to those institutions which specialize in making mortgage loans. Therefore, banks are prohibited by law from paying as high a rate on savings deposits as can savings and loan associations or mutual savings banks. The underlying rationale is that these institutions specialize in making home mortgage loans, hence they should be accorded a competitive preference over commercial banks, which are general purpose lenders.

Such devices of course interfere directly with the market mechanism, and thus give rise to all of the difficulties inherent in any kind of price control. In addition, the allocation of preferences to specific types of intermediaries are no guarantee that utilization will precisely or substantially meet nationally recognized priorities. In the case of housing, for example, there is no single market—but numerous market divisions. They are separated by size, location, production techniques, legal aspects, rates, credit quality and many other factors. Market conditions or institutional policies may result in a frustration of the objective or require the imposition of still additional controls. For example, the government has imposed various tax penalties on those mortgage-oriented institutions which do not specialize in mortgage lending to the degree which is deemed desirable. Such discriminatory tax and regulatory patterns result in a cumbersome hodgepodge of market restrictions. Undoubtedly they have generated additional funds for residential lending from an overall standpoint, but clearly they have failed to channel mortgage money into the ghetto and low-income housing, where the needs are critical.

Early in 1969 the Administration offered a tax proposal which would have rewarded any institution allowing funds to certain types of socially-desirable loans. Properly, it placed the incentive on the economic function without regard to the classification of the institution's business. While subject to considerable refinement, this nondiscriminatory approach seems more reasonable than the paths we have been following. Should it be coupled with the elimination of various price controls now applicable, the wholesome result would be less interference with a free market.

Direct investment controls

Many of our problems are pressing, and the luxury of awaiting long-range solutions is much too costly. Accordingly, there are more and more proposals for direct investment controls, and, of course, "banks are where the money is." Like it or not, there is a usually misguided but growing sentiment for direct investment controls, with banks as a primary target.

Thus, for example, a recent Congressional proposal stipulated that any shortfall in mortgage fund flows deemed desirable for home financing would be obtained by forced investment from pension funds, the majority of which are bank-administered. It has further been proposed that funds now maintained by banks as reserves be invested instead in mortgages or in other instruments designated as socially desirable types of investment. As president of The American Bankers Association, I testified favorably, albeit reluctantly, on this latter proposal when it was before the Congress. Suffice it to say I regarded it as desirable merely as a standby basis with Federal Reserve authority for use limited to emergency conditions.

A future which might require a significant portion of the funds held by banks to be invested as specifically directed by government would be a far cry from the banking system we know today. Almost by definition such investments would be less profitable than other options available to banks—otherwise they would be made without government interference. Obviously, the effect would be much the same as levying a special tax upon the banks. If on the other hand, the penalty to profitability were removed, an alternative disadvantage of reduced liquidity would ensue.

Proposals for direct investment controls appear to have a special fascination for some Federal officials. The concept seems simple—you merely identify a pool of funds in banks or elsewhere, and, with a single stroke of the pen, you direct that it be placed here rather than there. Even more appealing, this can be done at no apparent cost. No appropriation is needed, no vote need be cast for increased Federal expenditures, no wrangling need occur about additional revenues. The real cost may be quite substantial, however. It could be found in the erosion and ultimate destruction of the market mechanism.

The social function of a market economy

In the decade ahead, the pragmatic approach will be to seek a middle-ground. According to a recent report in *The New York Times,* the search is underway by business and professional leaders at such centers as the Aspen Institute for Humanistic Studies. According to this account, and not unexpectedly, the study group is reexamining the function and consequences of a free market economy. It is also assessing its findings in relation to the need for reducing pollution and for achieving other goals incident to a healthy environment.

This raises a new dimension of the issue. There is always the possibility that planners will go further than seeking to channel bank funds into desirable uses. They may also attempt to prevent their use in what are judged to be undesirable ways. There is a subtle but important difference between the two approaches.

Banks have had experience with the second of these approaches. On occasion the Federal Reserve has strongly implied that certain types of bank loans are "undesirable." For example, in 1966 the Federal Reserve issued a controversial letter to banks which was intended to prevent banks from making loans which the Federal Reserve believed to be inflationary. The letter indicated that there were "bad" loans—which were inflationary—and "good" loans—which were non-inflationary. Thtis rationale can be seriously questioned—and indeed was—so that the particular letter was eventually withdrawn. Nonetheless, the philosophy which prompted it lingers on in various governmental circles including the Congress.

The future possibility that those who would divert funds to *desirable* uses may become even more enamored with diverting them *from undesirable* uses should give us pause. Converted to reality, such an approach would make the role of commercial banks as mobilizers and allocators of capital completely untenable. Indeed, the commercial banking system would have been converted into a system of government development banks.

Resolving the basic dilemma

So, to recapitulate, on one hand I have asserted that the free market is not sufficiently reliable to meet all of the financing requirements of our nation. At the same time, I maintain that unrestricted direction by government is inappropriate. What, therefore, is the solution? Frankly, the answer is an imponderable, but I suggest that there are certain principles which are applicable.

First, the basic role government must play should be conceded. It cannot escape responsibility for achieving solutions to deep-rooted social problems and for the attainment of other essential public policy objectives. Primarily, this responsibility should be exercised in such fashion as not to impede or compete with the operations of private institutions. Certainly government must shift real resources to certain needed areas—education, welfare, national defense, environmental preservation, the ghettos—by utilizing its powers to tax and to appropriate. In this process, a governmental policy of providing compelling incentives to the private sector should take precedence over direct government action. This principle should be applied widely in tax policy, welfare reform, and elsewhere.

Second, the temptation to manipulate the market mechanism in search of seemingly cheap solutions must be avoided. Destruction of our free markets will scarcely benefit the economy in the long run, or for that matter, even in the short run.

Third, to the extent that the government does not shift real resources through the tax and expenditure processes, it can play a crucial role in encouraging private institutions to do so. The tax system has long been a favorite source of such devices. Other policies may include subsidies and insurance programs, which can change the relative degree of attractiveness of various types of investments. As already indicated there may be considerable merit to programs designed to motivate private institutions in the solution of social problems. The point is that the most direct and efficient decision-making takes place within the framework of a market economy. There each decision-maker must select the most attractive uses for funds from a choice of alternatives. It will be ineptly done if private incentive-based decision-making is replaced by a series of directed investments.

In any event, it is clear that this is a subject to which President Nixon's new Commission on Financial Structure and Regulation will certainly be directing its attention. According to its first formal announcement, three of the four priority items which it will initially study relate precisely to these matters.

In banking, we know that we are in a changing, evolving world, in which the old benchmarks may no longer be valid. As we accept new obligations, perfect new techniques, and reorder existing priorities, it is fundamental that we constantly sense the drift. Preserving a maximum degree of private incentives and retaining flexibility in the administration of our credit and capital markets are vital necessities. With these advantages present in suitable relationship to our nation's urgent needs, commercial banking can and will make a major contribution to the solutions of our problems. Should commercial banks be relegated to any lesser role, the real loser would be the nation.

The 1970's—A Time of Change

Lauris Norstad

One aspect of the business environment which I am sure all understand but to which we sometimes give insufficient attention warrants some highlighting. That is the fact that business happens within a framework created by other activity, national and international. Put another way, the war in Vietnam, tensions in the Middle East, student strife and domestic disorder all have broad impacts in our area of interest, in 1971 or any time. In fact, we must conclude that the economy of the nation—of the world—operates within parameters set by the social and political climate of the time.

For many reasons—heavily influenced by the war in Vietnam and the unrest here in the United States—there has been a tendency to take an essentially gloomy view of the world and of our national future. Without creating unfounded optimism, I would like to offer a point of view which suggests that the 1970's should be a decade of change, even exciting and dramatic change, offering important opportunities to our civilization.

First let me suggest that history moves in waves and surges. As it works its way across time, there are peaks and valleys but not too many really critical points. We might see this better if we could eliminate the myopia which results from our being part of current events. The immediate post-World War II period offers perhaps the best, certainly the most recent, example of one such peak. That was a time when important new ideas caught up with the forward movement of history, ideas which established whole new outlooks, ideas which set in motion important political events, ideas which changed the course and character of the world. Events of the years before combined to cause the wavecrest that emerged in the late 1940's, such events as World War I, the Depression of the 1930's, World War II, the harnessing of nuclear power—and, of course, the technical revolution in the communications and computer fields and the increasingly intense industrialization of the United States. The force of these events caused change, major change in our world. The character of that world was sharply altered.

The curve of history

To support this point, we might examine the critical changes which emerged in the span of a very few years—our wavecrest of the late 40's. World power shifted. The United States and the Soviet Union were established as the two nations of preeminent strength, and they were adversaries. France and Great Britain, both still great in stature and in influence, were now of lesser impact on the world scene. The empires long associated with Britain and France, and with other colonial powers as well, began their process of dismemberment. China's agony continued, but with a decisive turn toward China's own variety of communism. Yugoslavia established its own niche in the world political framework; Israel was brought into being; the Truman Doctrine sent aid to Greece and Turkey to help them support themselves as free and independent peoples. European nations, forced by threats from the East, recognized a community of interest and forced the Western European Union. They then helped that organization, in effect, to grow into NATO. We set a new standard of world citizenship with a new concept of help from one nation to the life or society of which it is a part—the Marshall Plan. NATO, organized with our participation, reflected a new awareness of our world role and demonstrated our readiness, in our own self-interest, to make binding commitments in international undertaking. The programs and policies—political and military—which were

General Norstad, chairman, Owens-Corning Fiberglas Corporation, presented the address from which this article is drawn before The Conference Board's 54th annual meeting—1971 Business Outlook—at the Waldorf-Astoria in New York City.

established then were fresh, forward-looking and far-reaching.

Those years—the late 40's—were years of thought, of decision. They were years of critical action in which we made fundamental determination of direction, determinations which would guide us and influence our friends and allies throughout the world for many years to come. This was a time when men seized circumstance and turned it to their will, but circumstance was part of the ebb and flow of history, the result of some interplay of natural forces, all of which piled events one on top of the other and demanded a response. Our system of government and the men who manned that government proved adequate to the challenge—and for this we should be grateful.

It is not my purpose to suggest that those few years in the late 40's are to be recognized as a moment unique in history. On the contrary, I would identify them as one of a number of critical points on the curve of history. I would like specifically to suggest that another such moment seems now to be imminent and that in this decade, somewhere in the 1970's there will occur one of these moments that dictate the shape of world events for many years to follow.

I have already acknowledged that distortion frequently results when we look at our own contemporary circumstances. Without meaning to ignore the imperfections of my own vision, I would like to suggest that there is an impressive accumulation of critical departure points, the sort of accumulation that sets the stage for change. If this conclusion turns out to be right, great opportunity lies ahead. If we can correctly forecast the turn, it is at least possible that we can also be wise enough to improve our preparation and thus, hopefully, our response.

New points of departure

In listing critical departure points, I give high place to the relationship that exists between the two principal powers of the world—still adversaries—and the understanding I believe they now have of the facts of their relationship. Both the United States and the Soviet Union have available unparalleled capacity in terms of destructive power. The character and the quality of the weapons available create a totally new and totally different environment—an environment which encompasses not simply the relationships between these two powers but which affects the entire world community. It would be comforting to conclude that all this has made a major war impossible. Unfortunately, I cannot do more than state that such a thing has become more completely and more obviously irrational, and with some care and some luck, we can keep the unreasonable from happening. As the two great powers pursue their national goals, they do so under the weight of their obligation to keep the peace. It seems to me that reason has a higher value than ever before. Negotiation and understanding have new importance. Conflict and frictions that can lead to conflict are under new restraints. We may dislike many things that the Soviet leadership has done or stands for, but I suggest that they, too, must be soberly aware of the obligations their tremendous military strength imposes. We must believe that today both sides understand and respect the limitations and the pressures which they uniquely share. I offer this situation as one which, even by itself, must lead to very significant change.

It is in this context of responsibility and restraint that we see some ultimate gain, even though small and tardy, in the Strategic Arms Limitation Talks (SALT) soon to reconvene in Helsinki. The record of arms limitation conferences offers the prudent observer no basis for optimism, it is true, but it is also true that today's atmosphere may alter the meaning of past experience.

Another event or circumstance which sets the stage for change, the one particularly close to the minds and hearts of America, is Vietnam. Our experience in the war there has been costly, difficult and unhappy; but we may have learned some lessons. The United States, to the enlightenment of a large audience of its own citizens as well as those of other nations, may have demonstrated certain current and valid criteria concerning the exercise of military strength. Whether or not our commitment in the southeast Asia area remains the same, it is quite clear that the manner in which we discharge that commitment is in the process of change. It has been said that we are correcting our strategy so that we may be free to use our influence in that important part of the world without unbearable domestic pressures or without creating hostility on the part of friends and allies whom we are trying to assist. Further, we may have made a convincing case for greater restraint, for more effort to find alternatives to military action, for more sustained and more carefully developed effort on our part to define new courses of action which would at least defer and limit military intervention.

After an age of heroes

In Europe political personalities of great dimensions launched changes in the late 1940's and then remained on the scene to implement what they had helped create. The last of that generation, indeed the last of that heroic mold, has left office. Time has brought about important change in the cast of characters. New points of view have inevitably emerged. Increasingly, Europe is demonstrating a readiness for change, perhaps change of critical proportions. That the recent meetings between the USSR and the Federal Republic of Germany portend something of importance, no one can doubt; what will develop from then, no one knows. But it seems to me we can look for some restructuring of the old establishment, some important change.

Elsewhere in the world, other events, some already a part of history, also suggest a new turn. We can find developments of great importance in Asia, in Africa, in the Americas, but one of particular interest to businessmen is Japan, a nation grown to giant economic stature under the umbrella of U.S. political and military strength. Now, Japan's political position is showing form and character in important respects; its military strength is also developing, even if in somewhat subdued background. In short, Japan is on the verge of becoming a major world influence; that fact and her capacities, her orientation, her goals, will help drive change in some direction.

For the first time in several years, Vietnam is not the first and only subject discussed when informed Americans consider policy and politics. The urgency of the Middle East problem is demanding our attention. However, while the best minds of many governments work towards solutions, it is probably not constructive—perhaps not even appropriate—to speculate on what is happening or what will develop in that area of crisis. The costs are terrible but it seems reasonable, not merely hopeful, to expect that the outcome will ultimately be a better defined pattern of relationships among nations within that part of the world and between that part of the world and other areas. Meanwhile, we are concerned observers as the bitter struggle continues and the responsibility of the great powers is subjected to a most demanding test.

Some nonpolitical parameters

Our concentration up to this point has been almost entirely on the political environment or on those factors which seem likely to lead to significant political change. The examples we have looked at—surely not a complete list—demonstrate how political developments establish the parameters for both policy and action. But in spite of the dominance of political change, there remains other important influences which must be given recognition here.

We all have some general appreciation of the truly incredible technological progress that has taken place within the life span of most of us. This is certainly part of the setting for the 1970's. Without becoming involved in detail, we can, I believe, establish some important implications by considering a few illustrations.

Our ability to handle information—which finds its roots in computer science—permits man to work with data and produce results in time spans that until quite recently could not be imagined. Man's tools to solve his toughest problems have improved by orders of magnitude that defy quantitative definition. This fantastically expanded capacity to handle information is complemented by a corresponding improvement in communications. We have compressed time and space to the point that planets now stand in relationship to one another almost as countries on this one planet once did. In terms of communicating, we are near to being an open world society and the promise of high visibility and easy interchange even now affects the behavior of organizations and governments just as it affects the behavior of individuals. The decade of effort that resulted in our landing on the moon has built a platform of knowledge which, in addition to the incredible result already achieved, must in time lead to still other achievements of the broadest significance. Such technological developments add another dimension to the setting for major change.

And finally, there are the currents of change in our society. I think that all would agree that never before in our lifetimes has there been as diversified and as shrill a pressure for up-dating the ways of our society. While this is by no means a uniquely American phenomenon, we in the United States certainly have our generous share. We see it in many domains. Concern for the environment is certainly one. Some may think challenges to the role that business and industry take in modern society to be still another. Our greater interest in improving the lot of the disadvantaged and minority elements, the questions about our national role and our national manner in world affairs, new efforts to steer the political process—all of these are not simply isolated and unrelated efforts to achieve change. They are reflective of an insistence on a larger pattern of revision, reflective of a building pressure to force this period of historical change to emerge on the national and world scene.

Impending change

There are, it seems to me, several other questions that I could legitimately be expected to address in further illumination of my thought that an historical wave will peak in this decade. First, the question of "when," seeking an answer more definitive than "some time in the 70's." I have no good answer to that question. It may be that we will become confident about the answer only when we look backward in time as we do now in respect to the late 40's. All I can offer at this point is a sensing that a time of important change, a time of decisive definition of direction seems near at hand. It is, I suppose, possible that the process has begun.

Another question would require me to be prophetic about the specific character of the change. Quite obviously I don't *know* the answer to that question either, but I believe that there are reasonable judgments to be offered. It seems to me that for reasons already developed, and in spite of present wars and rumors of wars, the nations of the world could embark upon an era of more peaceful existence than they have known for a long time. With the kind of help that great nations can provide, an environmental situation, fundamentally hostile to military action, can become dominant. As a second judgment, I would suggest that recognition of the fact that the world grows smaller will become more strongly characteristic of everything we do. All of the factors that work toward a world society with a freedom and speed of interaction never before known, all these will work toward change in our ways of doing business.

And now for a last question—what do we do about this impending happening—certainly defined as it is and must be? I have two answers to that question. First, having identified the likelihood of significant change, we should do our best to prepare for it. Because our ability to forecast clearly has limits, we probably cannot expect to do more than understand the steps and the implications of alternative courses of action that seem reasonable to us. But identifying the course of action and defining the steps and the implications are no small task. To prepare for change, to be ready to respond, industry has really only started to do the kind of thinking and studying which are required. But beyond this question of improving readiness, I suggest to you that even more important may be the matter of our receptivity to reasoned change. This question of receptivity—in my judgment—has crucial importance. I have had opportunities to watch a number of bureaucracies at work—bureaucracies in government—our own and in other nations—bureaucracies in the military—our own, in other countries and international in character—and yes, in business—in our own country and abroad. And in terms of fundamental characteristics, there are some very fundamental likenesses shared by all of these bureaucracies. They tend to resist change—because people don't like change—and what I am suggesting is that acceptance of reasoned change is going to be of very high importance. In my view, it may well be that the preservation of what we have known as the free-enterprise system will, in the long term, depend on willingness and ability to adapt to change.

I do suggest then that the world stage has been set for emergence of critically important initiatives—initiatives that will reflect the lead role of political events but which will also bring with them important evolutions in other areas of activity. I believe that we must expect the 1970's to include a turning point of fundamental significance in contemporary history. Within this decade we should identify one of those critical periods when ideas germinate and decisions direct events, when man does not merely accept, he designs his destiny.

Surely the challenge of these times is enormous, far greater, far more serious, far more complex than the challenge of any time in the past. But our ability to deal with the challenge has also grown tremendously. If there is one constant, it must in some way involve the nature of man, his capacity for constructive thought and effort—his conscience. And here, I am certain, is the real basis for confidence.

Antitrust and Emerging Information Technology

Betty Bock
CB Antitrust Department

. . . a speculation

As the ability to store, process, and send information becomes increasingly sophisticated, long-standing questions concerning business-government relations in the antitrust area can be expected to take on new significance. In the following article, Dr. Bock considers some of the major questions that will arise as computer systems serve increasingly as storage facilities and as clearing houses for data that were formerly the exclusive property of individual companies. The paper begins by outlining some underlying assumptions concerning future attitudes toward antitrust.

While substantive changes in the antitrust laws normally take longer than estimates of the time required for change, judicial procedures under which antitrust cases are brought and tried have generated regulatory processes that are not always sensitively responsive to rapid changes in the institutions regulated.

The adversary process is designed to legitimatize the judicial appropriateness of evidence concerning the causes of a definable event; *e.g.*, the causes of sudden death or the identity of a shoplifter. It does not represent an equally viable method for dealing with mass data on ambiguous questions concerning competition. Once computerization permits—although it will not necessarily guarantee—generation of more precise, complete, and readily available information concerning business operations than could be generated in the past, the conceptual problems of what regulators should ask and how they should interpret the information they get can be expected to take on new urgency. The propelling power behind this urgency is made up of several elements:

First, populism, or anti-bigness sentiment, is not likely to decline as pressures from new activists, including consumer and conservation groups, militant students, and minority advocates, keep the bigness issue alive. Meanwhile, training in economics is likely to continue to focus on model-building and mathematical manipulation of information which at present is not well-adapted to problems in industrial organization. Thus, until more precise and complete economic data concerning enterprise processes are available, the existing gap between inputs for model-building and facts concerning industrial dynamics cannot be expected to decrease.

While, therefore, the relations between the social and economic goals of competition will require cooler and more precise formulation than in the past, the existing gap between understanding of enterprise processes and analysis of standard statistical data designed primarily for other uses can be expected to increase.

Second, conflicts between major business enterprises and the antitrust enforcement agencies have in the past reflected differences in interpretation of the meaning of the law. Or, to put the matter differently, open-forum discourse and argument between enforcement officers and companies have tended to focus on different competitive factors—with the Antitrust Division of the Department of Justice, the Federal Trade Commission, and the courts tending to emphasize short-run considerations and corporate advocates tending to emphasize long-range considerations concerning the competitive consequences of business behavior.

Unless enforcement goals can be formulated in terms that reconcile both sets of considerations, advances in the technology of the information process can lead to irrelevant use of data (or use of irrelevant data) to obtain short-run enforcement results. Some of the data and information problems that have already emerged may be briefly noted.

Present data can raise problems

Individual company data published as such serve as the basis for many types of analysis of competitive processes. Where such data are aggregated outside of standardized survey programs, the resulting statistics generally cover only so-called public corporations with 500 or more stockholders. These data are subject to internal inconsistencies because of varying methods of corporate record-keeping and reporting and because of the problems of fitting changing data into classification systems.

A company may, therefore, appear larger or smaller, or to be growing or declining at a slow or rapid rate, depending on its method of reporting. And statistical aggregates compiled from such data may also appear relatively large or small (or growing or declining slowly or rapidly), depending not necessarily on shifts in corporate facts, but on shifts in the relevance of a given classification system—or on shifts in the system of classification itself.[1]

Statistical aggregates compiled by the Bureau of the Census or other government agencies also present major problems for industrial analysis. Such aggregates are compiled for a variety of purposes, but none measure what is actually sold in the marketplace and, therefore, none bear *directly* on enforcement of the antitrust laws; *e.g.*, problems of case-selection, validation of evidence, or fashioning of viable remedies for violations of law. No serious questions would arise, however, if the scope and underlying limitations of data were explicitly reflected in subsequent analysis, but if limitations are not reflected, conclusions will contain distortions.

The problems arising from the use of the Standard Industrial Classification System (SIC) of the Bureau of the Census as a statistical base for the generation of data on concentration are typical of those encountered in using existing statistical aggregates as direct antitrust tools—without consideration of additional background facts.

The SIC system is a codified set of interlinking classes of products building up from narrowly defined to broader and broader groups. If one wants to generate time series based on such data at the 4-digit level, for example, it is desirable that definitions of classes remain unchanged over time; but if one wants to compare different classes within the system, it is desirable that the criteria for classes be systematic and be applied uniformly. In periods of rapid change, however, these two sets of considerations may well conflict. While such problems are routine for most uses of statistical data, they become significant when figures are used for regulatory purposes, since "observations" and conclusions concerning individual companies will depend on the statistical system employed.[2]

Granted such data problems, a pure and simple structural approach to antitrust—emphasizing concentration, market shares, market rank, numbers of companies, and barriers to entry into an industry to the exclusion of other data—can, under rapidly changing conditions, yield unreliable predictions concerning competitive performance.

If, for example, antitrust cases are brought and evidence is presented in terms of concentration ratios for markets whose boundaries are shifting rapidly, an observer may reach counter-competitive conclusions if he relies solely on data on changes in concentration. Because a market share or concentration test is primarily designed to apply to static market conditions, it will normally fail to take account of changes in rapidly declining or newly emerging markets. Concentration in a declining market—narrowly defined—can be high and increasing, without giving rise to the immediate inference that the market is anticompetitive; equally, concentration in a developing and relatively young market can also be high and increasing, without giving rise to the same inference. Substantial increases in concentration in such markets can be evidence of active competitive enterprise, not the reverse. Indeed, distortions in conclusions may result from failure to evaluate shifts in market structure in terms of verifiable underlying shifts in technological or demand factors affecting specific industries.

Between 1947 and 1954, for example, the share of the value of shipments (which is not necessarily what is sold in the marketplace) of hatters' fur accounted for by the first-4 companies making such shipments increased from 53% to 63%. Meanwhile, the total value of shipments of the industry declined from $24 to $10 million and the number of companies in the industry fell from 45 to 30. By 1963, the industry had disappeared as a Census category. Clearly, hatters' fur was a senescent industry, and only passive stagnation could have prevented the substantial increase in an already high level of concentration that accompanied the substantial decline in shipments and number of companies.

Table 1 lists six additional industries where increases in concentration during the 1947-1954 period were associated with rapidly declining markets—all but one of which had disappeared by 1967. Table 2 lists four

[1] See "Statistical Games and the '200 Largest' Industrials: 1954 and 1968," *Studies in Business Economics* No. 115, The Conference Board, 1970.

[2] It should be noted, for example, that the Bureau of the Census collects SIC data from establishments as distinguished from enterprises in which inter-plant transfers and intra-enterprise items are eliminated in preparing consolidated statements for the enterprise. Combining reports from related establishments will not yield the same result as a consolidated report for enterprises, if there are inter-plant transfers and related intra-enterprise items which offset each other in a consolidation.

Examples of Industries with 1947-1954 Increases in Concentration of Shipments in the First-4 Companies Combined with Substantial Declines in Value of Shipments and Number of Companies **Table 1.**

Industry	1947-1954 Increase in Concentration (Percentage Points)	1947-1954 Decline in Value of Shipments (Percent)	1947-1954 Decline in Number of Companies (Percent)	1954-1967 Increase in Concentration (Percentage Points)	1954-1967 Decline in Value of Shipments (Percent)	1954-1967 Decline in Number of Companies (Percent)
Mechanical stokers	23	64	46	—a	—a	—a
Leather dress gloves	9	40	42	—a	—a	—a
Suspenders and garters	9	33	27	—a	—a	—a
Saddlery, harness and whips	5	45	23	—a	—a	—a
Handkerchiefs	5	25	37	—a	—a	—a
Manufactured ice	4	48	35	7	31	52

a) No longer a separate 4-digit industry category, as of 1967.

Sources: Data for 1947-1954 are from "Concentration Patterns in Manufacturing," *Studies in Business Economics* No. 65, National Industrial Conference Board, 1959, Appendix Table 3b(2), p. 125; this material is based on "Concentration in American Industry," Report of the Subcommittee on Antitrust and Monopoly to the Committee on the Judiciary, U.S. Senate, Eighty-fifth Congress, First Session, U.S. Government Printing Office, Washington, D.C., July 1957, Table 42, p. 196.

Data for 1954-1967 are from 1967 Census of Manufactures, "Concentration Ratios in Manufacturing," Special Report, Part 1, Bureau of the Census, U.S. Department of Commerce, MC67(S)-2-1, August 1970, Table 5; and *Standard Industrial Classification Manual*, 1967, Executive Office of the President, Bureau of the Budget, U.S. Government Printing Office, Washington, D.C.

industries where increases in concentration during the 1947-1954 period were associated with new and emerging markets: in two (prefabricated wood structures, and plastic materials and resins), the increase in concentration reversed itself substantially between 1954 and 1967; in the other two (computing and related machines, and carpets and rugs, except wool), the industries no longer existed in 1967, since, as they expanded, they had been split into two or more separate industry segments.

Information technologies and antitrust

Some of the basic building blocks of antitrust analysis may, therefore, be in need of reconsideration—both because they are not well designed to take account of problems of change and because computer potentials for identifying, storing, and processing mass data give promise of generating new methods of considering the time as well as the space dimensions of competition.

Appropriate for reexamination in this connection are the concepts of a "firm," "product," "transaction," and "market," as well as the more specific antitrust concepts of "monopolization," "oligopoly," and "conspiracy in restraint of trade." If such reconsideration is undertaken, it will become apparent that the existing assumption that there is a clear difference between independence and interdependence among business units does not, and cannot normally, reflect existing enterprise arrangements.

Current intercorporate relations, for example, run the gamut from full ownership of a subsidiary to majority, equal-joint, and minority holdings in other companies, and from full merger to partial acquisition of assets, long-term purchase or sales contracts (with or without related financing), long-run noncontractual relations, short-term commitments, and spot-transactions. And this, in turn, means that traditional methods of economic analysis which rest on the assumption that buying and selling is conducted through spot-transactions and that dealings among companies are normally at arm's length are becoming outdated.

Indeed, it is primarily because of lack of definitive

Examples of Industries with 1947-1954 Increases in Concentration of Shipments in the First-4 Companies Combined with Substantial Increases in Value of Shipments and Number of Companies **Table 2.**

Industry	1947-1954 Increase in Concentration (Percentage Points)	1947-1954 Increase in Value of Shipments (Percent)	1947-1954 Increase in Number of Companies (Percent)	1954-1967 Decrease in Concentration (Percentage Points)	1954-1967 Increase in Value of Shipments (Percent)	1954-1967 Increase in Number of Companies (Percent)
Prefabricated wood structures	16	117	13	11	120	134
Computing and related machines	5	113	46	—a	—a	—a
Plastic materials and resins	3	158	59	20	182	341
Carpets and rugs, except wool	2	213	15	—b	—b	—b

a) Split into two separate computer industry categories, as of 1967.

b) Split into three separate carpet industry categories, as of 1967.

Sources: Data for 1947-1954 are from "Concentration Patterns in Manufacturing," *op. cit.*, Table 3b(1), p. 123; "Concentration in American Industry," *op. cit.* The source of the data for 1954-1967 is the same as for Table 1.

information concerning corporate complexes, long-term pricing and sales arrangements, and shifting product specifications that academic and enforcement agency analysis of competition and monopoly have placed such strong reliance on structural tests.

If, however, computerized time-sharing arrangements can give corporations of varying sizes access to expanded information on their own operations as well as on the offers of potential suppliers and the needs of potential outlets, it will be possible for them to base management decisions on up-to-date and relevant data. At the same time it may also be possible for regulatory agencies to frame questions more fully responsive to emerging enterprise requirements.

On the other hand, antitrust vulnerabilities may appear either in computerized time-sharing arrangements or in direct conversations among computers domiciled in independent corporations. Such arrangements have not come under formal enforcement attack as yet. Questions might, however, arise, for example, in cases where conditions for joining a time-sharing group were so onerous that some potential participants would be excluded and had no viable alternatives; where members of a time-sharing pool could access each other's data for use in price fixing, price discrimination, or reciprocity purchasing; in cases where computer communication would permit boycott of specific suppliers or customers; or cases where communication among competitors through computers would permit behavior that precluded any inference of arm's-length relationships.

While further formulation of such issues would be desirable, it is sufficient here to note, first, that with improved information facilities it may be possible for companies to enter into new networks of mutual relations with respect to specific parts of their operations without losing significant degrees of self-determination and, second, that the effect, scope, and limits of the structure of such relations will be determined in critical respects by antitrust considerations.

Need for new concepts?

Some of the most intricate problems implicit in present interpretations of the antitrust laws have been obscured by the sluggish flow of ambiguous data. If information flows are purified, expanded, and speeded up, these problems can be expected to be intensified. Some of the principal issues may be briefly outlined:

Competition of product-and-service systems? A theory of "perfect competition" suggests that, other things being equal, optimum allocation of resources requires an economy where many small, single-output enterprises compete to supply specific types of consumer demand. But if one views today's economy as a process through which different numbers and sizes of multi-output enterprises compete to satisfy broadly defined ranges of human needs, "perfect competition" may not automatically provide for optimum—or possibly even satisfactory—allocation of resources.

Further, if one sees the emerging information technology as capable of high-speed registration of alternative product-and-service systems that can be devoted to satisfying broad-gauge needs, one may have additional reasons for seeking to formulate a theory of competitive means—not goals—appropriate to this view.

The adversary process as an antitrust tool? In considering the proper mix for adversary and nonadversary procedures in maintaining an enterprise system, some of the paradoxes implicit in the present concept of competition—and in present methods of assessing whether particular corporate practices are competitive or anti-competitive—will require reformulation. Two of the salient paradoxes are, for example, the fact that short- and long-range effects of given practices may run counter to each other and the fact that distinctions between actual, probable, and possible competitive effects are not clear-cut in complex company and market situations.

The meaning of conflict of interest? Today, certain corporate activities are assumed to take place at arm's length; *e.g.*, bargaining between sellers and buyers, planning of sales strategies, etc. It is, however, accepted that arm's-length dealings may be diluted through mutual understanding and long-term relations among vertically or horizontally related enterprises. Once the flow of information shifts to a new level, the concept of arm's-length dealing will require reconsideration.

The meaning of privacy? Today, certain types of data concerning an individual enterprise are generally conceded to be private and can, in theory, be made available to others only if the proprietor wishes; *e.g.*, data on costs and profits, know-how, and trade secrets. Insofar as data of this kind are fed into computer banks, special methods of sealing off access by unauthorized persons will have to be developed. This is not primarily a question of security, where suitable engineering solutions appear to be well in hand, but a question of privacy, *i.e.*, of identifying appropriate distinctions among those who are permitted access and those who are not (including private and public persons)—in a multiplicity of complex situations.

The consequences of rapid response rates? It is possible that high-speed feedback of wide ranges of information may cause human reflexes without reflection concerning consequences. Such problems are already implicit in some of today's rapid communication systems and can be expected to increase; *e.g.*, the type of problem that occurs when television passes on news of a riot that attracts additional rioters, or where election returns from the East Coast are fed to the West Coast before polls close there. While it is technically possible to build lags into information systems, it will also be necessary to evolve new concepts concerning assessment of information and its ability to activate response. This implies new concepts of buffer systems in a human, as distinct from a machine, sense.

Delusions of precision? Today, concepts used to resolve antitrust issues are primarily cardinal in nature; *i.e.*, critical relationships tend to be quantified and weighed. As computerization of data concerning company operations permits larger and more complex matrixes of information to emerge, the number and kinds of items that may be enumerable, but defy precise cardinal ordering, can be expected to expand.

And if we develop the incentives and the technology to computerize what today is considered "fuzzy" data, we may begin to experiment with the use of such data to describe markets that do not have tight boundaries. Careful distinctions will, however, be required, since the ability to computerize "fuzzy" data may delude us into believing that we "know" what we do not fully "understand": such ability will permit scrutiny of more kinds, and more items, of information than in the past; but the constraints on the information—or the degrees of precision—may be weaker than those implicit in market-share and concentration concepts.

Forbearance and modesty will be required if we wish to explore possible methods of dealing with less precise, but possibly richer, lines of data than are today relevant to antitrust problems.

The prospects?

In summary, the foregoing analysis suggests that:

1. Developing computer technologies promise a capability for approximating what economists have called "perfect" markets—at the industrial and at the consumer level; *i.e.*, data concerning "all" possible buyers and sellers could, in theory, be made instantaneously available at particular moments in time to "each" buyer and seller.

It would, for example, be possible from an engineering standpoint to develop computers and terminals that would permit "each" buyer to summon up data concerning the products (or services) of "every" alternative supplier, including data on specifications, prices at specified past and future dates, terms of sale, transportation charges, volume available at given dates, delivery dates for given destinations, etc. Similar information on alternative buyers could also be available to suppliers, including information on specifications, prices to be paid, amounts desired, dates required, and so forth.

The major factors essential to a "perfect" market that cannot be directly realized through advances in computer technology concern numbers of independent buyers and sellers, homogeneity of products, and reliability of information. Whether incentives will be such that existing potentials can become realities is a different matter. The critical question here is not whether we can approximate some of the elements of "perfect" markets, but whether we want to approximate them.

For while we can theoretically give "each" actual and potential buyer and supplier access to information concerning each market relevant to his operations, we would also be close to giving otherwise independent units a "perfect" opportunity to engage in price fixing, allocation of markets, group boycotts, reciprocity, and price discrimination. It may be objected that a supplier's (or buyer's) competitors could be locked out from access to information concerning his prices (or costs) and terms of sale (or purchase). But for industrial markets, a high proportion of buyers are also suppliers—and for distribution to consumer markets, feedbacks of information between multi-level operations may more often be the rule than the exception.

2. In a highly computerized economy, concepts of independence and interdependence among business units and between business and government units may well require realignment. This will, in turn, require new concepts for identifying critical internal company data as well as for identifying data appropriate for comparing the operations of different companies.

Along with these developments, computerized capabilities for identifying, storing, and processing multiple items of information will present business and government with incentives to rethink problems of data generation, record structuring, record accessing, and record retention.

3. Current data used in testing for competitive consequences of given company activities, such as market shares, will in some cases cease to have definitive meanings when we have access to continuously updated information on rapidly changing markets.

4. Considerations such as these suggest a need for continuing study of the scope and limits of the adversary process as a method of preserving and regulating competition. The outlook here is, however, not clear, since advances in information processing will highlight the paradoxes implicit in the existing concepts of competition, but they will not change problems of potential bias in other methods of testing for actual or potential impairment of competition.

To the extent that the above predictions are correct, they suggest that fuller computerization of new bodies of data concerning competitive operations will crystalize a need for continuing examination of the concepts and the tests for competition. And this, in turn, suggests that full utilization of computer capabilities may require reexamination of the meaning of economic evidence in an antitrust-case setting; or if we prefer to retain the existing evidentiary format intact, we may face the risk that we will inhibit full realization of the capabilities of the developing revolution in information technology.

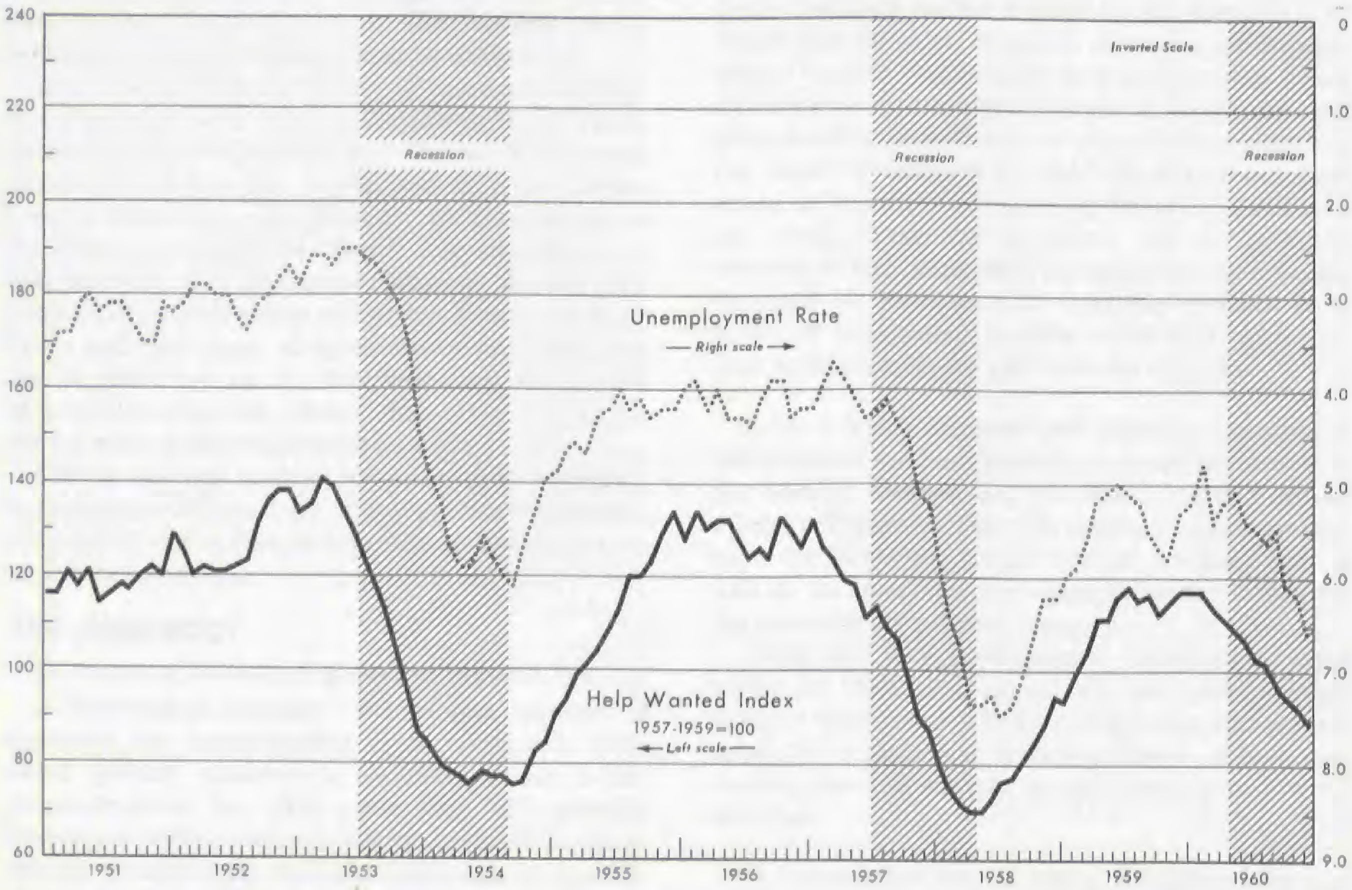
An Increase in Help-Wanted Ads?

Mel Colchamiro
CB Economic Research

The index indicates an upturn may be near

Because of its consistent sensitivity to general business activity, particularly labor market fluctuations, The Conference Board's Index of Help-Wanted Advertising has long been considered a valuable measure of the level of business. Since its inception in 1951, the Index has shown movements similar to those of other measures of economic activity during periods of expansion and contraction. For example, during the 1953-1954, 1957-1958, and 1960-1961 recessions, when the number of unemployed rose 132%, 79%, and 35%, respectively, the Help-Wanted Index dropped 37%, 39%, and 21%.

The Help-Wanted Index and the Unemployment Rate, 1951-1970 (Part 1) **Chart 1.**



Sources: Bureau of Labor Statistics; The Conference Board

The Index of Help-Wanted Advertising[1] reached a peak in April last year. It began to fall sharply in October 1969, and by August 1970 had dipped to 170, 28% below the level of April 1969. During the same period the unemployment rate increased from 3.5% to 5.1%. The current drop in the Help-Wanted Index represents a greater decline than that of the 1960-1961 recession when the Index dipped 28% and the unemployment rate rose from 5.1% to 6.9% (Chart 1). Since January of this year, however, when the index plummeted 6.5% from the previous month, the declines have gradually become less and less severe, and perhaps foreshadow a bottoming-out of the Index in the near future:

[1] A brief discussion of the methodology used in the compilation of the Index is included in Horst Brand, "Manpower Shortages and The Changing Labor Market," *The RECORD*, January 1969, p. 45.

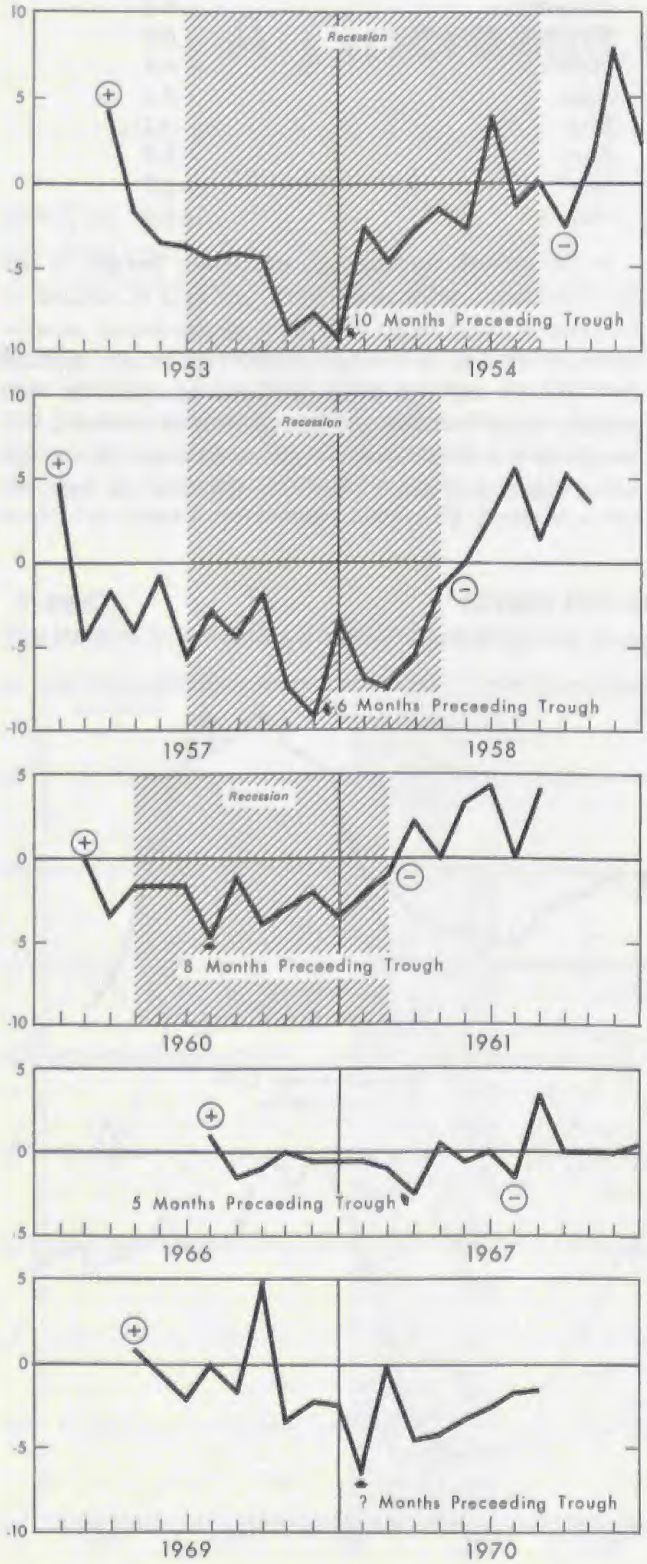
1970	*Percentage Change from the Previous Month*
January	−6.5
February	0.0
March	−4.4
April	−4.1
May	−3.2
June	−2.8
July	−1.7
August	−1.4

In the periods immediately preceding troughs in the three business cycles since 1951, the rate of decline in the Help-Wanted Index did not show the steady month-to-month decline in the rate of decrease which appears in 1970. In each of these periods, nevertheless, the greatest single monthly percentage decline preceded the trough in the Index (which coincided with the trough in the business cycle) by between five and ten months.

The Help-Wanted Index and the Unemployment Rate, 1951-1970 (Part 2) **Chart 1.**

Sources: Bureau of Labor Statistics; The Conference Board

Month-to-Month Percentage Change in the Help-Wanted Index **Chart 2.**



Source: The Conference Board

For example, from its peak in February 1960 to its trough in February 1961 the largest single percentage month-to-month decline in the Index occurred in July 1960, seven months before the trough. Similar patterns occurred in the recessions of 1953-1954 and 1957-1958, as well as in the mini-recession of 1966-1967 (Chart 2).

A trough this fall?

Since past evidence indicates that the largest monthly percentage decrease precedes the trough in the Help-Wanted Index by five to ten months, the current performance of the Index suggests that the next trough will occur sometime this fall. (November will be the tenth month since the largest monthly percentage decline of the current downturn occurred in January 1970.) Further weight is given to this conclusion by the steady month-to-month decline in the percentage decrease that the Index has exhibited throughout 1970.

However, a qualification to the preceding discussion may be necessary in view of the United Auto Workers strike against General Motors. The dampening effect on the economy has already been felt as the strike continues into its fifth week (as this article goes to press). Auto and truck production is down about 50%. In addition to curtailing demand for labor in the auto industry, the strike dampens labor demand in supplying industries and in consumer goods industries as well. For these reasons, the level of the Help-Wanted Index is likely to be depressed until the settlement of the strike.

Though it appears that the demand for labor, indicated by the Help-Wanted Index, will shortly begin to increase, the supply of labor is also growing. The indications are that the increased supply (accentuated by Vietnam veterans and lower draft calls) may outstrip gains on the demand side. For example, there appears to be a consensus among economic forecasts that the unemployment rate will remain somewhat above 5% in 1971. While in both 1958 and 1961 the trough of the Help-Wanted Index led the peak in the unemployment rate by three months, it is not clear that this relationship will hold in 1970. Also, it is unclear whether the anticipated upturn in the Help-Wanted Index will again coincide with the upturn in general business activity, for there are some indications—rebounding stock prices and increased housing starts, among others—that the economy is already headed upward.

After the Communication Revolution—Then What?

E. S. Safford

In August 1968 twelve outstanding scientists and academicians in the field of communications theory, psychology, sociology, and the neurosciences spent three days at a retreat in Colorado to discuss communication implications in today's world. Among these men was Dr. Warren McCulloch of MIT, considered one of the foremost scientists in the world in the field of brain research. In that session Dr. McCulloch pondered—"Can the world survive the communication revolution?" Then he added, thoughtfully, "My guess is, we have about 20 years in which to find out."

Two years have already passed in his 20-year allowance and, at this point, the developments in the technology of communication give us little comfort in the ultimate outcome.

When McCulloch talked of the communication revolution, he wasn't talking about the technology that has changed in the field of information transfer, information storage and retrieval, and data manipulation. He was really talking about the sociological and psychological results of a new environment which establishes completely new patterns of relationships among people, and a completely new relationship between knowledge and man. Man adapts rapidly to any new technology. For example, a Department of Commerce study indicated that television penetrated as many homes in ten years as it required radio 25 years, and as it required telephone 80 years. The impact of technological change is *not* that of technology on man, but is, rather, that of man upon man through technology. The technological advances and devices have merely extended man's capability of influencing man, and it is *this* phenomenon that really composes the communication revolution.

Making the revolution

While only seven lifetimes stand between today and the day that Gutenberg activated his first movable type press (and we can say that the communication revolution started with that event), the principal effects of the technological changes in communication have been felt since World War II. The rapidly improving and rapidly spreading networks of telephone lines, transoceanic telephone cables, radio stations, television stations and satellites have, in a few short years, made it technically possible for a man on any point on the globe to contact another individual on the globe instantaneously. Within the next several years, the economics, the technology and the equipment will undoubtedly be available to encourage widespread, instantaneous, direct person-to-person contact regardless of geographic location. Following closely upon the heels of this capability will be the ability not only to have voice contact, but to have video contact on a person-to-person basis. This individual contact capability is in itself an extremely revolutionary occurrence to mankind's coexistence.

In addition to this capability of global, instantaneous person-to-person transfer of information, however, must be added the newly developed and rapidly advancing computer technology. This additional capability not only offers fantastic opportunities for storage, retrieval and random access of vast volumes of information, it also introduces the opportunity for massive mathematical computations, creative search resources and increasingly complex decision-making capabilities far exceeding man's abilities. The "revolution" then becomes one of instantaneous world-wide access to all kinds of information and knowledge, and the manipulation of that information and knowledge in incredible volumes at incredible speeds for instantaneous application. In a few short years, the advantages and the power which comes from owning knowledge have passed from individuals to machines.

Mr. Safford is president, Denver Division, Cahners Publishing Co. This article is adapted from his remarks before the 13th Annual Institute in Technical and Industrial Communication, Colorado State University, Fort Collins, Colorado.

At this moment, the *wise* use of knowledge still remains a human prerogative; however, with the rapid advances of computer technology, this advantage of humans will also be short-lived. At some reasonably near point in time, we can expect that computers will be better able to assess the given alternatives of any given situation, from any body of knowledge, and produce the "wisest" solution to apply to that situation. The future opportunity for human intuition, or the human ability to assess the unknowns of the future, and to reasonably forecast the impact of such unknowns upon present actions will be considered as unreliable as witchcraft.

Many technological developments are already out of the laboratory, yet not in general use. Such items include the picture telephone, the electronic video recording for home television sets, the direct satellite to personal television set transmission, the home computer, the newspaper printed in the home by the television set, the use of lasers for computer storage, computer memories of pictures and pictures in color, the laser beam transmission of mail, the holographic picture transmission for business or entertainment, the computer networks linking libraries and other information sources, the micro image reduction of visual material for hard copy storage and use, and the micro-miniaturization of highly complicated electronic communication devices with resultant high mobility and individual use capability.

If we go beyond things which are already out of the laboratory, but not yet completely economically attractive, we can look at some of the things *in* the laboratory with great anticipation and some concern. For example, the work going on in the exploration of the chemical transfer of knowledge, the electrical control of emotions, the developing theories of genetic engineering and the neuro-scientific discoveries of how the brain functions—what is memory and what causes learning. How far away are we from the laboratory to application in today's rapidly changing scientific world? What sudden breakthrough may occur in some remote lab tomorrow morning which may make practical extrasensory perception as a standard communicating device between humans? What breakthrough may occur in creating a symbiosis that would connect computer databanks directly with human brains so information, introduced electrically, may be humanly massaged and utilized? How far away are we from the ability to produce the right frequency of radio waves that will energize the basic emotion centers of the brain so we can control human behavior by buttons?

New problems, new frustrations

The communication revolution then is not a revolution of technology—it is the revolution of *knowledge* and the *availability and utilization of that knowledge*—through new technology. It is this revolution, I believe, that worried Dr. McCulloch. This knowledge, or information revolution, is creating a whole new set of problems and frustrations never before experienced by mankind. Never before in the history of civilization has man been so closely in touch with all of his fellow human beings, and so conscious of others' problems, disasters and accomplishments as today's individual. For the first time in man's existence, through the medium of TV, he now *participates* in history as it is being made throughout this globe, and even off the planet upon which he exists. No longer does he receive this information at some point in time after the event occurred, and no longer does he have the luxury of having these events described and explained by qualified observers.

Modern man is confronted with the new problem of personally interpreting world events as to their meaning in his own life. Add to this the rapidly expanding networks of information which are feeding him constantly greater volumes of data on subjects, places and events about which he previously never thought, and about which, previously, he had no concern. As the economics of the technologies evolve, it will permit wider and wider introduction of information networks and increasing numbers of information input devices such as radio, TV broadcasting stations, mobile radio broadcasting, radio telephones, and personal mobile phone capabilities. The amount of information procured for the worldwide networks will increase at geometric rates.

Within a very few years, the combined communication network capabilities of the world will provide this globe with one, grand, global nervous system, and all the world's population may react to inputs much as an individual body presently reacts to an input. Just as a human reacts instantaneously when he steps upon a tack barefooted, so will the world react when a disaster, catastrophe or substantial aberration in social behavior occurs at any one point on the surface of the globe. The rest of the globe will know of that event immediately and may very well react impulsively.

When cultural "nervous systems" go global

We already are seeing the first evidences of this kind of "global nervous system" phenomenon through the limited, although extensive networks that currently exist in the United States. When the racial disturbances first started, a few hot summers ago, we found that revolution in the streets occurred in Watts and Detroit, New Jersey, and Georgia within a few short days of each other. When the tragedy of Kent State University occurred, 340 universities had strikes, shutdowns or demonstrations within a week after that event. The nervous systems of these particular cultures had reacted as a system—as one body—and they did so through the capabilities of instantaneous communication. The knowledge of these events, the information about these events, which was mass distributed, was seized upon by individuals having similar thoughts, similar concerns, similar worries and similar ambitions—and these individuals created similar actions in their own geographic area. While the general information about these events was widely dispersed and was available to all ages, cultures, races, colors and all levels of intelligence, the *reactions* to the distribution of this information were highly definitive. In other words, cultural groups, groups of individuals with deep cultural ties, acted in concert, and this phenomenon is descriptive of what is evolving out of this knowledge revolution.

Marshall McLuhan has made the statement, "Electricity has eliminated geography," and the events described above confirm and illustrate what McLuhan was saying.

There is a temptation to extrapolate current reactions into broad generalities in attempting to anticipate what the future will be. Yet, in today's complex technology, such an exercise can, indeed, be fruitless and foolish. Short-term extrapolations may have some validity, however, and if we are to project the concept of cultural identification through communication technology into a worldwide pattern, we may very well see mankind changing its loyalties, its philosophies, its concerns, its ambitions, its power structures, and its interpersonal relationships very drastically from historical precedent.

Up to this point in time, man has lived pretty much in islands, whether they be geographic islands or political islands. Groups of people with similar political motivations and philosophies, similar economic systems, similar languages, similar colors or similar needs have joined together for practical reasons to defend themselves or to enlarge their sphere of influence through joint efforts. With the introduction of a worldwide communication network capability (a worldwide nervous system), however, we may very well see mankind becoming polarized into *cultures*, rather than into economic, or race, or language, or color, or political groups. Individuals of similar cultures, regardless of position on the globe, regardless of color and regardless of language, will find a a kinship among others on the globe of similar makeup, and they will find that they can intimately share this kinship on a very personal basis through satellite TV, through picturephone satellite projection, and through all the other instantaneous communication media which will exist in the years ahead.

Reorganizing the world society

If this occurs, then a whole new set of social problems, interrelationship problems and general coexistence problems develop. For example, if the philosophers of the world and the top scientists of the world find a very strong cultural unity (and there is certainly evidence that this is occurring now in the scientific fields), then this group, worldwide, may develop its own community of conversation, of shared experience, of personal fulfillment through association with like kind in the medium of global instantaneous communication. As a matter of fact, such a worldwide cultural relationship has firm roots already extending prior to World War II among certain groups of specialists. The so-called hidden colleges of top scientists and philosophers in specialized fields have existed for quite some time, but have done so in an awkward, inefficient fashion, with a great deal of individual isolation, and almost no visibility. As it becomes more practical, more economical and more convenient for individuals with like interests to obtain personal relationships on an increased frequency basis, regardless of location on the globe, the appetite for personal discussions particularly exciting to that specialty will force as a natural consequence increased interpersonal involvement among that group.

If we assume this is true, then we must recognize that there will be a considerable erosion of national loyalties, community loyalties, and company loyalties as we have known them in the past. Countries and nations are expedients by which man has made it possible for groups of like-minded people to exist and progress together. As civilization evolved, the original immobility of humans, and their inability to communicate with other humans geographically separated from them, forced the invention of countries or nations upon a geographic basis. With a worldwide communication network, or nervous system, interlocking individuals of similar cultures, the whole conceptual need for nations, countries, states, counties and cities begins to change rapidly and radically. No longer are human beings grouped together by geographical constraints. Almost in a generation, humans have become more intimately connected with the *kinds* of humans they find most comfortable, most exciting, most personally fulfilling with whom to live.

If we find, then, a deterioration of political structures which have served humans up to this point, such a change should not be surprising. If traditional political structures are no longer sufficient for regulating relationships, we will find a new kind of conflict arising. Cultural groups, bound together worldwide, but existing individually in different kinds of political environments may find such political constraints too confining. As political structures were designed by humans, they will be redesigned by humans. For practical and personal reasons cultural groups will not tend to cluster together physically, as there will be no need for this through the capabilities of worldwide communication networks. Instead, individuals in cultural strata will insist that their political environment accommodate a practical living relationship for them.

Back to the power of knowledge

Pursuing the idea of the philosopher-scientist combination as a cultural group or stratum, let us say that a principal part of the wisdom of civilization, as well as the awareness of knowledge, currently lies within this group of people. If this group develops a strong and intimate global kinship, and becomes, in effect, the gatekeepers of the superior knowledge of the earth, at some point, they may elect to *not* place their knowledge and their wisdom in the service of politicians or military organizations. They may realize that geographic national units and traditional economic systems no longer have any valid reason for destructive power struggles or exploitations. This group may recognize that the conflict hazards ahead are inter-cultural conflicts, not international, or interracial, or inter-economic, and therefore, such traditional struggles are now archaic and meaningless. Should this occur, the development of weaponry would be removed from political manipulation, and ultimately the power and influence of politics would deteriorate. A replacement structure for governing interpersonal relationships would naturally evolve. Such a structure would be designed around cultures, not around geography, or economics. Whole different perspectives of physical needs, of human recognition by levels of cultures, of the interdependency of cultural strata would form the criteria of design of new "governments."

This example merely illustrates that while the technology has developed a nerve network for the globe, *the importance of this network is in the knowledge that will be carried by the network.* Knowledge will become the power, and those who can control the knowledge and can apply the knowledge are the ones who will have the power. This knowledge is not just knowledge of things, knowledge of electronics, or medicine, but it is knowledge of psychology and sociology and philosophy. In fact, the emerging strength of new knowledge may be in the field of sociology rather than in any of the hard sciences, although the hard sciences will be the conveyor, the universal carrier, for the superior knowledge.

Implications for individuals

As with all technological developments, we want to translate them into "What will it mean to *individual* human beings—not just human civilization?" Because this revolution of knowledge and information is a revolution of human interrelationships achieved through new capabilities, then we need to consider what it can do to individuals. It can do several rather dramatic things. For example, in interpersonal relationships a natural law seems to exist similar to a certain physical law; namely, that for every force there is an equal and opposite force. As we generate a global communication network capability, a global nervous system, and we overlay this on a world population which is growing in numbers by leaps and bounds, we are compounding the concept of a "universal public." *As a "public" grows, an equal and opposite need for "privacy" will develop.* The human beings, the individuals on this earth, will *have* to escape periodically this worldwide public and will have to have a privacy more severe than exists today.

This privacy may be achieved by several means. Eventually it will mean the development of a fairly formal sense of individual selective curiosity, and a means by which the individual can tap into the worldwide communications network on a selective basis. In other words, an individual will be able to purchase a communications filter, if you will, designed to his own profile of interests, concerns and ambitions, and this filter will screen from him all the other extraneous information about which this individual doesn't want to know. The individual, in this fashion, can selectively design his world of interest, his level of culture and his sense of personal being by *not* exposing himself to the overwhelming flood of data, of knowledge, or miscellaneous information constantly washing across the world in greater and greater densities.

Secondly, I think that the one-to-one relationship among people will become more and more important. When mass communication first came into real being after the turn of the century, heroes were made in all kinds of specialties. Names like Madame Schumann-Heink, Babe Ruth and Lindbergh were not just momentary heroes; they were a part of that age. As mass media increased in its volume and capability, heroes expired more quickly. How many can remember the name of the first man into space, although that flight was a much greater achievement than Lindbergh's? Each World Series season produces its current stars, yet a year later, new ones take the spotlight. It is increasingly difficult for any individual anywhere on the globe to obtain prolonged public recognition currently, unless he is the leader of a major political state. The frustration of the millions of individuals who seek more kind of acceptance, some kind of individual recognition, must find its satisfaction, not in the eyes of the public, but in the eyes of other individuals. Eventually, this gratification may come from only one individual, or a very small group of individuals, rather than from a public. The never-changing need of a human being for love, for appreciation, for recognition, for acceptance, may find increasing realization in the concept of marriage because the "universal public" will become more and more overwhelming, competitive, unsympathetic and impersonal.

Third, individuals will probably find increasing satisfaction in the contemplation of spiritual matters. The human spirit must find its companionship just as human emotions must find their satisfactions. The increasing awareness on the part of individuals of the awesome knowledge which has been discovered already, and the increasing awareness that man has merely scratched the surface of what there is to be known will drive more and more individuals to seek a reason for personal existence, through a search for something greater than man's own works.

What then?

I posed a question in the title of this paper, so I am obligated to suggest a possible answer. What will follow the communication revolution? For lack of a better description, I suggest that civilization will be caught up in a "Cultural Revolution." It will be the child of the communication revolution because it will see mankind polarized in totally different dimensions with resultant totally different problems.

If Dr. McCulloch were concerned about the ability of civilization to survive the Communication Revolution, I wonder, if he were alive today, what chances he would give mankind for surviving the "Cultural Revolution?"

Foreign Economic Aid In the 1970's

David Bauer
CB International Economic Research

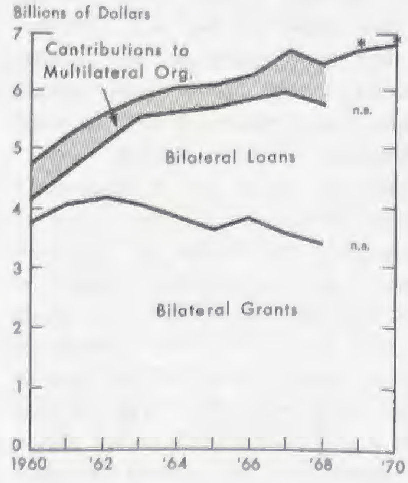
In terms of aggregate output, the past decade has witnessed no appreciable reduction in the gap between the rich and the poor nations of the world. From 1960 to 1969, real gross national product rose by 60% in the developing countries, slightly ahead of the 56% growth recorded by the developed ones. But this apparent gain was vitiated by a much more rapid increase in population: in the poorer countries, per capita GNP has grown by only 28% since 1960 and currently averages less than $250, while in the richer countries it has jumped by 41% and is now in excess of $2,600. This lack of progress in the developing world, despite large-scale aid programs by the United States and other major countries, has spurred a lively debate on the merits of aid and on the forms and ways in which aid can best be given.

During the past decade, economic assistance to the developing countries continued to expand in every year but one, albeit at an uneven rate (Chart 1). This erratic growth was partly the result of budget constraints in the donor countries. But it also reflects these countries' recurring doubts and hesitations over the effectiveness of aid in stimulating economic growth among the recipients.

One of the severest critics of current aid efforts has been Professor P. T. Bauer of the London School of Economics, who argues that "the flow of aid since the Second World War has probably more often retarded than prompted overall economic advance in recipient countries."[1] Bauer believes that the major prerequisites for economic development are natural resources, export markets, and viable social and political institutions, as well as values, motivations, and objectives that place a high priority on raising material living standards.

Foreign aid is not a substitute for these factors; in Bauer's words, foreign aid "cannot promote development if the population at large is not interested in material advance, or if it is strongly attached to values and customs incompatible with material progress." In fact, to the extent that foreign aid in the form of technical assistance, economic planning advice, and machinery and equipment grants lessens the recipient country's incentive to draw on and develop its own indigenous resources, foreign aid may hamper rather than spur development.

Economic Aid, 1960-1970 **Chart 1.**



* estimated
Note: Does not include aid from Communist countries.
Source: Organisation for Economic Cooperation and Development

While Bauer's views represent a fairly extreme position, many economists do feel that foreign aid is only one—and not necessarily the most effective — of the instruments available to accelerate development in the poorer countries. According to the Pearson Report,[2] a study commissioned by the World Bank and generally considered to constitute one of the most favorable views on the results of aid-giving, the correlation between aid and development is very tenuous. Although the report recommends substantial increases in aid, both in

[1] P. T. Bauer vs. René Dumont, "Debate on Aid," *Ceres*, January-February 1970.

[2] *Partners in Development*, Report of the Commission on International Development (New York, Praeger Publishers, 1969).

absolute terms and as a percent of the donors' gross national product, it also concedes that in the past the effectiveness of aid has been sorely hampered by poor administration, with priority being placed on political rather than on economic goals and with aid often being used to expand exports from the donor country rather than development in the recipient country. Furthermore, the report declares, in many cases private investment funds rather than public loans and grants may be a more effective means of stimulating growth.

Since private funds are intended to return a profit, they require the sound management and administrative controls that sometimes are lacking in publicly financed investment projects. Additionally, a valuable by-product of private investment is acquisition of technological, administrative, marketing, and distributive skills by native labor hired and trained by foreign investors.[3]

Private investment in development

At present, however, private funds make only a limited contribution to development efforts, principally because relatively few of the developing countries offer investment opportunities that are sufficiently profitable to attract foreign capital. In some instances, developing countries themselves have discouraged foreign investment, either by placing restrictions on the repatriation of earnings or by requiring a high level of local participation in investment projects. In other cases, however, factors such as the limited size of the domestic market, meager supplies of natural resources, and the lack of highways, utilities, financial markets, etc. have made private investors reluctant to commit funds. As a result, only about one-third of all the funds flowing to the developing countries between 1960 and 1968 came from private sources, and a relatively large portion of those funds went to countries with substantial oil and mineral deposits.

Ultimately, of course, the developing countries must rely on their own resources rather than on official aid to achieve substantial increases in real income. The Pearson report feels, however, that official aid remains essential, partly because it enables recipients to set up the facilities prerequisite for private investment. The report reasons that a primary purpose of official aid programs is to provide sufficient resources to allow the poorer nations achievement of *self-sustaining* growth, and that in most developing countries this could be attained by the end of this century. But complete termination of all aid programs by that date is possible only if substantial increases in the amount of aid are realized in the interim.

The prospects for substantial increases, at least in the short run, are not bright, however. The Development Assistance Committee (DAC) of the Organisation for Economic Cooperation and Development estimates that economic assistance extended by the noncommunist nations in 1970 will remain virtually unchanged from the 1969 level. But the DAC's concern goes beyond the anticipated size of this year's aid efforts. The lack of coordination between the aid programs of individual donor countries, the hard terms on which aid is being extended, and restrictions on how aid receipts are to be spent—all these decrease the effectiveness of any given level of aid and contribute to what the DAC refers to as a "stage of crisis" in development assistance programs.

The United States foreign aid program

Reevaluation of foreign economic assistance has been especially pronounced in the United States. In February of this year, President Nixon declared that U.S. foreign assistance efforts met neither the realities nor the needs of the 1970's. Accordingly, "our assistance program, like the rest of our foreign policy, will be changed to serve the future rather than simply continued to reflect the habits of the past. We have already begun that change. I expect a new approach to foreign assistance to be one of our major foreign policy initiatives in the coming year."

Innovations in this country's foreign aid program were in fact spelled out by Mr. Nixon in a message to Congress last September and are based on a report of a study group headed by Rudolph Peterson, former president of the Bank of America. The Peterson Report,[4] which Mr. Nixon sees as providing the "foundation for a new American policy," recommends (1) sizable increases in U.S. foreign aid appropriations and (2) a greater reliance on multilateral organizations (chiefly international institutions, such as the World Bank) to channel these funds to the developing countries. Utilization of these institutions is essential, according to the report, because the United States no longer dominates the financing of development programs, as it did in the 1950's. It is true that the United States still accounts for roughly half of the total aid extended to the developing world (Chart 2). But more significantly, many multilateral institutions, which ten years ago were not in existence or just beginning to function, can now bring a measure of much needed coordination to economic aid

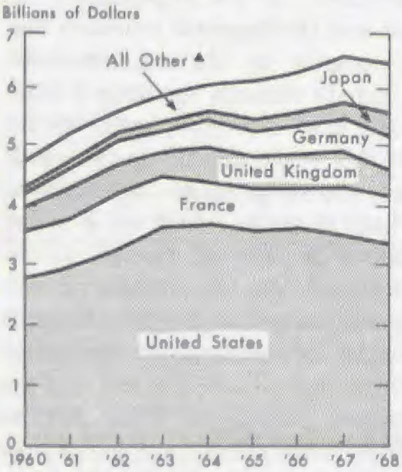
[3] The role of private investment in the development process is discussed in a recent Conference Board publication, "The Capital Gap Between Developed and Developing Countries," *International Survey of Business Opinion and Experience*, 1970.

[4] *U.S. Foreign Assistance in the 1970s: A New Approach*, U.S. Government Printing Office, March, 1970.

programs that would not have been feasible a decage ago.

In addition, the Peterson Report suggests that cooperative programs can command the long-term public support that will ensure adequate financing — a point that has been contested by Congressmen who feel that U.S. taxpayers will resist participating in programs that provide only limited control over the funds donated by this country. The Peterson Report also recommends that even the U.S. funds that are extended bilaterally should be administered under cooperative programs developed by both the international organizations and other countries, including the recipients of U.S. aid.

Economic Aid by Major Donors, 1960-1968 Chart 2.



▲ Australia, Austria, Belgium, Canada, Denmark, Italy, Netherlands, Norway, Portugal, Sweden, Switzerland.

Source: Organisation for Economic Cooperation and Development

As regards the first proposal—increases in the volume of U.S. foreign aid—the short-term prospects appear even bleaker than those for increased aid-giving on a global scale. The foreign aid budget submitted to Congress in January of this year recommends outlays of $3,033 million in fiscal 1971, slightly below the level of the two previous fiscal years and 13% below the fiscal 1968 figure (Table 1). But prospects of achieving even the level proposed for 1971 seem remote in view of the severe cut in appropriations voted by the House Appropriations Committee.

The various subcategories listed in Table 1 are to some degree arbitrary since there exists no precise definition of what types of outlays should be included in the general category labeled "foreign aid." The Peterson Report commented that "at present, there is not one U.S. foreign assistance program but several" and implementation of the recommendations of that report hinge to some extent on reaching a commonly accepted definition. The items listed in Table 1 fall under the classification of "official development assistance" as defined by the DAC. They are expenditures that are (1) administered with the promotion of the economic development and welfare of the developing countries as their main objective *and* (2) extended under financial terms intended to be concessional in character.

United States Foreign Aid Outlays Table 1.
(In millions)

	F.Y. 1968	*F.Y. 1969*	*F.Y. 1970**	*F.Y. 1971**
Agency for International Development	$1,936	$1,932	$1,761	$1,722
Development loans	598	540	458	427
Technical cooperation	222	198	178	181
Alliance for progress	406	374	371	366
Supporting assistance	433	474	461	513
Contingencies and other	277	346	293	235
International Financial Institutions	201	121	256	335
Peace Corps	111	105	102	100
Food for Peace	1,205	975	971	852
Other	15	18	25	24
TOTAL	3,467	3,151	3,115	3,033

* Estimated. The 1971 estimates are subject to major revisions depending on congressional alterations of initial spending requests.
Source: Bureau of the Budget

How much foreign aid?

Possibly the most all-encompassing view of U.S. foreign assistance is that taken by Congressman Otto Passman, Chairman of the House Subcommittee on Foreign Operations, who estimates that spending requests for such programs in fiscal 1971 are in excess of $12 billion. Passman's estimates are that large because they include funds for military assistance which are administered by the Department of Defense and are generally tied to U.S. military activities abroad or to foreign defense needs, rather than to the economic development of the recipient country. The Peterson Report recommends that Congressional consideration of these funds be severed completely from such items as development loans and technical assistance, which are more directly related to economic development. Also included in Passman's estimates are loans and guarantees extended by the Export-Import Bank, most of which are made at market interest rates and contain few of the concessional elements (extended maturity dates, grace periods during which no payment of interest is required, etc.) usually associated with foreign assistance programs.

While some observers thus feel that the amount of aid actually given by the United States is grossly understated by the figures listed in Table 1, others insist that those figures are too comprehensive. In particular, outlays for "supporting assistance," which totaled $461 million in fiscal 1970, are (as is the case with military assistance) closely related to defense commitments abroad and hence not directly tied to the development needs of the recipients. In 1971 well over half of such outlays are to be used in financing the "Vietnamization" programs, and Laos and Thailand are other major recipients. Expenditures such as these in foreign aid programs [5] "undoubtedly have some developmental effect," according to the DAC, but their inclusion in foreign assistance only leads to "embarrassing questions about why such aid has not produced bigger dividends."

The Peterson Report recommends that outlays for supporting assistance (as well as other expenditures the size and allocation of which are determined primarily by the U.S. defense posture) be combined into one piece of legislation and be acted upon by Congress apart from other legislation more directly related to economic development.

Additionally, some observers question whether grants or sales of food make a lasting and constructive contribution to development. While these shipments in some instances have been vital in restoring food supplies in countries suffering unexpected crop failures, in other cases reliance on U.S. foodstuffs has permitted the recipient countries to relegate agricultural development to a relatively low status. In the past few years, however, most developing countries have re-affirmed the importance of a strong agricultural sector capable of producing adequate food supplies without large-scale recourse to imports. This shift is occurring because imported supplies of food are costly and not always available in the quantities needed—a situation which either jeopardizes an already precarious food balance or requires an outlay of funds which might otherwise be used for industrial development.

At the same time, officials in this country have encouraged the trend towards greater agricultural self-sufficiency abroad. The U.S. position was summed up three years ago by then-Secretary of Agriculture Freeman, who felt that "the easy answer in the War on Hunger has been, and is 'Grow more and give more away.' But this answer flies in the face of logic—and in the long run is self-defeating."

Multilateral aid

The second major recommendation of the Peterson Report—greater reliance on multilateral institutions to utilize U.S. foreign aid funds—has been strongly endorsed by President Nixon and other members of the Administration. In fiscal 1970, less than 25% of this country's foreign aid funds were earmarked for multilateral organizations, although outlays for multilateral assistance jumped by 20% and funds for bilateral programs fell by 7%. The Peterson Report suggests that the current level of U.S. funds going to multilateral bodies (nearly $500 million) be doubled over the next two to four years. Such amounts, while substantial, would still fall short of the outlays reached in earlier years, however.

Much of the aid given during and after World War II was administered through international agencies rather than extended bilaterally. Between 1943 and 1947, the United States contributed $2.7 billion to the United Nations Relief and Rehabilitation Administration (UNRRA) and the original U.S. subscriptions to the World Bank and the International Monetary Fund totaled $5.9 billion. Even more important was the Marshall Plan, totaling some $15 billion in loans and grants to Western Europe. While aid was given on a bilateral basis, the programs were the product of agreements reached collectively by the European countries (organized into the Committee of European Economic Cooperation, the precursor of the OECD) and the United States.

Perhaps the chief argument advanced by the defenders of multilateral organizations is that such bodies are able to invest funds more productively than are individual donor countries. In some instances, efficiency results from a larger and more competent staff of administrators, planners, and technicians than most individual nations can attract to direct their own programs. The World Bank, for example, has acquired considerable expertise in the identification and administration of development projects that few if any of the individual aid-givers could hope to match. Additionally, prospects for efficiency are enhanced because the funds administered by multilateral organizations are not tied, *i.e.*, exports purchased with these funds may be bought in any country the recipient chooses.[6]

In contrast, a substantial portion of the funds loaned or granted on a bilateral basis usually must be spent in the donor country. Well over 90% of the funds administered by the U.S. Agency for International Development (AID) are used to purchase goods and services from this country; for other countries the ratio is frequently over 50%. Because prices in the donor countries are not necessarily the lowest available in world markets, recipients of aid are often forced to pay relatively dearly for their imports. Various studies have indicated that in some countries the value of loans and grants could, in effect, be increased by as much as 20%

[5] The balance of the funds is allocated for relief programs in Nigeria, malaria eradication in Haiti, and other programs, including a $19 million contribution to UN peace-keeping and refugee programs in the Middle East.

[6] Although recipient countries are formally free to purchase exports in any country of their choosing, the fact that many developing countries are former colonies makes them more apt to purchase exports from the country with which they were once associated. Critics of multilateral organizations in the United States have argued, *e.g.*, that countries such as India, for instance, use a large share of their aid receipts to purchase goods from the United Kingdom.

Per Capita Foreign Aid Receipts for Selected Regions and Countries, Annual Average, 1965-1968 **Table 2.**

	Bilateral	Multi-lateral	Total
Africa	$4.80	0.74	$5.54
Algeria	9.36	−0.26	9.09
Chad	3.98	1.76	5.74
Ethiopia	1.12	0.40	1.52
Egypt	2.02	0.02	2.04
Ghana	7.79	0.66	8.44
Ivory Coast	7.49	2.29	9.74
Kenya	4.95	1.20	6.15
Mali	2.03	2.13	4.16
Nigeria	1.58	0.67	2.25
Rhodesia	0.34	−0.70	−0.35
Sierra Leone	4.63	0.38	5.01
Swaziland	29.53	2.02	28:65
North America	3.64	0.86	4.50
Bahamas	48.68	0.07	48.75
Cuba	0.02	0.08	0.10
Dominican Republic	15.41	0.36	15.77
Haiti	0.92	0.14	1.06
Mexico	1.25	1.03	2.25
West Indies	28.74	0.57	29.32
South America	2.91	0.82	3.73
Argentina	−1.81	−0.17	−1.99
Brazil	2.20	0.24	2.44
Chile	13.13	2.44	15.56
Peru	3.49	1.29	4.79
Venezuela	3.63	3.45	7.08
Europe	3.48	1.03	4.52
Greece	2.60	1.40	4.00
Spain	1.94	0.93	2.87
Turkey	5.17	0.93	6.10
Yugoslavia	2.51	1.00	3.51
Asia	2.92	0.35	3.25
Afghanistan	2.50	0.24	2.74
Iran	1.24	0.46	1.70
Cambodia	1.67	0.23	1.90
China (Taiwan)	4.49	0.83	5.32
India	2.04	0.32	2.36
Israel	32.54	4.80	37.34
Jordan	17.95	9.45	27.41
Korea (South)	8.15	0.06	2.94
Pakistan	3.33	0.72	4.05
Philippines	2.38	0.47	2.85
Thailand	1.78	−0.01	1.77
Vietnam (South)	25.44	−0.14	25.30
Total for all Developing Countries	3.62	0.54	4.15

Note: Figures do not include aid from Communist nations. Subcategories may not add to total because of rounding.

Source: Organisation for Economic Cooperation and Development

if restrictions on where the money is to be spent were removed.

Proponents of multilateral institutions also argue that such institutions are in a unique position to coordinate development efforts so as to eliminate the duplication and even conflicting objectives that can arise when several different donors are administering aid programs in the same country. In Thailand, for instance, a recent count showed that 19 separate countries were providing technical assistance for well over 100 different projects. It is, of course, unrealistic to expect donor countries to suddenly halt projects which they may have administered for many years, and to redirect their funds and personnel towards multilateral agencies. Nor would such a transition be desirable in all cases. The Pearson Report points out that many bilateral relationships have arisen between developed countries and their former colonies, and that the latter have undoubtedly received more assistance than would have otherwise been available from multilateral agencies. Additionally, the close ties of language and culture which exist in such relationships are conducive to a more efficient administration of funds.

Nevertheless, coordination of the aid programs of individual countries under the aegis of a global organization would, it is believed, be useful in achieving better aid results. The Peterson Report, which holds that "a predominantly U.S. program is no longer politically tenable in our relations with many developing countries, nor is it advisable in view of what other countries are doing in international development," nevertheless states that it will be some time before this country would be willing to channel all aid into multilateral organizations. The report strongly urges, however, that this country's existing aid programs be restructured to better complement the efforts of other countries.

A third advantage of multilateral bodies is that the effectiveness of aid programs is enhanced because both the donor and the recipient countries are provided an opportunity to design and implement development projects. The advantages arising from such an approach were outlined succinctly by Barbara Ward (Lady Jackson), when she said recently that the developed countries

> . . . cannot give aid as a set of duchesses moving around to the slums, patting people on the head and telling them not to put coal in the bath. One of the great problems of assistance programs is that having engrossed 80% of the world's resources, we then go and tell people how to live on the remaining 20%. Let us purposefully move more of this whole development strategy into international agencies which represent the human race attempting to organize its *own* housekeeping. Let us also be behind every effort to build up the regional development banks and the regional institutions so that those who at the present moment participate so little in the power, in the decision-making, in the influence of this planet can begin to feel that their participation is valid and can, when necessary, be decisive.[7]

The arguments against multilateral development programs are not sufficiently persuasive to indicate that this

[7] "The Paradox of Planetary Unity," *War on Hunger* (a periodical published by A.I.D.), April 1970, p. 13.

type of approach should be abandoned; however, several observers have questioned whether multilateral institutions are capable of assuming a *larger* role in international development. These reservations have been accorded particular importance because in at least one instance doubts have been raised by one of the major multilateral bodies itself. In a recent report,[8] commissioned by the United Nations, the ability of that organization to effectively expand its programs of technical assistance and pre-investment surveys (projects designed to attract investment funds) was seen as being severely limited. The limitations stem from defects already present in these programs, particularly a lack of coordination between the UN and recipient nations in designing programs, as well as from costly delays in executing the programs.

The UN as coordinator

Although the advantages of multilateral programs are listed in great detail, correction of present defects and expansion of UN operations hinge, according to the study, on reform of the "baroque structure" of the UN development system, and prospects for such reform appear to be bleak.

Most of the barriers are found to exist within the UN itself. Individual agencies have learned to "safeguard and increase their powers, to preserve their independence, and to resist change." Those officials who acknowledge the need for change are too overburdened by their present duties to undertake reorganizational efforts, and the lack of a more centralized administration at the UN works to prevent changes from being forced on any one agency. The study offers many suggestions as to what form reorganization might take, some of which have already been acted upon by the UN itself, but the study nevertheless strikes a cautionary note for supporters of the Peterson Report proposal for expanded multilateral aid.

To be sure, the recommendations of the Peterson report are not controversial in the sense that serious objections have been raised to the proposals for increased spending and for greater reliance on multilateral organizations—although the UN report and the Peterson study itself stress that the administrative structure of international bodies leaves room for improvement. The more serious threat to realization of the Peterson proposals arises from problems facing the donor countries—principally balance-of-payments deficits, rapidly rising prices, and domestic and social difficulties—which severely limit the funds available for foreign aid programs. Pressing domestic needs and the lack of resources to meet them has been one of the arguments cited most often by the U.S. Congress in curtailing foreign aid outlays. Thus, while the recommendations of the Peterson report have aroused little public debate and criticism, their *implementation* remains far from assured.

[8] *A Study of the Capacity of the United Nations Development System*, Volumes I and II, United Nations, Geneva, 1969. The study is commonly referred to as the "Jackson Report."

Federal Manpower Programs In a Slack Economy

Sar A. Levitan

A favorite pastime during the 1970 summer doldrums was guessing whether the nation was in a recession. Any number could play the game, but politicians were most active. Economists, on the whole, were either uncommonly silent or spoke with a forked tongue.

The views of politicians were easily predictable. Administration spokesmen kept assuring the public that the unfolding economic scenario followed the script laid out by the Republican planners (though many of them did not cherish this appellation). Politicians carrying the sign of the donkey saw it differently. They failed to discern the trade-off between inflation and unemployment, and complained that the Nixon policies were spinning a recession without arresting inflation. The outs blamed the ins for reviving old-fashioned recessions with a new twist: the Nixon economics also carried a strong dose of inflation.

The caution of economists was easily explained. Ritual required that economic indicators speak first to the computers in the National Bureau of Economic Research; only then could the word be revealed to the multitudes. But the sages (or computers) in the NBER refused to speak and economists were at a loss to interpret their silence.

Simple folk—a category which includes most of us—also played the recession game. Following the well-established law—the one of whose ox is being gored—those who were affected by the economic decline in late 1969 and 1970 had little doubt that we were in a recession. But most were unaffected and so remained inactive spectators in the politicians' game.

Out of the speculation, however, some incontrovertible facts emerged. Unemployment rose to 5.5% and many feared that it would continue to rise. Only the most optimistic expected that it would decline below 5% before sometime in 1971. In 31 large cities and 564 other areas the recession game was a serious matter indeed. Unemployment in these cities had reached over 6%, by any standard substantial and, to many, downright disturbing. The usual victims of unemployment—youths, blacks, and members of other minority groups—lived in a recession economy even when tight labor market conditions existed and to them the game was nothing novel.

It is little wonder that in this uncertain atmosphere policy shapers felt uneasy about the applicability of traditional manpower programs which had expanded during the 1960's to train those who were unable to compete for sustained gainful employment. Though initiated in a period of relatively high unemployment, these manpower programs had undergone considerable changes, and by the time of the downturn (or recession) in economic affairs they focused largely on the needs of the poor, poorly educated, and unskilled—the disadvantaged, in the lexicon of the manpower experts.

The precipitous rise in unemployment during 1970 means that over a million more people will be looking for work and that the incidence of unemployment will rise by more than double that amount during the course of the year. Hundreds of thousands more will leave the labor market because of gloomy employment prospects. All types of workers will be affected, but unemployment will be concentrated among blue collar workers and those at the end of the labor queue who suffer the most serious disadvantages in competing for existing jobs.

With rising unemployment, not only are there increasing numbers of persons needing manpower service, but there is also a change in the nature of the clients and the economic environment in which the manpower programs must function. Jobs are no longer plentiful,

Dr. Levitan is director of the center for Manpower Policy Studies, George Washington University. His article is drawn from a paper presented on the occasion of the 25th anniversary of the New York State School of Industrial and Labor Relations, Cornell University, and is part of continued evaluation of manpower programs supported by a grant from the Ford Foundation.

placements are not easy, more competent workers are now competing with the disadvantaged for available jobs, and businessmen are less willing to participate in manpower programs. The programs designed to aid the poor and unskilled in tight labor markets quite obviously must be adjusted to these changing circumstances.

Adapting to rising unemployment

The challenge to manpower policy planners and administrators is to adapt programs to serve these new clients without ignoring the interests of their old clientele. The task is difficult not only because of budgetary constraints, but also because manpower administrators have little experience in operating manpower programs in a labor market with rising unemployment.

It is useful to differentiate between programs in which private employers participate and those which are administered and conducted by government agencies. Manpower programs oriented towards the private sector are likely to be more effective in tight labor market conditions than when slack occurs. Subsidies to hire and train disadvantaged workers, to induce business to locate in depressed areas, or to eliminate discrimination will have their greatest impact when qualified workers are not readily available, when firms are expanding and opening new plants, and when the supply of "preferred" workers has dried up. Conversely, when firms are forced to lay off employees because of declining demand, when they have excess capacity and are trying to eliminate all but their most efficient plants, and when fears of unemployment lead to employee antipathy towards newly hired disadvantaged workers, OJT or locational subsidies will be less effective. This has clearly been the experience under the JOBS program, where terminations increased and hires decreased markedly in the economic decline at the end of 1969 and the beginning of 1970; in fact, funds originally earmarked for JOBS had to be reallocated to other manpower programs.

Public-sector training is virtually imperative in slack times, if for no other reason than to fill the gap left by declining private-sector participation (assuming that the level of funds allocated to manpower programs is maintained). Institutional training provides at least income maintenance and occasionally useful preparation for work along with basic education. In loose labor markets, the opportunities of potential enrollees to opt for jobs instead of training are reduced, and employers are less likely to pressure training institutions to speed the delivery of trainees. Under these circumstances, more persons are likely to participate in and complete a course of training under the manpower programs. Because placements and employment rates are closely correlated with duration of stay, institutional programs should become more effective.

It is also likely that manpower programs will serve a different clientele when unemployment is high than they did when jobs were plentiful. In their quest for work, increasingly during the 1960's, the more seriously disadvantaged workers were helped—in large part a result of expanding employment opportunities generally. The queue of job seekers moved forward rapidly and the disadvantaged, who were next in line for employment, were most in need of manpower services. But the fact that manpower programs then emphasized the needs of the unskilled, poorly educated, and members of minority groups subject to discrimination does not mean that they will continue to do so. Under all the programs there has usually been a tendency to "cream" from the available and intended clientele those most likely to benefit from assistance. If demand slackens, it is safe to say that more advantaged workers will seek out and be selected for manpower programs; workers with more severe problems will receive less attention. For instance, in the JOBS program, as unemployment increased in 1970, the average family income of participants under contract increased steadily, indicating the selection of a less disadvantaged group. No doubt this is happening under other manpower programs, although data are not yet available to substantiate this change.

A fairly certain development is that disadvantaged workers will find it more and more difficult to find private-sector employment, and that they will likely fall into dependency. Because there are many useful jobs which need to be done in the public sector, many of which can be filled by those with low skills, public job creation is urged as an alternative to the expansion of relief rolls. The Senate has already approved a bill (S.3867) which proposes that one-third of manpower funds be earmarked for public employment projects.

Labor market services should also be adjusted to changing economic conditions. When jobs are plentiful, the public employment agencies function as labor exchanges; but they can also reach out to disadvantaged persons, providing them with needed counseling and help, inducing them to seek and find jobs. When unemployment is high, however, fewer firms turn to the public employment agencies, and those that do can choose among recently employed and less disadvantaged workers. If the needs of the disadvantaged are not ignored, this is exactly the time when job development and placement efforts should be intensified—even though they will be less successful in terms of placements. While the recently unemployed should be aided in quest for work, the hard-core must not be ignored; and if they cannot find private jobs, public employment or other manpower programs should be made available. Unfortunately, most employment service offices become bogged down administering an increasing unemployment insurance caseload during slack times, and thus play only a passive role as a labor exchange for the declining number of job offers.

Taken together, these adjustments would suggest a strategy which runs as follows: When unemployment rises, manpower expenditures should be shifted into the areas of public employment and training because private employers will be less willing to hire and train disadvantaged workers, and because many previously hired will be laid off because of slackening demand. Institutional training and public employment must be expanded to assist such workers. Because enrollees are likely to stay longer in institutional programs, these can concentrate on basic education and the more serious problems of marginal workers. Adequate income support must also be provided. Private-sector incentive programs must change their focus from increasing the number of hires or relocating firms to reducing the number of workers who are dismissed or the number of depressed area plants which must be closed. In other words, they should perform a holding action so that prior accomplishments will not be undone. The employment service must likewise increase job development and placement efforts for those recently unemployed, directing them to available manpower programs. Outreach efforts must necessarily be diminished, with a holding action again stressed.

Whatever the rhetoric used by the Federal administration, the direction of manpower programs has been shifting, albeit too slowly, along these lines. While most experts would agree that such a strategy would maximize the impact of manpower programs in slack times, one must emphasize the uncertainty underlying these prescriptions. The simple fact is that we do not know how effective manpower programs can be at higher rates of unemployment. In all likelihood some will be better than others, but we cannot expect them to have as favorable an impact in slack times—even though the need for them is more pressing. When demand slackens, it may be wiser public policy to forego training efforts and shift manpower funds to income maintenance. Much will depend on the duration of the recession; it might be wasteful and also frustrating to the enrollees to train for nonexistent jobs.

Underlying the suggested strategy is the assumption that the shifts in program emphasis can be achieved efficiently and with little loss of time. Past performance in the administration of manpower programs does not necessarily support this assumption. In the present case, Administration spokesmen have been entirely too slow in acknowledging the economic downturn when it occurred, and needed adjustments in manpower programs have been delayed.

The potential of public employment

At the center of the proposed shifts of manpower efforts is greater emphasis upon public employment. The normal reaction is to launch and expand job creation when unemployment rises, and this has been the case during the 1970 decline.

Expansion of public employment is probably a wise strategy, but it is not above question. Certainly the evidence of its effectiveness is mixed, and it has hardly been subjected to careful analysis. In tight labor markets there is little interest in public employment programs, while during economic downturns arguments are hastily mounted to get programs underway. Many misconceptions prevail, and these should be cleared up before any large-scale commitments are made.

Public job creation to absorb the unemployed reached its peak during the New Deal. The Public Works Administration, the Works Progress Administration, and the Civilian Conservation Corps provided income and work for millions of people. And despite the image of the leaf-raking WPA worker which still persists, many workers must have done more than a fair day's labor: thousands of buildings and hundreds of thousands of highway miles attest to the useful work performed by the New Deal public employment agencies. If a cost-benefit ratio could be applied to these programs, there is little doubt that it would be highly favorable.

More recent experience with public employment programs has been less favorable. The Work Experience and Training Program initiated under the 1964 "war on poverty," for instance, was addressed to a potential clientele numbering more than 2 million, and it was hoped that eventually the program could reach the majority of these people. By 1968, the program had been dropped, with general agreement that it fell far short of intended goals. Out-of-school Neighborhood Youth Corps, another antipoverty effort, started out with high hopes and reached a point where 189,000 openings were planned in fiscal 1966. Here, too, performance was judged to be deficient, and the program has since been cut back to some 30,000.

Public employment programs have been de-emphasized in the last few years because of the increasing availability of jobs in the private sector, but also because the programs have shared certain shortcomings. First, they were rapidly expanded and then contracted, so that the enrollees' work could not be well-planned. While it is difficult to measure the value of work done, available evidence indicates that it was slight. Participants in the programs did not seem to benefit apart from the income they received. The limited dosages of education and counseling consumed a fair amount of time and money, but there is no persuasive evidence that the services improved the enrollees' later work experience. The jobs which were created lacked attraction and carried little prestige, and in many areas there were difficulties in filling available slots. If the analysis of some labor market economists is correct, many similarly unattractive jobs in the private sector also remained unfilled, and in such areas it was simply wasteful to create new jobs in the public sector. Many public employment projects were merely stopgap measures, with few permanently beneficial effects and questionable impact even at the time. Perhaps such jobs were preferable to income transfers, but they were hardly equal to manpower services with a long-run payoff.

Operation Mainstream, which provides public employment in conservation work for rural areas, is a notable exception. The clientele is older. Basic education and vocational training are not important components of the program. Time is productively utilized because very little is spent on training. Since participants would otherwise probably be unemployed, and many of their families on assistance, any positive contribution they can make is all to the good. Clearly the ingredients to success in Operation Mainstream could be duplicated in more rural areas where job deficits exist, but only for a similar clientele.

From this mixed experience, it is difficult to arrive at a clear judgment on the effectiveness of public employment programs. It should be emphasized, however, that the term covers many different types of activities, ranging from simple conservation work under Operation Mainstream to paraprofessional positions under New Careers; they can serve a range of clienteles, from elderly workers desiring an income supplement to youths who need preparation for future labor force participation; they can be planned as temporary measures to cushion the effects of short-term slumps or long-run measures to combat secular changes in the economic structure.

Unfortunately, these distinctions are too often ignored. Arguments for increased public employment, bolstered by public concern over rising unemployment rates, tend to follow rather simplistic lines. Public employment is urged by those who believe that "structural unemployment" has increased markedly, as more and more workers become obsolete because of technological change. While unemployment rates have fallen among the disadvantaged, and income has increased in recent years, much of this has been due—they argue—to an arbitrary statistical decision not to count enrollees in manpower programs as unemployed or to exclude them from labor force statistics, and to the induction into the armed forces of an additional 800,000 men, many of whom would have been unemployed or else would have filled jobs opened to disadvantaged workers. With increasing unemployment rates, many of these more disadvantaged workers are unable to find private-sector jobs. The proper course of action, according to the structuralists, is to generate public employment for those who cannot find jobs in the open market.

Supporters are also found among those who see the need for large numbers of unskilled workers in rapidly expanding public service areas such as health, education, sanitation, welfare work, and conservation. Though estimates of job vacancies in public employment are suspect and may frequently be blown up to support claims of unmet needs, they have ranged from 5.3 million for the nation in 1966 to 300,000 in 130 large cities in 1968. Whatever the precise number, it is apparent that hundreds of thousands of persons could be absorbed in highly productive full-time public employment.

The most common mistake is to equate estimated job vacancies with actual openings. Various pressing needs always compete for available resources, and in allocating additional expenditures the authorities may opt for constructing new facilities rather than hiring new workers. Even if it is decided to hire additional workers, it would be incorrect to assume that needs can be automatically filled by those who are unemployed, or that supply can be efficiently matched with demand through a subsidized public employment program. Real life is much more complex. For instance, Mayor Carl Stokes of Cleveland estimated in the summer of 1970 that only 2,900 of the 6,900 additional jobs needed by his city could be filled, with training, by disadvantaged unemployed persons; 4,000 of the jobs would require more highly skilled workers than those found among the clientele of the manpower programs. Given a choice, most cities would probably fill their skill needs first; they would require many additional qualified or credentialed employees before they could effectively use the unskilled and deficiently educated, who would require training before they could become fully productive.

Unskilled manpower can be utilized in rural conservation work, which remains labor-intensive despite the use of machines to do much of the work which was performed manually in the New Deal days. The problem is that the disadvantaged in urban areas have never expressed great enthusiasm for the idea of moving to rural areas in order to accept minimum wage jobs. Unless unemployment rates are extremely high, as they are for youths in the summer, it is unlikely that the public needs for workers in rural areas will be met from the pool of unemployed in the cities.

Finally, most of the needs, especially in urban areas, are for full-time, long-term workers. But economic slumps since World War II have lasted less than a year (on the average). While one might think offhand that numerous tasks could be performed by an enlarged public work force during periods of temporarily high unemployment, the experience of summer NYC suggests the acute difficulties of putting enrollees to work, even at present operating levels. Especially in large cities, there may not be a very large demand for temporary unskilled employees.

Clearly, then, public employment has serious drawbacks in aiding the unemployed during economic declines. While expansion of public employment is warranted, and even promises some success, it should certainly not supplant all other approaches. So far, we do not know whether public employment can put the disadvantaged to productive work in the present day and age, or even whether it is an attractive alternative to monetary and fiscal measures increasing aggregate demand. Public employment must be viewed as an experiment and its implementation must depend upon changing economic conditions; it should not be promoted as a proven solution to evolving problems.

Manpower programs and economic policy

The inherent deficiencies of a rapid expansion of public employment are shared by other manpower efforts. Rapid expansion of these programs is likely to be sustained by allocating increasing shares of manpower funds to income maintenance (which may be desirable in a period of high unemployment, but should not be confused with skill training) and administrative overhead.

Of course, manpower programs have been touted as a major ingredient of overall Federal economic policies. The argument begins with the hypothesis that there is a necessary trade-off between price stability and unemployment. The experience of industrial nations has been that prices rise when aggregate demand is high, when employers are hiring to increase production, and when wages are rising as employers compete for scarce labor. Alternatively, prices fall or remain stable when demand is slack, when employers are terminating excess workers in the face of falling sales, and when unemployment has shown a fair degree of statistical regularity over time, which has meant that monetary and fiscal policies influencing aggregate demand could only reduce unemployment by raising prices, or vice versa.

The attractiveness of manpower programs, according to received theory, is that they can shift the terms of trade-off so that lower levels of unemployment can be achieved with less inflationary pressure. Rehabilitation and training programs, it is reasoned, reduce "structural unemployment" by preparing technologically displaced or educationally deficient workers for useful work. In addition to reducing unemployment, prices will be diminished to the degree that the social benefits of the training programs exceed their cost. Improved labor market services reduce the time lost between jobs and, thus, the level of unemployment. Greater mobility of workers helps fill job vacancies which would otherwise have contributed to rising prices in tight labor markets. Thus improved placement, counseling, outreach, and mobility-inducing measures reduce "frictional unemployment," resulting in a decline in both prices *and* unemployment. Finally, efforts to improve vocational training and counseling of workers and measures to boost the supply of skilled laborers remove labor bottlenecks and increase productivity by lowering unit labor costs.

These theoretical arguments are grounded in economic experience. Manpower programs do promise to improve the terms of trade-off between unemployment and inflation. But the impact of the trade-off should be placed in the proper perspective; members of Congress, executive officials, and even economists have sometimes shared inflated notions about the potentialities of manpower programs. The hoped-for improvements will be realized only over the long run; even then, their impact may not be great. Currently some 450,000 people are enrolled in Labor Department-funded manpower programs—compared with approximately 4 million unemployed and more than 80 million in the labor force. If past experience is any guide, a third of the enrollees will drop out of the programs, and more than half will show no benefits in employment and earnings. Improvements for those who are helped cover the initial costs only over the long run, and these improvements might be only slightly greater than would have been achieved by spending the manpower funds some other way.

On the theory that every little bit helps, I would reject the limitations of manpower programs as an argument against their utilization as countercyclical measures. As long as their proper role is understood, manpower policy could be used to "fine tune" the economy, not only by varying the mix of manpower programs in response to economic fluctuations, but also by adjusting the level of expenditures. One way to do this is to provide for an automatic increase in manpower funds when unemployment passes a certain level. The Nixon Administration has proposed that allocations to manpower programs administered by the Department of Labor be boosted by 10% when unemployment reaches 4.5% for three consecutive months—an increase of about $160 million at current annual outlays. This trigger mechanism might be extended by additional boosts in manpower funds for increases in unemployment above 4.5%. For example, if manpower funds were boosted by 10% for each .2% increase (above 4.5%) in unemployment over a period of three months, there would have been a 30% automatic increase of manpower funds in September 1970.

This would probably be useful, for as unemployment increases it is logical to step up aid to its victims. While aggregate demand management can change the level of unemployment, the effects must first filter down through the economy. Manpower expenditures, on the other hand, are directed to those most in need of help. Dollar for dollar, manpower programs probably have more impact on unemployment than other types of spending, and expanding them may be the best way to help the unemployed when demand slackens.

None of this is to imply that manpower programs will have a large countercyclical effect. For instance, if an unemployment rate increase of 1% triggered a 10% increase in manpower expenditures, roughly 45,000 additional slots could be created. The trigger mechanism could be adjusted to release more funds for manpower programs, as the 1970 Senate Committee bill did. It is doubtful, however, whether bona fide training slots could be created on short notice. The Senate proposal would still fall short of needs. A 1% rise in unemployment means that on the average 800,000 more workers will be out of jobs, and that the number of persons unemployed 15 weeks or longer during the course of the year will increase even more. Any reasonable expansion in manpower programs would absorb only a small proportion of a recession's victims, and manpower policy is hardly a substitute for monetary and fiscal measure in controlling fluctuations. Manpower policy we must have, but we must not overestimate its efficacy in a slack economy.

Continuing Financial Education

David I. Fisher
CB Business Practices Research

How much and how good?

Encouraging employees, particularly executives, to increase their professional knowledge through continuing education has become a serious commitment in many companies. This article reports on continuing education programs that 150 business concerns offer to their financial management staffs. Most, if not all of these programs, it should be noted, appear to be available as well to personnel employed in other areas of these companies.

Corporate financial specialists, from senior executives down to young staff members, are increasingly under pressure to upgrade their skills through continuing education. This development has been building over the last decade and, as many executives see it, it will continue to do so in the decade ahead.

The basic cause lies in the growth of modern management science. Its emphasis on computer technology and applied mathematics has brought about a profound revolution in the methods of corporate financial management. These techniques have not only made it possible to mechanize many routine functions, but they have also encouraged wider practice of sophisticated approaches in operations research, investment decision making, and economic forecasting.

As a result, scores of financial men, some of whose formal education ended years ago, find themselves faced with a knowledge gap. Closing it requires participation in courses and seminars focusing on the latest management techniques. These courses and seminars, however, can be costly; moreover, they are sometimes available only in distant cities, entailing time away from the job and additional expenses for travel and lodging.

Aware that cost and the problem of arranging for time off are major obstacles for employees interested in continuing education, the vast majority of the 150 companies recently surveyed by the Board offer education-assistance programs.[1]

By and large, these programs are of two types. One is financial support for study outside the company, either in the form of tuition-aid plans or expenses-paid attendance at seminars or enrollment in advanced management programs. The other is internal training—rotating job assignments, periodic seminars, and special classes.

Tuition-aid plans

Nearly 80% of the companies reporting say that they have tuition-aid plans under which employees desiring to take courses outside working hours may apply for reimbursement of tuition costs.

Generally speaking, these plans are open to all employees, regardless of where they work in the company, their level of responsibility, or whether they are paid on a salary or hourly basis. One exception is a food company that tries to limit participation to "seasoned" employees only. The company's treasurer explains: "Recently hired college graduates do not have as much experience needed nor will they get as much out of courses as more experienced employees might receive."

On the other hand, companies rarely reimburse employee tuition costs without imposing certain conditions. Usually these require that the course have some relationship with the employee's job, and that he receive management's approval before registering for it. For example:

> The company has a program whereby it subsidizes totally or in part the cost of any educational program taken by any member of management relating to the area for which they are responsible. These courses must be approved in advance by the Executive Committee Member to which they report and the Personnel Department. At the time the application is reviewed, it is established as to

[1] The complete findings of the survey are published in "Continuing Education for Financial Management," *Managing the Financial Function*, No. 7, NICB, 1970.

the amount the company is willing to share in the expense prior to the employee committing for the course.

(*A furniture company*)

In many companies the amount of tuition refunded also depends on grades received:

We have an educational incentive program whereby we allow our people to take night school courses. If they get an "A" or "B", they are paid 100% for the courses, whereas if they get a "C" they pay 50% of the tuition. If they flunk a course, they have to pay the tuition themselves.

(*A precision instruments supplier*)

A few executives responding to the survey point out that tuition-aid plans would probably not be made so widely available were it not for the help they give to corporate recruiting efforts. "With the high rate of employee turnover," the treasurer of an electronics equipment manufacturer says, "tuition-refund programs probably help the employee more than the employer. If we were to be honest with ourselves, we would admit that such programs are necessary merely to be competitive in the market place."

Attending seminars

More than a third of responding companies report that they assume full expenses for selected employees to attend professional society and trade association seminars. For various reasons, companies generally limit these opportunities to executives; however, an executive's mere desire to attend a seminar doesn't mean his company will finance it. This benefit is often contingent upon the seminar's topic being of particular interest to the company. And a few executives state that their companies' support depends on the reputation of the organization conducting the seminar.

For busy executives, though, seminars can be an extremely effective form of continuing education. "I feel that seminars in general are very helpful to those who participate," the financial vice president of a machine tool company notes. He adds: "Not only is the subject matter informative, but I feel it is most helpful for our personnel to rub elbows with other men faced with similar problems in order to compare their own views and judgments."

Yet seminars can have their shortcomings. Many executives emphasize that trading experience with other attendees can be a waste of time if the backgrounds of these men are limited. Also vital is the matter of leadership. Seminars are hardly worth attending, says one treasurer, "if the leaders do not know much more about the subject than the students."

Business school management programs

About 10% of the companies represented in the survey enroll executives in advanced management training programs conducted by many of the country's leading business schools.[2] With curricula ranging from two weeks to four months, costs may run to nearly $4,000. Primarily for these reasons—cost and time—companies are highly selective in the executives they single out for such an opportunity. To be seriously considered, practically all state that a candidate must either be a "key executive" or a subordinate who is being groomed for a higher position.

Training inside the company

Some companies round out their continuing education activities by setting up internal training programs. To some extent, this reflects disenchantment with the instruction provided by outside media. As the treasurer of a printing company explains:

"We have become dissatisfied with the effectiveness of outside programs, mainly because we find them far too broad, at too elementary a level, and, generally speaking, not especially relevant for the majority of financial people we send to them. We are developing our own seminars and other programs internally to meet our own needs, and intend to supplement them only where the subject matter is highly technical or specialized."

Generally, companies committed to internal training approach it informally—usually through the scheduling of periodic seminars. The principal distinction among these seminars is the extent to which companies rely upon their own personnel to serve as instructors. Some look to them almost entirely; others bring in outside experts when possible; still others try to find the best blend of both:

We provide opportunities for approximately 300 middle management people annually to improve their knowledge of financial management. Instruction for these programs comes mainly from within the company.

(*A retail company*)

Our corporation has held management seminars for approximately 120 of our executives. This is a broad program that has been developed and, in effect, put on by an outside organization; in this program, executives have been exposed to professors and personalities who are outstanding in their fields.

(*A paper company*)

[2] See "Executive Development Programs in Universities," *Studies in Personnel Policy*, No. 215, NICB, 1969, pp. i-iv.

Continuing Education for Financial Management
. . . with a difference

From a company that has its own management development program: Periodically, the corporation has conducted for its middle management executives formalized, intensive three-week seminars. Each person attending the seminar is involved in case studies which place him at a top management level requiring decision-making with respect to finance, accounting, marketing, and manufacturing. We believe they are very worthwhile and that the individuals who choose to attend or are encouraged to participate are given a better understanding of how higher management makes certain decisions, and thus are better prepared to accept advancement as opportunities occur.

From a company that selects trainees for special assignments: For the past six years we have selected a trainee for a one-year assignment on the Treasurer's staff. The trainee is one of our outstanding young men with a financial background. During the one-year assignment he becomes acquainted with, and actually works on, the financial management of the company's securities portfolio and pension trusts.

From a company that employed outside professionals in developing a course in financial management: Recently we enlisted assistance from an outstanding national firm of management consultants/industrial psychologists along with the financial faculty of a local university to work with one of our senior accounting executives to develop a comprehensive course in financial management for our non-accountants. We have since adapted this program to a more in-depth training course for professional financial people. This is made available now on a routine basis for all new hires within the first year of employment and reveals to them not only the overall systems of accounting in the company but, more importantly, makes clear to them through case discussions the underlying economic concepts which we have chosen to guide the company. It covers cash flow and discounted cash flow, acquisitions and mergers, the economics of pricing and market position, and stresses in great detail the implications of foreign operations to the financial executive.

From a company that has an arrangement with a local university involving a form of closed-circuit television: We have an educational department in a separate building with several classrooms. Classes are conducted on various subjects. We have a participating arrangement with a local university and a direct line for closed-circuit TV. It really isn't the normal closed-circuit TV but rather a "facsimile transmission." Our students can't see the instructor, but they can hear him and see what he is writing on the board. There is a direct connection by telephone, so that the student can ask questions. The instructor can then answer verbally, by writing on the board, or both.

Monthly during the winter, the Treasurer's Department conducts its own seminars for all levels of its financial executives, with speakers ranging from high-level executives of the company to outside representatives of government and academia.

(*A petroleum company*)

Surveyed companies having formal management training programs in finance split about evenly in the way they organize them. Some lean toward the format of rotational assignments—exposing a new staff member to different departments within the company, usually for several weeks at a stretch, before settling him into the particular job for which he was hired. Others prefer to limit their programs to relatively shorter periods—a week or ten days to a month—highlighted by classes of intensive instruction.

Reactions and results

The results of programs of continuing education in finance are extremely difficult to judge, according to most executives responding to the survey. Several say, with many employees of the company participating in them, it is impossible to gauge overall effectiveness.

While unsure as to their impact, most companies believe that continuing education programs in finance serve them well. "It is difficult to generalize on the effectiveness of these programs since it varies from program to program and by individual," says the vice president of a transportation company. "Our continued support of them, however, confirms our general feeling that they are very effective."

At the same time, though, a number of executives think that the programs of their own companies could be improved. For example, several suspect that their firms lean too heavily either toward outside study or to an internal training approach, and that the company would be better off to strike a balance between the two. Another question in the minds of some is whether their companies are doing as much as they could to advise employees about available opportunities. "I believe," notes the treasurer of an electrical equipment manufacturer, "the effectiveness of our programs could be improved with a somewhat more formalized way of analyzing the continuing education needs of our younger people and specifically counseling them on methods available to fulfill their needs."

Three American Standards of Living

Fabian Linden
CB Consumer Economics Department

It currently requires $10,800 a year for an urban family with two children to maintain a "moderate but adequate" standard of living, according to a recent study made by the Bureau of Labor Statistics. In developing this budget, the Bureau priced a fixed market basket of goods and services for a city worker's family consisting of an employed husband (age 38) and a housewife and two children (boy 13 and girl 8). This family unit is considered to be reasonably representative of the typical American family. It is at the middle stage of the life cycle, and at this juncture the husband has considerable work experience and is approaching his peak earning level. The couple has been married for at least 15 years and has acquired an adequate inventory of home furnishings.

The content of some of the items included in the Bureau's model budget is based on scientifically determined nutritional and health requirements. For other categories of goods, such as house furnishings and transportation, the Bureau took into account consumer preferences as determined through a study of expenditure patterns. The schedule of the various goods and services that make up the Bureau's budget was "priced" at the retail level in the spring of 1969. The Conference Board has adjusted those figures to reflect the higher prices which prevailed in the summer of 1970.

In addition to the moderate standard of living budget, the Bureau has developed two other budget models, one providing for a lower level of consumption, the other for a higher level. In all instances the budgets are based on the same four-person family unit described above. To sustain the living standards defined by the lowest of the three budgets would require close to $7,100 in today's marketplace. Living up to the higher budget requires an estimated income of $15,700.

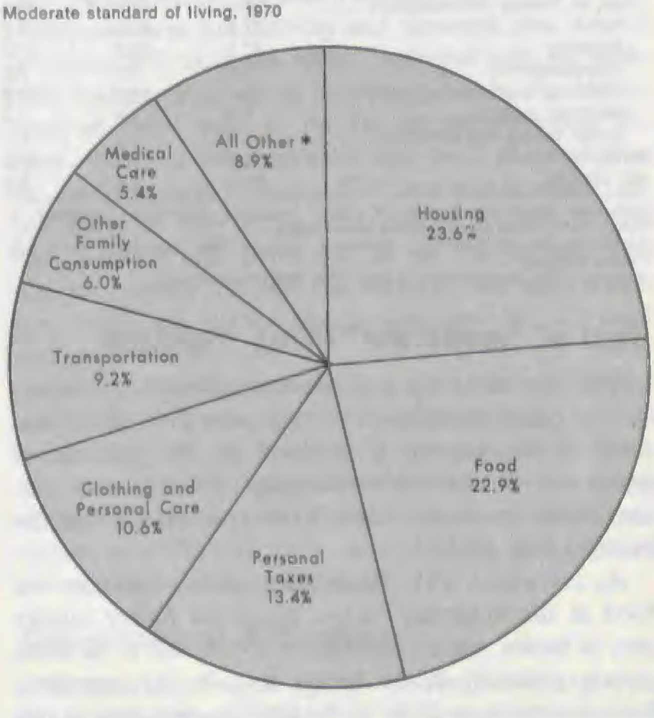
Cost of "lower" living standard

About four-fifths of the family's budget at this level goes for the consumption of goods and services. The remainder is about equally distributed between personal taxes and other items such as Social Security, insurance and occupational expenses. Food requires over 27% of the family's resources, and housing more than an additional 21%.

It is assumed that at this level there is little or no homeownership, and the allowance for shelter is based entirely on the cost of rented facilities. Food and housing together in this budget claim almost half of the family's resources, a fraction substantially larger than in the moderate and higher living standard budgets.

In estimating transportation requirements, the Bureau assumes complete reliance on public facilities in

The Directions of Spending **Chart 1.**
Moderate standard of living, 1970



* See table.
Sources: U.S. Department of Labor; The Conference Board

large metropolitan areas, and the use of cars only in relatively sparsely populated areas. Where car ownership is assumed, the estimate is based on the acquisition of a used vehicle with an average age of about eight years. All told, the cost of transportation takes slightly over 7% of the family's dollar here, which is a smaller percentage than in the other two budgets.

Clothing costs and personal care make up an additional 11.5% of the family's total budget at this level. In estimating clothing requirements, the purchase of relatively low-quality items, selling at below-average prices is assumed. However, in percentage terms clothing requires a larger share of the family dollar here than in the moderate and more affluent budgets.

Provisions made for medical care are about the same in all three budgets. It is assumed that at all economic levels today's family has insurance coverage for hospitalization and surgical needs. However, in the lower standard budget medical care costs come to more than 8% of the family's aggregate income. The relative claim of this item in the other two budgets is evidently a good deal lower.

The Cost of Living on Three Levels

July 1970

	Lower Standard Budget	*Moderate Standard Budget*	*Higher Standard Budget*
Total Annual Cost[a]	\$7,065	\$10,830	\$15,675
Percent Distribution	100.0%	100.0%	100.0%
Cost of Family Consumption	80.5	77.5	74.0
Food	27.5	23.0	19.5
Housing	21.5	23.5	25.0
Transportation	7.0	9.0	8.0
Clothing and personal care	11.5	10.5	10.5
Medical care	8.0	5.5	4.0
Other family consumption	5.0	6.0	7.0
Personal Taxes	9.5	13.5	17.5
All Other[b]	10.0	9.0	8.5

[a] Figures based on Bureau of Labor Statistics estimates converted to July 1970 prices by The Conference Board.
[b] Includes Social Security, insurance, occupational expenses, gifts and contributions.
Sources: U.S. Department of Labor; The Conference Board

Cost of "moderate" living standard

The cost of living at a moderate level for a family of four currently requires an estimated \$10,800. About 78% of this amount is required for the purchase of goods and services, the remaining 22% to cover personal taxes and other items, such as insurance and Social Security.

As compared with the low-cost plan, provisions for food in the moderate budget allow for higher quality cuts of meats, some convenience foods, and a bit more variety generally in the family diet. In the aggregate, food claims about 23% of the family's resources at this economic level—somewhat less than the lower budget plan. In dollar terms, however, assumed expenditures for food in the moderate budget run almost 30% higher than in the lower one.

The shelter component here claims close to 24% of the budget, or some 70% more, measured in dollar terms, than the figure in the lower income budget. At this economic level it is assumed that three-fourths of all families own their own homes, while in the lower budget, as observed, it was assumed that all families were renters. Close to 30% of the total dollar difference between the lower level and moderate level budgets is accounted for by the housing component.

Allowances for transportation run almost twice as high in the moderate budget as in the lower one, principally because a higher rate of automobile ownership is assumed. This budget calls for the purchase of a two-year-old car and a trade-in after four years' use. The lower budget provides for much older cars. In total, transportation takes a somewhat larger share of the family's dollar here than in the lower budget.

Clothing and personal care claim about 10.5% of the moderate level budget, which is a smaller ratio than provided in the lower budget. Actual dollar expenditures for clothing and personal care at this level, however, are some 40% higher.

In dollar terms, there is only a slight difference between outlays for medical care here and in the lower economic plan. (It is assumed that about the same medical facilities and care are available to the family at all three levels.) However, since income is now higher, medical attention claims a smaller share of the family's resources here, specifically 5.5%.

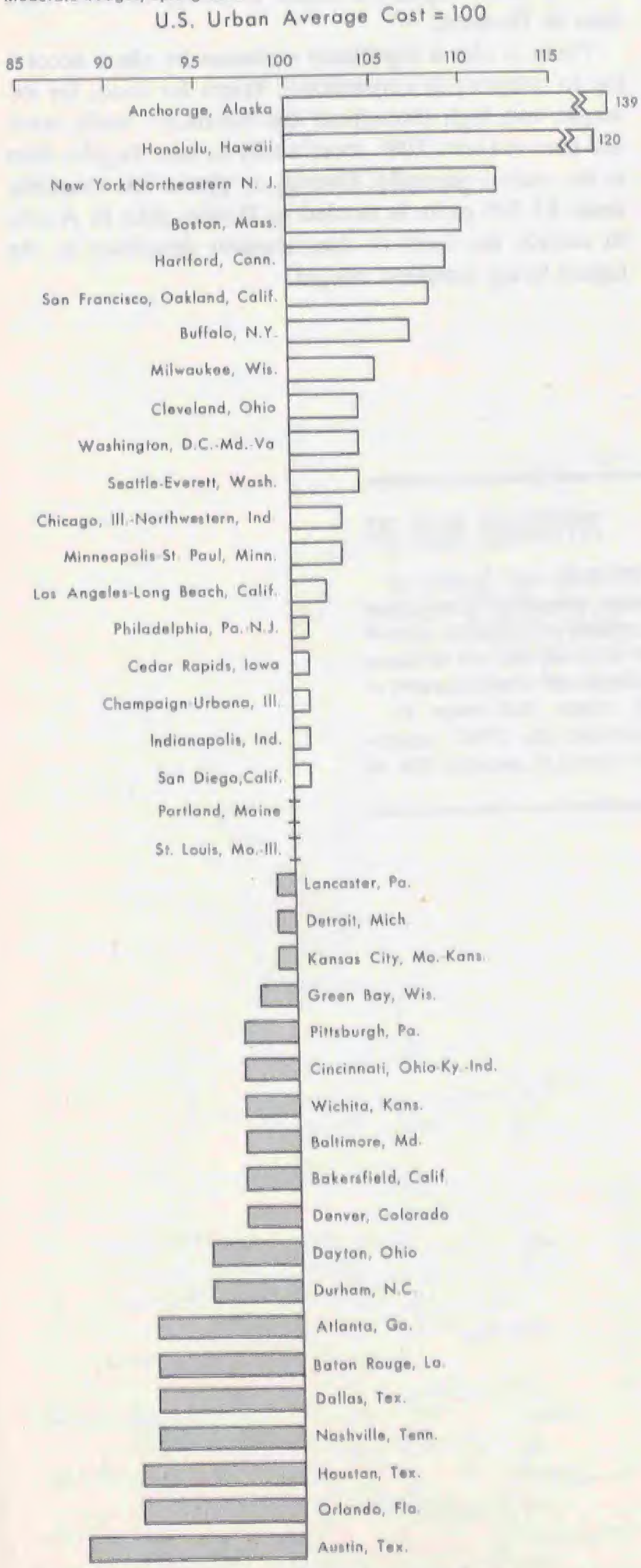
All told, the moderate budget provides for expenditures which are about half again as large as assumed in the lower budget. A substantial share of the difference—close to 30% of it—is accounted for by higher personal taxes, Social Security and related payments. An additional 30% represents improved housing, and another 15% goes for more varied and better-quality diet.

Cost of "higher" living standard

The cost of living for a four-person family at a relatively high standard now comes to almost \$15,700 a year. About three-fourths of this sum is available for the consumption of goods and services; over a fourth is needed for personal taxes and other items, such as Social Security and insurance. At this level personal taxes claim over 17% of the family's resources, compared with about 13.5% at the moderate budget level, and 9.5% at the lower level. The cost of the high standard of living budget is well over twice that of the lowest

Intercity Differences in Living Costs **Chart 2.**

Moderate budget, spring 1969



Sources: U.S. Department of Labor; The Conference Board

budget; taxes have increased more than fourfold, and spending for consumption has doubled.

The importance of food has declined in relative terms, to about 19.5% of the family's budget—although actual dollar expenditures, compared with the moderate level, are up by almost 25%. The food plan of this budget allows for greater variety, and more frequent consumption of meats, more fruits and vegetables. There is only a modest increase in food quantity, compared with the other budgets. The higher allowance reflects better quality within the food categories.

The relative importance of housing has increased modestly, now claiming about 25% of the family's budget. It is assumed that 85% of all these families own their homes and that there is more extensive ownership of appliances and equipment. At this economic level, too, provision is made for more household services. In dollar terms the housing component costs about 50% more in this higher level budget than under the moderate standard of living plan.

The relative cost of transportation has now declined to 8%, about a percentage point less than in the preceding budget level. All families are assumed to own a car, with three out of every five purchasing a new vehicle every four years, and other families buying a two-year-old used car. More extensive use of the car is also assumed at this juncture. Families at this level are assumed to spend about 30% more for transportation than those on the moderate budget.

Expenditures for clothing and personal care are up by about 50% in dollar value, compared with the moderate budget, although in percentage terms the importance of these items in the budget remain about the same. There is no significant increment in provisions for medical care, however. The increase in dollar expenditures is very small, and the importance of this item drops to only about 4% of the budget. All three budgets provide hospital and surgical insurance coverage, while the higher budget also includes a major medical insurance plan.

All told, the higher living standard budget calls for roughly $5,000 more than the moderate budget. About a third of this sum is taken up by taxes, Social Security, insurance, and other related outlays. Over a fourth of the difference is accounted for by housing, while food claims an additional 12%, and clothing and personal care about the same percentage.

Geographical differences

The various budget figures reviewed here represent a national average. However, because prices (and, to some extent, consumer needs) differ, often quite substantially, by region of the country, there are some significant variations in the cost of the Bureau's budget by place. For example, it is about 10% less expensive to live in nonmetropolitan areas than in more densely populated metropolitan neighborhoods.

There are meaningful difference in price levels from city to city, too. For example, in the consolidated New York metropolitan area the cost of the moderate level budget runs some 12% above the all-country urban average. The northeastern region generally is a more expensive place to live than the South. In Houston, for instance, prices are about 10% below average. It is 20% more expensive to live modestly in New York than in Houston.

There is also a significant variation by place according to category of expenditure. Prices for food, for example, run high throughout the Northeast, while medical care is about 30% more costly in Los Angeles than in the nation generally. Overall, to give a fine example, some $3,700 more is needed in Boston than in Austin to sustain the level of consumption described in the higher living standard budget.

TO OUR READERS

In view of The RECORD's growth in recent years, and in response to numerous requests, we are publishing this month Annual Indexes to Volumes III and IV (1966 and 1967). Indexes to the two previous volumes of the magazine appeared in these pages in the October issue.

As noted last month, the Annual Index to the current volume (1970) will be incorporated in the December issue, as will indexes to future volumes, year by year.

The RECORD—1966

An Index to Volume III, Numbers 1-12

The RECORD—1967

An Index to Volume IV, Numbers 1-12

THE CONFERENCE BOARD

RECORD

Published by The Conference Board, one of the great nonprofit fact-finding laboratories of the world. For more than fifty years, it has continuously served as an institution for scientific research in the fields of business economics and business management. Its sole purpose is to promote prosperity and security by assisting in the effective operation and sound development of voluntary productive enterprise.

- Major fields of study include: business trends and economic factors, international trade, human relations in industry, sales and marketing, corporate finance, organization planning and other areas of executive decision.
- The Conference Board also brings together leaders in business, labor and public affairs at meetings where economic policy, business prospects and executive experience are discussed in an atmosphere of free inquiry.
- Seminars conducted by the Board's staff are offered in selected areas of management responsibility in which the Board's continuing experience supplements the findings of its research reports.

The Board's charter specifically prohibits propaganda or any attempt to influence legislation. The Board is wholly independent, and has never been an agency or affiliate of any other organization.

The Conference Board is incorporated as a Membership Corporation. It has no endowment and depends on the support of its Subscribing Associates—now numbering more than 4,000 throughout the world, including:

- Business Organizations
- Professional Firms
- Trade Associations
- Labor Unions
- Universities
- Government Agencies

Subscribing Associates receive all current publications and notices of meetings. The product of previous research when still in print is at their disposal. They are entitled and invited to make full use of the Board's Information Service, now handling over 70,000 inquiries a year.

Further information about the Board and its activities is available upon request from:

The Conference Board
Service Extension Division
845 Third Avenue,
New York, N. Y. 10022
(Tel., 212 PLaza 9-0900)

Midwest Office:
The Conference Board
120 Oakbrook Mall
Oak Brook, Illinois 60521
(Tel., 312-654-3250)

In Canada:
The Conference Board
615 Dorchester Boulevard West,
Montreal 2, Quebec
(Tel., 514 UNiversity 1-1437)

MR. R.W. MC FALL, CHM. + PRES.
WESTERN UNION CORPORATION
60 HUDSON ST.
NEW YORK, N.Y. 10013

845 Third Avenue
New York, N. Y. 10022
(212) 759-0900

Alexander B. Trowbridge
President

THE CONFERENCE BOARD

February 18, 1972

Mr. Clay T. Whitehead
Director
Office of Telecommunications Policy
The White House
Washington, D. C.

Dear Clay:

We were extremely grateful to you for coming up to New York and addressing the closing luncheon of our conference on Information Technology. It provided a fine wind-up to an exciting day and a half, and all concerned appreciated your participation a great deal.

I hope we have an opportunity to cross paths soon again. Best wishes in your wild and woolly world of Washington.

Sincerely,

Sandy

A. B. Trowbridge

ABT:ms

(Signed in Mr. Trowbridge's absence)

Monday 2/7/72

TRIP
INTERVIEW
2/15/72
3:30

3:10

Brian advises you have agreed to the interview on WNYC TV when you are in New York on Tuesday, February 15. He has scheduled it for 3:30 in the afternoon.

TV Appe arance
11/23/71

Wednesday 10/27/71

10:40 Steve Scheuer (pronounced Sawyer) from WNYUTV called to invite Mr. Whitehead to appear on a TV program on November 23. Brian talked with him; they will send a letter.

2/15?
3:30

845 Third Avenue
New York, N. Y. 10022
(212) 759-0900

11/3

THE CONFERENCE BOARD

November 1, 1971

Mr. Clay T. Whitehead
Director
Office of Telecommunications Policy
Executive Office of the President
The White House
Washington, D.C.

Dear Mr. Whitehead:

This week I extended to you by telephone an invitation to play an active role in our forthcoming conference, "The U.S. in the Information Society of the '70's and '80's," to be held on February 14-15, 1972, at the Waldorf-Astoria, in New York City. In this more formal way may I say how pleased we are that you will be the luncheon speaker for the second and final day of our conference. The advance agenda is now being prepared on the basis of the text which I am enclosing for your immediate information. Briefly, I would like to explain the genesis of the conference, its purposes, and the role we hope you will play in it.

Background

Closely associated with The Conference Board is a group of thirty-seven chief executives from business, universities, public institutions, and foundations known as the Senior Executives Council. Robert O. Anderson is its chairman.

This Council sponsors, and The Conference Board directs, a series of studies under the general heading of "Management of Change." The purposes of the studies are fourfold: (1) to identify those trends and developments likely to have significant implications for individuals, business, and other institutions in the near future; (2) to evaluate the character and implications of these developments; (3) to isolate those issues or problem areas in need of attention today; and (4) to offer alternative initiatives which leaders might take to utilize the opportunities implicit in such issues, and to manage problems effecting the national interest.

"ASK THE CONFERENCE BOARD"

In *New York*: 212-759-0900
Cable: NICBOARD

During periods of dynamic change, it is necessary to clarify our perspectives, re-examine our goals and priorities, and adjust our directions. Therefore, some of the studies focus largely on the broader over-arching issues. Still others deal with more specific problem areas. All consider new demands upon management and new roles which leaders will be called upon to play. Each study is composed of papers devoted to important aspects of the main topic. Each paper is written by an authority who, in turn, is supported by a panel of experts. All reports are made public.

Since it is the responsibility of leaders to anticipate future as well as to act on current problems and opportunities, there is an effort on the part of study teams to examine short, mid, and longer-term trends concurrently. Therefore, important aspects of these reports constitute "responsible conjecture," and one would not expect nor find complete unanimity on the part of panel members on all findings. By the same token, the findings are not necessarily endorsed by the Senior Executives Council nor by The Conference Board.

The important thing to remember is that these findings are information inputs. If they are dismissed, hopefully, it will be a reasoned decision. If some topics appear to have been ignored or treated too lightly, then we should all give these questions the attention they deserve.

The Study: Information Technology

The first Council-sponsored study is entitled, "Information Technology; Some Implications for Decision-makers." The report sets forth the information context for the Seventies and Eighties and speculates on the possible implications of this context for business, education, political institutions and individuals.

Max Ways opens the report by citing the policy dilemma facing the United States. Each author thereafter, in a paper prefaced by a summary, discusses an aspect of the subject. In the last chapter, John McHale provides a graphic overview of some of the more important or difficult concepts in the report. A set of the background papers is enclosed for your personal use. The edited version will be published just prior to the conference.

Plans are being considered for publishing a follow-up report containing the ten problem areas emerging from the background papers together with the more important initiatives available to leaders and individuals today. Such a report may include the proceedings of this conference.

The Conference: U.S. in the Information Society

We believe this conference will be distinctive; in part, because it grows out of just-completed study; in part, because the study looks at information technology as an "industry" and as a national resource; and in part, because the national interest may be involved.

The research team has completed its task. Now it is the task of the conferees to assess and amplify the findings and meanings as decision-makers and citizens, for whom the report is intended. During the first day, the task is to assess the implications for traditional institutions and concepts. During the second day, the purpose is to determine how well we are likely to manage information technology as an "industry" and a resource, where we are likely to be competitive in this area, and what we must do now if we are to control and not be controlled by technology.

Two approaches can be taken to decide the type of speech you might give. One would be to make a major policy statement pertaining to telecommunications. The other would be to select one or two major areas from the report and to discuss them from your vantage point. However, there is no need at this immediate date to decide on your topic. Mr. Theodore Smith will be in touch with you.

Theodore Smith, formerly Executive Vice President, R.C.A. Corporation, has agreed to serve as liaison between my office and the panel chairmen with whom he will be in contact in the very near future to provide additional information, answer questions, and assist in the further development of the conference. Mr. Smith can be reached in Philadelphia (215-896-8667) or through my office here at The Conference Board.

General

One of the dangers in most discussions on the subject of information technology is the tempration to think of "technology" only as hardware or as research, and to give inordinate attention to the role of the computer. As a preface to the report begins to say, we take a more comprehensive view, and we are anxious to hold to it.

THE CONFERENCE BOARD

Discussion characterizes our form of presentation in this conference. Yours will be the only speech during the day and a half of proceedings. Since it does cap the conference, I could see one of at least two possibilities: (1) the occasion for a major policy statement relating to this subject, for here is the forum and the focus; (2) if not a policy statement, then important observations as to priority that might be attached to considerations put forward in the study and at the conference; (3) something else, providing it turns on a point or points emerging from the study or discussions. In short, we hope you agree that this is not just another conference but in fact a particularly timely and important occasion or setting for your comments.

We would ask that you advise us by January 10th of the title of your address so that we may include it on the final conference agenda.

We wish to thank you again for consenting to be our luncheon speaker in this conference, one which we believe can amplify the dialogue on a subject of considerable importance to our nation.

Sincerely yours,

Charles Darling.

Charles M. Darling, III'
Director, Planning and Forecasting
Public Affairs Research

CMD:bf

Enclosured
1. The Conference Agenda
2. The Information Technology Report

U.S. IN THE INFORMATION SOCIETY OF THE 70'S AND 80'S
(A Conference, February 14-15, 1972)

Information for Moderators and Panelists

The purpose of the Conference is to discuss the future role of various segments of American society as they may be affected by the future influence of information technology developments. The basis of the discussion is the study, "Information Technology; Some Implications for Decision-Makers 1971-1990," prepared for the Senior Executives Council of The Conference Board. The program will consider the various fields likely to be influenced by or related to advances in Information Technology. Most of the program periods will involve a discussion format conducted by a Moderator and several Panelists.

In general, the arrangements will be as follows:

1. The Moderator will lead off with a short summary of the principal points made in the applicable Study paper. He will include his own general comments as well. The time should be about ten minutes.

2. The Moderator will then call on each Panelist in turn who will speak for five minutes on one of the study conclusions, comment on it, its applicability, and its effects.

3. During the next fifteen minutes there will be an opportunity for the Moderator and the Panelists to comment on the preceding presentations, to add to the presentation and to question any of the speakers.

4. For any balance of the program time, the Moderator will present questions for the Panel to answer. There will be some prearranged questions as well as some collected from the audience.

Each program segment should endeavor to include:

1. A summary of the important conclusions reached in the study paper.

2. An interpretation of some of the major conclusions, the related problems, and any actions which might need to be taken. Participants may, of course, provide their own views relative to the subject material.

3. A lively discussion between participants.

<u>The total time for each of the program periods is forty-five minutes.</u>

It is expected that all participants will read the applicable study paper and at least the summaries of the other study papers. The Moderator will arrange for an agreement as to topics to be handled by each Panelist. Topics may include viewpoints of the panel relating to the subject which they consider important, even if not specifically covered by the study.

November 16, 1971

advance agenda

united states in the information society of the 70's and 80's

february 14-15, 1972

the waldorf-astoria

THE CONFERENCE BOARD

about this conference

A new resource of strategic national and international importance has been developed. Some refer to it as the information sciences, others as the information process, still others as communications. By information technology we mean the collection, storage, processing, dissemination and use of information.

"Within two decades," says Max Ways, "these new information technologies have become an indispensable part of the web that holds society together. If society had to get along without these technologies, the business life of the United States would be imperiled to the point of disaster. The new ways of handling information have brought about fundamental changes in governmental and political processes. They have altered the psychological and cultural attitudes of hundreds of millions who have only the haziest notion of how the new technology works."

Today, information technology provides us with the capabilities for formulating and ordering our goals, for increasing management's effectiveness, for freeing man to participate in broader and more meaningful activities, and for narrowing the gap between the haves and have-nots. If we fail to recognize this potential we may drift in another direction. We may create and strengthen the power of management elites, circumscribe the freedom of man, and create a new kind of rich-poor gap between those, regardless of economic status, who know how to command the information technology and those who do not.

"The next 20 years," continues Max Ways, "will be the critical period when the quality of our response to information technology will be disclosed."

A panel of 42 experts, under the direction of The Conference Board and the sponsorship of its Senior Executives Council, has just completed a major overview of this important subject. It is entitled – *Information Technology; Some Implications for Decision-Makers,* and it will be available in January 1972.

The Conference Board has invited a distinguished group of citizens to take part in a conference that examines some of the most important conclusions in this study and what they should mean for us today.

This conference is intended primarily for those in and moving into leadership positions in business, government, education who are concerned about the problems and opportunities moving swiftly in our direction, and who want to understand their implications and leadership options for today.

Alexander B Trowbridge

Alexander B. Trowbridge
President

monday, february 14, 1972

9:00 A.M.

MANAGING CHANGE

A New Imperative

A. B. TROWBRIDGE, President
The Conference Board

9:10 A.M.

CHANGING INFORMATION ENVIRONMENT

A Powerful Resource Emerges

JOHN McHALE, Director
Center for Integrative Studies
State University of New York

10:00 A.M.

NEW MEANINGS FOR TRADITIONAL INSTITUTIONS

Government

Moderator: WILLIAM D. CAREY, Senior Staff Consultant
Arthur D. Little, Inc.

Discussants: EMILIO DADDARIO, Senior Vice President
Gulf & Western Precision Engineers Co.

ROGER W. JONES, Consultant
Office of Management and Budget
The White House

TERRY SANFORD, President
Duke University

Education

Moderator: WARREN BENNIS, President
University of Cincinnati

Discussants: ROGER HEYNS, President
American Council on Education

HAROLD HOWE, II, Vice President – Education & Research
The Ford Foundation

FRANCIS KEPPEL
Chairman of the Board
General Learning Corporation

monday, february 14, 1972

Business

Moderator: ROBERT O. ANDERSON
Chairman of the Board and Chief Executive Officer
Atlantic Richfield Company

Discussants: HENRY M. BOETTINGER
Director of Management Sciences
American Telephone & Telegraph Company

W. ROBERT WIDENER
Vice Chairman
Information Management International Corporation

12:30 P.M.

GET ACQUAINTED LUNCHEON

2:00 P.M.

REGULATIONS FOR DEVELOPING INFORMATION TECHNOLOGY AND PROTECTING THE PUBLIC

Moderator: JAMES Q. WILSON
Professor of Government and Chairman of the Department of Government
Harvard University

Discussants: RICHARD HARWOOD
Assistant Managing Editor for National Affairs
The Washington Post

JOSEPH M. KITTNER
McKenna, Wilkinson & Kittner

ANTITRUST ANALYSIS

Nightmares — Opportunities —
New Building Blocks of Analysis

Moderator: FREDERICK M. ROWE
Kirkland, Ellis, Hodson, Chaffetz, Masters & Rowe

Discussants: ANDREW AINES, Senior Staff Associate
National Science Foundation

BETTY BOCK, Director, Antitrust Research
The Conference Board

ALLEN C. HOLMES
Jones, Day, Cockley & Reavis

JESSE W. MARKHAM
Professor of Business Administration
Graduate School of Business Administration
Harvard University

THE INDIVIDUAL

Enriched or Impoverished?
Master or Servant?

Moderator: THOMAS WICKER, Associate Editor
The New York Times

Discussants: MARCIA GUTTENTAG, Director
Harlem Research Center
City University of New York

ULRIC HAYNES, JR., Senior Vice President
Spencer Stuart & Associates

DONALD N. MICHAEL, Program Director
Institute for Social Research
University of Michigan

tuesday, february 15, 1972

9:00 A.M.

COMPETITIVE POSITION OF U.S. IN TOMORROW'S INFORMATION WORLD

Moderator: JAMES E. WEBB, Attorney – Treasurer
The National Academy of Public Administration

Discussants: ISAAC AUERBACH, President
the Auerbach corporation

PAUL BARAN, Consultant
Institute for the Future

EUGENE FUBINI
E. G. Fubini Consultants, Ltd.

MANAGING THE RANKING RESOURCE
International Trends
U.S. Policy Quest

Moderator: EMILIO DADDARIO, Senior Vice President
Gulf & Western Precision Engineers Co.

Discussants: JAMES C. ABEGGLEN, Vice President
The Boston Consulting Group, Inc.

MELVIN S. DAY, Head
Office of Science Information Service
National Science Foundation

JAMES E. WEBB, Attorney – Treasurer
The National Academy of Public Administration

TODAY'S LEADERSHIP INITIATIVES
Decisions That Can't Wait

Moderator: THOMAS O. PAINE, Vice President
General Electric Company

Discussants: EDWARD E. DAVID, JR., Director
Office of Science and Technology
The White House

JACK E. GOLDMAN, Senior Vice President
Xerox Corporation

EDWARD SAFFORD, President
Denver Division
Cahners Publishing Company

12:00 Noon
LUNCH

Speaker: CLAY T. WHITEHEAD
Director
Office of Telecommunications Policy
The White House

THE CONFERENCE BOARD
845 THIRD AVENUE, NEW YORK, N. Y. 10022 (212) 759-0900

11/8/71

SPEECH
2/14-15/71

To: George

From: Tom

In view of the high-powered people and the attention this speech will get, we should do a first-rate job. In order to do that, we will have to do a thousand times better analysis of this field over the next month than we have done over the past year. Please look at this and then let's talk about it.

Think it might be something like putting Enslow in charge of analyzing it; with Owen and you writing the speech. Would like your thinking on this.

Att: 11/1 ltr from Charles Darling re New York Conference Board speech on Feb. 15, 1972

2/15/72

Tuesday 10/19/71

3:45 Charles Darling, Conference Board of New York, called to talk to you about a study and meetings concerning information technology that Dr. David and others are participating in.

He said it was quite important that he talk with you today (before 5:00) and that you were the only one who could help him.

calling again by 01

(212) PL9-0900

(212) PL9-5814

~~Night~~ line

Conf from user's pt of view

14 PM Regulation

Anti-Trust

Individual invited or impoverished

Jim Well

Competition of U.S. in world

15 Managing the Resource. only speaker

Luncheon Speaker

15 not long-winded speech

Conf ends w/ lunch

Relevant to subj

14-15 Pa

Thursday 10/21/71 2/15/72

(212)Plaza 9-0900

5:00 Charles Darling called again to talk withyou. Wanted very much to talk with you personally -- to discuss your being a luncheon speaker at a conference (the first of its kind in this country on information technology overrun). Would be held on February 15 at the Waldorf-Astoria in New York. There will be approximately 400 Chief Executives, including people from Case Western Reserve, IBM, Isaac Auerbach, Jean Fubini, Dr. David, Paul Baran, Tom Wikker, Jim Webb, Tom Paine, Robert Anderson, Emilio Daddario, John Gardner.

avail now

This will be a conference on a $250,000 study completed by some very eminent people -- report to be out in January. They would prefer you speak on something within the study itself (you would receive an advance copy). Study sponsored by Henry Ford, Rockefeller -- overview of information technology...sponsored by some 25 organizations.

publ in Jan papers + initiatives

Stanton and Fubini both suggested that you would be a very thoughtful speaker to wind up the conference -- not in a narrow way but in a broader way. Not interested in defending the Administration or with dealing with public interest. You can probe in ways that let the chips fall where they may. You could take the opportunity for a major policy statement if you so desire. Yours would be the only major speech -- and would be on the final day of the conference. Would apparently be sent to Paris, translated and put out through USIA -- Fortune Magazine - Maxways translations.

Paris in March

Indicated National Academy had heard of it; mentioned Bob Lowe was to have lunch with Mr. Darling on the following day in connection with the report.

Translate book into French

He feels it is quite important that he talk with you about this.

Video Tape for Educational TV

Senior Exec. Council of Conf Bd.
Big names - business leaders
Not letterhead orgn
Overviews of major issues real central issues
Central nervous system issues
Understanding of emerging issues

EXECUTIVE OFFICE OF THE PRESIDENT

OFFICE OF EMERGENCY PREPAREDNESS

AUTHORIZATION OF OFFICIAL TRAVEL

Submit original and 2 copies to Fiscal Section at least 3 working days in advance of proposed travel

This document becomes an authorization of official travel only when the certificate of authorization has been signed by the designated authorizing official. This travel is ordered on official business for the convenience of the Government.

1. Date of request
February 7, 1972

2. Name and address of traveler
Clay T. Whitehead SS # 509-34-3700
OEP/OTP
EOBA
WA DC 20504

3. Title
Director

4. Type of appointment
Presidential

5. Orgn. unit *(Division)*
Office of Telecommunications Policy

6. Official station
Washington, D. C.

7. Purpose of travel
To present speech to New York Conference Board; to attend industry meetings.

8. Period of travel
February 15, 1972

9. Est. No. of days of travel status
1

10. Per diem rate
$25.00

11. Office number of traveler
770, 1800 G St., N.W.

12. Mileage rate

13. Phone number of traveler 5800

14. Itinerary

Washington, D.C., to New York, New York, and return to Washington, D.C.

15. Travel to be performed as indicated
a. ☒ Common carrier Including commercial airline
b. ☐ Government-owned vehicle
c. ☐ Other *(Specify)*

d. By privately-owned automobile:
(1) ☐ Reimbursable cost not to exceed common carrier cost or
(2) ☐ Administratively determined to be more advantageous to the Government—common carrier use impracticable *(if checked, explain under item 20, 'Remarks'.)*

16. Allotment number	17. Appropriation symbol	18. Travel authorization No.
82/OTP/210	1120601	607

19. Estimated cost of travel

Transportation	$68.00
Per Diem	25.00
Other	10.00
Total	$103.00

20. Remarks

First class travel authorized.

21. Requested by

Director
Signature
Office of Telecommunications Policy
Title

FINANCIAL MANAGEMENT BRANCH USE ONLY

22. Funds Obligated

FUNDS OBLIGATED
FEB 10 1972

Signature

Title

23. **CERTIFICATE OF AUTHORIZATION**

You are hereby authorized to travel at government expense, to be paid from available appropriations in accordance with the regulations of the Office of Emergency Preparedness and the Standardized Government Travel Regulations as amended, under conditions noted on this authorization.

MJMcCrudden
Signature
Michael J. McCrudden, III

Executive Assistant
Title

IMPORTANT- Every voucher or message concerning this travel must refer to the travel authorization number.

Form OEP 9
April 1969

Clay T. Whitehead

Tickets to be picked up 2/14/72 (Monday), at the American Airlines Will Call Office at the Statler Hilton, 16th & K, NW

Tuesday - 2/15/72:

8:30 a.m. Leave Wash., D.C., via AA #381.
9:26 a.m. Arrive New York, LaGuardia Airport.

5:30 p.m. Leave LaGuardia Airport, New York, via AA #377.
6:32 p.m. Arrive Washington National Airport.

7.

7:30 #514

$ 52.00 - coach

68.00 first

Wednesday 2/16/72

9:00 Do you have any expenses to claim for your trip to New York?

Do you need to get a check cashed before you leave for Colorado today? (Reminder: Monday is a holiday, so it'll be a long weekend.)

OFFICE OF TELECOMMUNICATIONS POLICY
WASHINGTON

For the Record:

Revisions as indicated on the attached copy were phoned to Miss Ludlow on April 28, 1972. They did not require written confirmation.

LKS

5-51 Special
2/25/72

845 THIRD AVENUE, NEW YORK, N.Y. 10022 PLAZA 9-0900

THE CONFERENCE BOARD
RECORD

REPORTING TO MANAGEMENT ON BUSINESS AFFAIRS

April 25, 1972

Mr. Clay T. Whitehead
Director
Office of Telecommunications
Policy
Executive Office of the
President
Washington, D. C. 20500

Dear Mr. Whitehead:

The RECORD plans to report in part on the Board's February conference on information technology, and we would very much like to include some of your remarks, edited from a transcript of the proceedings.

You will see in the enclosed materials that we have departed from the chronological order of the day so that we may present our readers with what we hope is a fairly broad perspective of the conference through the purposeful rearrangement of individual remarks. We hope that this presentation meets with your approval.

Since our publication schedule is a tight one, we would appreciate your telephoning us with any corrections or comments -- or simply to confirm -- as soon as possible. Because of the structure of the article we ask you please not to rewrite any more than you feel you absolutely must; it will greatly complicate production, and may also require us to drop the remarks of others where the general theme is closely related. If we do not hear from you by May 2, we will assume that your comments are correct as enclosed and will go ahead.

We thank you for your understanding and cooperation, and hope to hear from you very soon.

Sincerely,

Hope T. Ludlow

Hope T. Ludlow
Editorial Associate

HTL:FD
Enclosure

PUBLISHED MONTHLY BY THE CONFERENCE BOARD INC.
ALEXANDER B. TROWBRIDGE, PRESIDENT

EDITOR-IN-CHIEF: W. JEROME ARNOLD
BUSINESS MANAGER: STEVEN ELISH

THE CONFERENCE BOARD RECORD Author Hope T. Ludlow Copy rec'd.

Title Information Technology: The Revolution Reconsidered Page

A synopsis of some of the implications we must face in moving into the Information Society of the 70's and 80's

Women dialing kitchen computers for recipes for old-fashioned cornbread.... coaxial TV cables bringing twenty to forty channels full of information into every home and business office.... systems managers joining professors on college faculty rosters in order to expedite and expand the flow of knowledge to students.

Politicians with detailed access to more and more sectors of the voting public through finely tuned computer research centers feeding out of central data banks.... and, at the same time, John and Mary Voter learning more about the ins and outs of politics and the issues of the day, wired in to Capitol Hill through a complex of newfangled telecommunications equipment.

Add a number of the new, relatively informal "open universities" to give employees the chance to combine on-the-job learning with television seminars at home.... and the possibility that more and more businesses will be taking over the job of public education. In such a post-Sesame Street world of electronic classrooms and automated libraries, we might even expect that the information services business would become a public utility.

If all this begins to sound like scientific fiction come true, some might also be reminded we

(2 sides = 1 col.)

1081

THE CONFERENCE BOARD RECORD Author Copy rec'd.

Title Page

are only a dozen years from Orwell's "1984." Whether we look to the Promised Land or wait the approach of Domesday, there's no doubt now that fantasy and reality are fast merging in the world of the computer. For we are, as a recent Conference Board gathering of top executives in business, government, and education heard, moving into the Information Society. It's a move which the conferees were told may prove as momentous a change as the revolution that transformed us from an agrarian to an industrial society during the last century.

Descriptions of the coming Information Society varied from speaker to speaker at the two-day conference, but there was general agreement that we must recognize the existence of a major new resource called information technology. This technology -- comprehending the collection, storage, processing, dissemination and use of information -- carries with it a power far different, and perhaps far greater, than anything we have yet harnessed to human use. Its implications for the individual -- changes in our perceptions, attitudes, values, and capabilities -- will, we are told, bring about significant changes in the way we deal with our external world and with

(2 sides = 1 col.)

*

1087

each other.1/

Nor is there much time, the conference urged, to deal with the potentials of this new resource. As individuals and as institutions we must be willing and ready to adapt to the new developments, meantime learning how best to shape the new technology to our needs.

In the quotations excerpted on the following pages an effort has been made to group the comments of a large number of panelists as they bear on several different major areas of interest. While expert opinion of course varies, ~~in~~ emphasizing one or another set of implications which might be anticipated to flow from the increasing application of information technology ~~##~~ (and these differences are reflected in the remarks reproduced below) ~~##~~, the thoughts reproduced here are drawn from the entire conference and should not be read as a transcript of actual discussion.

1/ A description of the Board's program in definition of information technology, and of ~~its~~ an initial report on a study of its implications, may be found in Charles M. Darling, "Confronting the Information Society," The RECORD, March 1972.

*

THE CONFERENCE BOARD RECORD | Author | Copy rec'd.

Title | The Contributors . . . noted and quoted in this synopisis of opinion and comment on the information technology revolution | Page 1

George Bennett
Consultant
The Boston Consulting Group, Inc.

Warren G. Bennis
President
University of Cincinnati

Henry M. Boettinger
Director
Management Sciences
American Telephone & Telegraph Company

William D. Carey
Director
Public Affairs Center
Arthur D. Little, Inc.

Emilio Daddario
Senior Vice President
Gulf & Western Precision Engineers Co.

Melvin S. Day
Head
Office of Science Information Services
National Science Foundation

Edward E. David, Jr.
Director
Office of Science and Technology
The White House

Eugene Fubini
E. G. Fubini Consultants, Ltd.

Jack E. Goldman
Senior Vice President
Research and Engineering
Xerox Corporation

Thomas F. Green
Co-Director
Educational Policy Research Center
Syracuse University

(2 sides = 1 col.)

THE CONFERENCE BOARD RECORD | Author | Copy rec'd.

Title | Page 2

Marcia Guttentag
Director
Harlem Research Center
City University of New York

Richard Harwood
Assistant Managing Editor
for National Affairs
The Washington Post

Ulric Haynes, Jr.
Senior Vice President
Division of Public and
Institutional Affairs
Spencer Stuart & Associates

Roger Heyns
President
American Council on Education

Harold Howe, II
Vice President
Division of Education & Research

Roger W. Jones
Consultant
Office of Management and Budget
Executive Office of the President

John McHale
Director
Center for Integrative Studies
State University of New York
Binhamton

Thomas O. Paine
Vice President
General Electric Company

Mayford L. Roark
Director, Systems Office
Ford Motor Company

Terry Sanford
President
Duke University

Donald N. Mic[illegible]l
Program Director
Institute for [illegible] [illegible]rch
University of M[illegible]

(2 sides = 1 col.)

*

1081

THE CONFERENCE BOARD RECORD Author Copy rec'd.

Title Page

3

James E. Webb
Treasurer
The National Academy of Public
Administration

Clay T. Whitehead
Director
Office of Telecommunications Policy
The White House

James Q. Wilson
Chairman
Department of Government
Harvard University

(2 sides = 1 col.) 26

*

1087

#7 The role of the media--and of government

James D. Wilson: The principle government body that grapples with the problems information technology poses is, of course, the Federal Communications Commission, whose statutory authority was set down in an act of Congress in 1934 -- a time when the chief concern of most people when they thought about the electronic aspect of information sources was to insure that one broadcaster would not electronically interfere with another broadcaster.

That statutory peg, plus a good deal of loose language surrounding it, have provided in subsequent years an opportunity for the courts and various commissions to expand their range of interest to a point where now we have a very substantial intermix of government constraint and regulation on the one hand, and private initiative on the other hand.

This act and the equally dated copyright act of 1902 pose interesting problems in that neither of these pieces of legislation anticipated the technological realities of today. I hope that during the next decade we can take a clearer look at the regulatory structure we have and ask how -- by more precise language, better practice, and new modes of departure -- we can insure that the public obtains maximum advantage from the new technologies that are before us.

(2 sides = 1 col.)

*

1081

Ulric Haynes, Jr.: The superb job of news coverage done by the media without much coverage of hopeful solutions of the problems they report must contribute to individual and social turbulence.

As a result of information technology there has also been a dangerous increase in the amount of vicarious or second-hand knowledge available to the individual. The resultant lack or decrease of first-hand experiential knowledge causes the individual to deal with many important problems and decisions in a detached manner -- to the detriment of what I would consider good judgment based on the realities of the situation and on the sensitivity that is born of involvement.

Clay T. Whitehead: We have to realize that when we structure the information business, we ~~also~~ structure the framework for the expression of ideas in our society and the use of information in our economy. We'll have to think of access that encourages diversity and quality in the sources of information, as well as in the way the information is utilized -- access that benefits individual human beings and small businesses as well as large institutions, access that minimizes social polarization rather than aggravates it, access that avoids development of a new class division between

(2 sides = 1 col.)

*

the information-poor and the information-rich before that kind of division can occur. It is obvious that there are many uncertainties in evaluating what is the best way of providing access of all these kinds.

Richard Harwood: One characteristic of the news industry from the print standpoint is that, with the exception of very few communities, most newspapers have achieved a monopolistic position in their local markets. I see nothing in the way of technology that is likely to change that situation, but by their nature these local papers are labor intensive enterprises that require substantial revenues to function and there's simply no technology in the offing that is going to change that character.

News broadcasting, on the other hand, is characterized by considerable local competitiveness, which CATV will intensify. And with regard to the question of access, I would venture to say that we probably have more diversity of information in this country than in any country in the world. And that access is increasing as we develop, particularly in the periodical field or in broadcasting, more and more special interest units.

Conversely, it seems to me that in their efforts to maintain mass markets, local newspapers

(2 sides = 1 col.) *

and networks are being forced by various social pressures to broaden the range of their coverage, and are becoming more open and accessible to all elements in the population.

I think there is no indication at the present time that limitations on access by the print media are sufficiently severe to have generated strong public pressures for governmental intervention or for the enactment of access legislation. The FCC, I think, is moving in the other direction, toward more regulation of broadcasters and to more severe interpretations of the fairness doctrine. One development that will affect access and the problem of diversity, I believe, is a growing interest on the part of the news industry in some concepts of self-regulation, concepts of professional standards that are being developed as an alternative to access legislation.

Can we protect individual privacy and still promote social growth?

Haynes: Is there any need to protect the legions of people who are part of the revolution of information technology -- but don't know it? I'm talking about the unwitting victims of commercial advertising in its broadest sense, of violence in film and TV, the perpetration of socially deleterious stereotypes in some of the media.

Paine: Priority efforts should be made to reduce the literacy gaps which exist in information technology between top management and technologists so that communications do not break down between today's experienced management who use empirical judgment to solve problems and the emerging management generation who will increasingly substitute decision models for experience; between producers and users of information technology; and between experts and the public so as to dispel myths, reduce threats (real or imagined), and prevent unwarranted antagonisms against information technology.

5 ~~Mayford~~ Roark: We've been talking about computers as if the computer had somehow the qualities of leadership, as if the computer could take us somewhere--take us to a new utopia. The computer, of course, is nothing of the sort. The computer is what I like to call the great multiplier, and

in human terms it can take whatever we're inclined to do and multiply the effectiveness of it. And if, in corporate life, our management is one which tends to be uncertain and indecisive, then the management armed with computers can be 10 times as uncertain and indecisive. So the computer has no qualities of its own. It's a great neutral, and our problems therefore in business and industry is going to be trying to bring selectivity, order and structure into the use of these information technologies.

Paine: The computer is merely a tool, like the pen or the typewriter, but in the wrong hands it can inflict hardship, even oppression, with ruthless efficiency. Society must resist any erosion of rights as confidential data are computerized and merged into huge national information systems. The initiative here is to determine those areas where regulations can be privately or self-administered and those where they may be publicly administered by government.

Haynes: I think There are dangers, by far the greatest being the impact of information technology on the traditional right of individual privacy. With or without the consent of the individual, information technology permits more organizations to amass more personal data on individuals, and it similarly permits others to use those data for ends that are often detrimental to the individual. I'm speaking specifically of personnel data banks, law enforcement agencies, consumer credit organizations, banks, insurance companies, government, the armed services, hospitals, licensing agencies, schools, and so forth. Do individuals no longer have the right to withold information about themselves or to determine to whom it should be given?

Daddario: The basic data needed to support social legislation and policy are accumulated every 10 years by the Census, and in income tax returns and Social Security payments on a yearly basis. We recognize, of course, that there is national and Congressional opposition in putting together this information because of the invasion of privacy factor. The Congress and the people don't trust the agencies of the government; they don't believe that if this information is made available the individuals will be protected. That is, of course, a problem. But unless we are able to utilize such information, society will be unable to meet the complex demands placed on it, and we as individuals will lose our privacy anyway.

Technology and democracy are not necessarily compatible. An autocratic society could impose the decision upon itself to put together all those computer centers and to impose other technological innovations on itself, but we must go through the slow process of public education and choice.

George G. Bennett: I think that if, in fact, the various data bases that exist within the country today were linked by some data transmission schemes, it would be fairly simple conceptually, although reasonably difficult physically, to have policy-makers have access to all of the data in any way necessary for policy decisions and yet maintain the individual's privacy.

There would need to be rules. For example, it could be made a Federal felony to transmit Social Security numbers, say, and other data related to individuals in the same basic transmission, because then one computer system or center could thus identify individuals to another center. Instead, the data requested could be returned, but without identifying numbers. With that one simple rule, and without the construction of any centralizing switching force that would let a given individual collect the data in one place, there should be no objections.

With that one rule, it would be possible to establish a network among the Federal agencies in such a way that for policy-making decisions the data could be integrated, but in fact the potential for invasion of privacy would be virtually nil and the potential for some ominous force from outside the U.S. to come in and have access to all our data not exist--because the data, in fact, would be separated.

Michael: In order to keep information technology from taking a monstrous course we're seeing some action. One kind of action is the deliberate infiltrating of an organization for a few years until one has the information necessary to leak that might demonstrate how that organization has been misrepresenting itself. The Pentagon and the Food and Drug Administration have experienced this, and I'm certain we'll see more of it simply because there are more people who are associating themselves more with the problems of society rather than with the survival of the organization they are affiliated with.

I don't mean to suggest that the only way the individual's access to information can be protected is at the expense of the corporation by invasion, infiltration and so forth. What I want to point out is that all organizations operating in conventional ways, government agencies as well as corporations, set their own survival ahead of the welfare of the environment they are presumably related to. And that survival, if we follow the usual procedures that have been successful, is one in which information is restricted for the use of the organization and the aggrandisement of its effective control of its environment. If one of the devices that has to be used is to attack and go in and get that information, then I would hope that over time such action might encourage some organizations to see a virtue and a necessity in soliciting feedback and putting out information, rather than equating survival with the restriction of information.

Whitehead: There is a basic interest in privacy which society must protect. However, it is also true there is a broad social interest in disclosure. There may be times when society must obtain some private information in order to act knowledgeably for the solution of social problems. If we absolutely prohibited all data acquisition~~ed~~ about individuals, more would be lost in terms of foregone social capability than would be gained in terms of greater individual privacy. There cannot

(2 sides = 1 col.)

be a single monolithic guide to policy on privacy.

There are certain kinds of information, or "zones" of privacy which should be protected from all intrusion. But beyond that, there is no single best resolution of the competing interests of privacy and disclosure that applies either for each individual or each kind of situation.

Government, however, does have a role in assisting in shaping the utilization of information technology so that once an individual or social decision is made, there is an effective mechanism for carrying it out. I think it's important to note that this will not necessarily require new institutions. Indeed, the basic objectives of diversity, choice, access, and privacy are more likely to be achieved in our system of private rights and legal procedures for enforcing them than they are through any new or expanded Federal bureaucracy. We ~~just have to~~ should pay attention to how to update ~~those~~ existing systems and ~~those~~ to enhance our capabilities to meet the new situation.

Terry Sanford: I don't think information technology is going to make Congress or government any more effective of itself. Nor do I think it's going to make government more repressive or coercive. I would suggest that it might make it less coercive and less repressive as it gives us the tools for more people to know what's going on.

I certainly believe that it will not of itself create more elites, and if it does, this is nothing new in American society. We've had elites all the time from Revolutionary days throughout the history of this nation. Far from developing this, we might very well now have the tools to spread out the power of decision-making to a greater extent than ever before.

A self-renewing government with the capacity to bring together information to monitor what's going on in all of the various programs gives us again a capacity to have the kind of government that keeps up with the problems and even anticipates them. We've now put together, for example, what normally would have been called a library at the Duke Medical Center. We are going to call it a Communications Center. It gives us a new capacity in the delivery of health care throughout the whole southeastern part of the country. Again, ~~10~~ ten governors have joined what we call the Southern Growth Policies Board, organized for the first time because of this new technology. We can find out and plan not to make the same mistakes the cities of the north have made.

Because we've got this technology, we can find out what those decisions should be, and we can help educate the people to support that kind of decision. So I don't see us moving to an elitist, repressive, coercive society. Rather, I see all of this new technology leading to the kind of federalized, open, reorganized, revitalized, self-renewing government that we ought to have.

~~Clay T.~~ Whitehead: While I don't believe that information technology will bring about any utopian ideal, neither do I think that machines necessarily destroy human values. It's people who destroy human values. Information technology is the tool that we have placed in our own hands. We can use it to enhance our own abilities and our own potentials to enhance the importance of the human individual. We can use it for all those constructive things just as easily as it can be used to degrade them. To do so, our stress should be on developing the kind of institutions for the technology that serve this positive function, and not on creating defenses to meet a conjured-up parade of horrible possibilities.

NY - Conf Bd speech

FEB 2 1972

Mr. Charles M. Darling, III
Director
Planning and Forecasting Public Affairs
The Conference Board
845 Third Avenue
New York, New York 10022

Dear Mr. Darling:

Thank you for sending me an advance copy of "Information Technology: Some Critical Implications for Decision-Makers."

The report looks interesting and comprehensive. I am sure that my staff and I will find it most useful.

I look forward to meeting you on the 15th.

Sincerely,

Clay T. Whitehead

Clay T. Whitehead

cc:
DO Chron
DO Records
Whitehead (2)
Mansur
Joyce
Lamb
LKS Subject
LKS Chron

LKSmith:jom 2/1/72

845 Third Avenue
New York, N. Y. 10022
(212) 759-0900

THE CONFERENCE BOARD

January 25, 1972

Mr. Clay T. Whitehead
Director
Office of Telecommunications Policy
Executive Office of the President
The White House
Washington, D.C.

Dear Mr. Whitehead:

Advance copies of the final report-- "Information Technology; Some Critical Implications for Decision-Makers" have just been received from the printer.

I am taking this occasion to send to you your personal copy of the report, and once again to express our deep appreciation for your participation in the February 14-15th conference on this subject here in New York City a final agenda of which is enclosed.

Sincerely yours,

Charles

Charles M. Darling, III
Director
Planning and Forecasting
Public Affairs

Routing Slip
Office of Telecommunications Policy

Date: FEB 4 1972

From:
To:

✓	Whitehead, C. T.	C - Lonly
	Mansur, G. F.	
	Babcock, C.	
	Buss, L.	
	Carruthers, B.	
	Cooke, A.	
	Culpepper, C.	
	Dean, W.	
	Doyle, S.	
	Enslow, P.	
	Goldberg, H.	
	Hailey, L.	
	Hall, D.	
	Hinchman, W.	
	Jansky, D.	
	Johnston, B.	
	Joyce, C.	
	Lamb, B.	
	Lasher, S.	
	Lyons, W.	
	McCrudden, M.	
	Nelson, R.	
	Owen, B.	
	Raish, L.	
	Robinson, K.	
	Scalia, A.	
	~~Smith, L.~~	~~Resigned~~
	Thornell, J.	
	Urbany, F.	
	Ward, D.	

Remarks:
Credentials in
attached envelope.

10 - 7

845 Third Avenue
New York, N. Y. 10022
(212) 759-0900

THE CONFERENCE BOARD

February 1, 1972

Mr. Clay T. Whitehead
Director
Office of Telecommunications Policy
Executive Office of the President
Washington, D. C. 20500

Dear Mr. Whitehead:

The plans for our forthcoming meeting on the "U. S. in the Information Society of the 70's and 80's" are progressing rapidly.

The luncheon session on February 15th will begin with a reception at 12:00 Noon in the Hilton Room on the lobby floor of the Waldorf. This will be followed by luncheon and your address.

Enclosed are your necessary conference credentials.

I look forward to meeting you soon.

Cordially yours,

John Worssam

John G. Worssam
Assistant Conference Director

Enclosures

"ASK THE CONFERENCE BOARD"

In *New York*: 212-759-0900
Cable: NICBOARD

845 Third Avenue
New York, N. Y. 10022
(212) 759-0900

THE CONFERENCE BOARD

February 1, 1972

Mr. Clay T. Whitehead
Director
Office of Telecommunications Policy
Executive Office of the President
Washington, D. C. 20500

Dear Mr. Whitehead:

The plans for our forthcoming meeting on the "U. S. in the Information Society of the 70's and 80's" are progressing rapidly.

The luncheon session on February 15th will begin with a reception at 12:00 Noon in the Hilton Room on the lobby floor of the Waldorf. This will be followed by luncheon and your address.

Enclosed are your necessary conference credentials.

I look forward to meeting you soon.

Cordially yours,

John Worssam

John G. Worssam
Assistant Conference Director

Enclosures

4/1-2

Speech
2/15

OFFICE OF TELECOMMUNICATIONS POLICY
EXECUTIVE OFFICE OF THE PRESIDENT
WASHINGTON, D.C. 20504

January 11, 1972

To: Tom Whitehead

From: Phil Enslow Phil Enslow

Subject: Title for speech before the Conference Board, New York, February 15, 1972

On 15 February you will give the wind-up luncheon speech to the Conference Board conference "United States in the Information Society of the 70's and 80's."

They would like to have a title; however, that is not essential. A decision is required by 12:00, Wednesday, January 12.

Suggested titles (selected so as not to limit you on what the talk might cover):

REMARKS OF (no title)

INFORMATION-COMMUNICATION --- RESOURCE OF THE FUTURE

INFORMATION --- POLICY $\left\{\begin{array}{c}\text{QUESTIONS}\\ \text{IMPLICATIONS}\\ \text{ISSUES}\end{array}\right\}$ FOR THE $\left\{\begin{array}{l}\text{FUTURE}\\ \text{80'S}\end{array}\right.$

INFORMATION --- IMPACT ON COMMUNICATIONS POLICY

✓ INFORMATION AND COMMUNICATIONS ~~[illegible]~~

INFORMATION --- THE PROBLEM OF THE 80'S

FEB 2 1972

Mr. Charles M. Darling, III
Director
Planning and Forecasting Public Affairs
The Conference Board
845 Third Avenue
New York, New York 10022

Dear Mr. Darling:

Thank you for sending me an advance copy of "Information Technology: Some Critical Implications for Decision-Makers."

The report looks interesting and comprehensive. I am sure that my staff and I will find it most useful.

I look forward to meeting you on the 15th.

Sincerely,

Clay T. Whitehead

cc:
DO Chron
DO Records
Whitehead (2)
Mansur
Joyce
Lamb
LKS Subject
LKS Chron

LKSmith:jem 2/1/72

845 Third Avenue
New York, N. Y. 10022
(212) 759-0900

THE CONFERENCE BOARD

January 25, 1972

Mr. Clay T. Whitehead
Director
Office of Telecommunications Policy
Executive Office of the President
The White House
Washington, D.C.

Dear Mr. Whitehead:

Advance copies of the final report-- "Information Technology; Some Critical Implications for Decision-Makers" have just been received from the printer.

I am taking this occasion to send to you your personal copy of the report, and once again to express our deep appreciation for your participation in the February 14-15th conference on this subject here in New York City a final agenda of which is enclosed.

Sincerely yours,

Charles

Charles M. Darling, III
Director
Planning and Forecasting
Public Affairs

Routing Slip
Office of Telecommunications Policy

Date: NOV 3 1971

From:
To:

✓	Whitehead, C. T.	C
	Mansur, G. F.	
	Babcock, C.	
	Buss, L.	
	Carruthers, B.	
	Cooke, A.	
	Culpepper, C.	
	Dean, W.	
	Doyle, S.	
	Enslow, P.	
	Goldberg, H.	
	Hailey, L.	
	Hall, D.	
	Hinchman, W.	
	Jansky, D.	
	Johnston, B.	
	Joyce, C.	
	Lamb, B.	
	Lasher, S.	
	Lyons, W.	
	McCrudden, M.	
	Nelson, R.	
	Owen, B.	
	Raish, L.	
	Robinson, K.	
	Scalia, A.	
	Smith, L.	Original
	Thornell, J.	
	Urbany, F.	
	Ward, D.	

Remarks:

New York, N. Y. 10022
(212) 759-0900

3/14-15

THE CONFERENCE BOARD

November 1, 1971

Mr. Clay T. Whitehead
Director
Office of Telecommunications Policy
Executive Office of the President
The White House
Washington, D.C.

Dear Mr. Whitehead:

This week I extended to you by telephone an invitation to play an active role in our forthcoming conference, "The U.S. in the Information Society of the '70's and '80's," to be held on February 14-15, 1972, at the Waldorf-Astoria, in New York City. In this more formal way may I say how pleased we are that you will be the luncheon speaker for the second and final day of our conference. The advance agenda is now being prepared on the basis of the text which I am enclosing for your immediate information. Briefly, I would like to explain the genesis of the conference, its purposes, and the role we hope you will play in it.

Background

Closely associated with The Conference Board is a group of thirty-seven chief executives from business, universities, public institutions, and foundations known as the Senior Executives Council. Robert O. Anderson is its chairman.

This Council sponsors, and The Conference Board directs, a series of studies under the general heading of "Management of Change." The purposes of the studies are fourfold: (1) to identify those trends and developments likely to have significant implications for individuals, business, and other institutions in the near future; (2) to evaluate the character and implications of these developments; (3) to isolate those issues or problem areas in need of attention today; and (4) to offer alternative initiatives which leaders might take to utilize the opportunities implicit in such issues, and to manage problems effecting the national interest.

During periods of dynamic change, it is necessary to clarify our perspectives, re-examine our goals and priorities, and adjust our directions. Therefore, some of the studies focus largely on the broader over-arching issues. Still others deal with more specific problem areas. All consider new demands up management and new roles which leaders will be called upon to play. Each study is composed of papers devoted to important aspects of the main topic. Each paper is written by an authority who, in turn, is supported by a panel of experts. All reports are made public.

Since it is the responsibility of leaders to anticipate future as well as to act on current problems and opportunities, there is an effort on the part of study teams to examine short, mid, and longer-term trends concurrently. Therefore, important aspects of these reports constitute "responsible conjecture," and one would not expect nor find complete unanimity on the part of panel members on all findings. By the same token, the findings are not necessarily endorsed by the Senior Executives Council nor by The Conference Board.

The important thing to remember is that these findings are information inputs. If they are dismissed, hopefully, it will be a reasoned decision. If some topics appear to have been ignored or treated too lightly, then we should all give these questions the attention they deserve.

The Study: Information Technology

The first Council-sponsored study is entitled, "Information Technology: Some Implications for Decision-makers." The report sets forth the information context for the Seventies and Eighties and speculates on the possible implications of this context for business, education, political institutions and individuals.

Max Ways opens the report by citing the policy dilemma facing the United States. Each author thereafter, in a paper prefaced by a summary, discusses an aspect of the subject. In the last chapter, John McHale provides a graphic overview of some of the more important or difficult concepts in the report. A set of the background papers is enclosed for your personal use. The edited version will be published just prior to the conference.

Plans are being considered for publishing a follow-up report containing the ten problem areas emerging from the background papers together with the more important initiatives available to leaders and individuals today. Such a report may include the proceedings of this conference.

The Conference: U.S. in the Information Society

We believe this conference will be distinctive; in part, because it grows out of just-completed study; in part, because the study looks at information technology as an "industry" and as a national resource; and in part, because the national interest may be involved.

The research team has completed its task. Now it is the task of the conferees to assess and amplify the findings and meanings as decision-makers and citizens, for whom the report is intended. During the first day, the task is to assess the implications for traditional institutions and concepts. During the second day, the purpose is to determine how well we are likely to manage information technology as an "industry" and a resource, where we are likely to be competitive in this area, and what we must do now if we are to control and not be controlled by technology.

Two approaches can be taken to decide the type of speech you might give. One would be to make a major policy statement pertaining to telecommunications. The other would be to select one or two major areas from the report and to discuss them from your vantage point. However, there is no need at this immediate date to decide on your topic. Mr. Theodore Smith will be in touch with you.

Theodore Smith, formerly Executive Vice President, R.C.A. Corporation, has agreed to serve as liaison between my office and the panel chairmen with whom he will be in contact in the very near future to provide additional information, answer questions, and assist in the further development of the conference. Mr. Smith can be reached in Philadelphia (215-896-8667) or through my office here at The Conference Board.

General

One of the dangers in most discussions on the subject of information technology is the tempration to think of "technology" only as hardware or as research, and to give inordinate attention to the role of the computer. As a preface to the report begins to say, we take a more comprehensive view, and we are anxious to hold to it.

Discussion characterizes our form of presentation in this conference. Yours will be the only speech during the day and a half of proceedings. Since it does cap the conference, I could see one of at least two possibilities: (1) the occasion for a major policy statement relating to this subject, for here is the forum and the focus; (2) if not a policy statement, then important observations as to priority that might be attached to considerations put forward in the study and at the conference; (3) something else, providing it turns on a point or points emerging from the study or discussions. In short, we hope you agree that this is not just another conference but in fact a particularly timely and important occasion or setting for your comments.

We would ask that you advise us by January 10th of the title of your address so that we may include it on the final conference agenda.

We wish to thank you again for consenting to be our luncheon speaker in this conference, one which we believe can amplify the dialogue on a subject of considerable importance to our nation.

Sincerely yours,

Charles Darling.

Charles M. Darling, III'
Director, Planning and Forecasting
Public Affairs Research

CMD:bf

Enclosured
1. The Conference Agenda
2. The Information Technology Report

OFFICE OF TELECOMMUNICATIONS POLICY
WASHINGTON

Eva

Original for you - plus copy. Brian is doing the details!

Linda

Enslow says
we have to
give Mr. Darling
an answer
by 9:30
Wed morning

SPECIAL
SERVICE

OFFICE OF TELECOMMUNICATIONS POLICY
EXECUTIVE OFFICE OF THE PRESIDENT
WASHINGTON, D.C. 20504

October 26, 1971

To: Mr. Whitehead

From: LTC Enslow

Subject: Request for Luncheon Speech

I called Mr. Darling of the Conference ~~Bureau~~ Board and had him describe in detail what the background of this conference is. The study was conducted under the guidance of the Senior Executive Council of the Conference Board, an extremely prestigious group of individuals who are actively involved in the work. One of their major interests in this study is to gain a better understanding of the emerging issues that will be of great importance.

The conference to be held on 14 and 15 ~~October~~ Feb will be a series of panel discussions on specific topics within the study. The study will be published in January and will consist of papers examining specific subjects as well as proposed iniatives in each of these areas. USIA is considering translating the book into French and the conference will be video taped perhaps for educational TV.

Some of the panels that will be held will be regulation, anti-trust, the individual: enriched or impoverished, competitive position of the U.S. in world trade in this area, managing resources, etc.

I told Mr. Darling that I was sure that you were not interested in moderating the panel on regulation; however, you might be interested in being the luncheon speaker on the 15th. This will be the only speaker of the conference and the conference ends with this lunch.

Considering the caliber of the auidence and the other participants in the panels, I recommend that you give serious consideration to accepting the invitation to speak at the luncheon.

Mr. Darling needs an answer before 5:00 this afternoon.

Phil

Philip H. Enslow Jr.
Lieutenant Colonel

Tuesday 10/26/71

MEETING
2/15/72

9:45 Checked with Ed David's secretary. She indicated they have been in touch with Charles Darling and Reginald Holland many times -- the Conference Board is a legitimate thing. Dr. David has spoken and met with them several times.

1:50 Mr. Darling called again. He is under extreme pressure. Had a deadline of last week -- needs to contact three others for their participation. Suggests either being a panel chairman or luncheon speaker.

3:30 Requested Enslow to talk to Mr. Darling; he has checked and is writing a note to urge Mr. Whitehead to talk with Darling and most likely to be the luncheon speaker.

Thursday 10/21/71

(212)Plaza
9-0900

5:00 Charles Darling called again to talk withyou. Wanted very much to talk with you personally -- to discuss your being a luncheon speaker at a conference (the first of its kind in this country on information technology overrun). Would be held on February 15 at the Waldorf-Astoria in New York. There will be approximately 400 Chief Executives, including people from Case Western Reserve, IBM, Isaac Auerbach, Jean Fubini, Dr. David, Paul Baran, Tom Wikker, Jim Webb, Tom Paine, Robert Anderson, Emilio Daddario, John Gardner.

This will be a conference on a $250,000 study completed by some very eminent people -- report to be out in January. They would prefer you speak on something within the study itself (you would receive an advance copy). Study sponsored by Henry Ford, Rockefeller -- overview of information technology...sponsored by some 25 organizations.

Stanton and Fubini both suggested that you would be a very thoughtful speaker to wind up the conference -- not in a narrow way but in a broader way. Not interested in defending the Administration or with dealing with public interest. You can probe in ways that let the chips fall where they may. You could take the opportunity for a major policy statement if you so desire. Yours would be the only major speech -- and would be on the final day of the conference. Would apparently be sent to Paris, translated and put out through USIA -- Fortune Magazine - Maxways translations.

Indicated National Academy had heard of it; mentioned Bob Lowe was to have lunch with Mr. Darling on the following day in connection with the report.

He feels it is quite important that he talk with you about this.

Tuesday 10/19/71

3:45 Charles Darling, Conference Board of New York, called to talk to you about a study and meetings concerning information technology that Dr. David and others are participating in.

He said it was quite important that he talk with you today (before 5:00) and that you were the only one who could help him.

(212) PL9-0900

calling again

O/

OFFICE OF TELECOMMUNICATIONS POLICY
EXECUTIVE OFFICE OF THE PRESIDENT
WASHINGTON, D.C. 20504

October 26, 1971

To: Mr. Whitehead

From: LTC Enslow

Subject: Request for Luncheon Speech

I called Mr. Darling of the Conference ~~Bureau~~ Board and had him describe in detail what the background of this conference is. The study was conducted under the guidance of the Senior Executive Council of the Conference Board, an extremely prestigious group of individuals who are actively involved in the work. One of their major interests in this study is to gain a better understanding of the emerging issues that will be of great importance.

The conference to be held on 14 and 15 ~~October~~ Feb will be a series of panel discussions on specific topics within the study. The study will be published in January and will consist of papers examining specific subjects as well as proposed iniatives in each of these areas. USIA is considering translating the book into French and the conference will be video taped perhaps for educational TV.

Some of the panels that will be held will be regulation, anti-trust, the individual: enriched or impoverished, competitive position of the U.S. in world trade in this area, managing resources, etc.

I told Mr. Darling that I was sure that you were not interested in moderating the panel on regulation; however, you might be interested in being the luncheon speaker on the 15th. This will be the only speaker of the conference and the conference ends with this lunch.

Considering the caliber of the auidence and the other participants in the panels, I recommend that you give serious consideration to accepting the invitation to speak at the luncheon.

Mr. Darling needs an answer before 5:00 this afternoon.

Phil

Philip H. Enslow Jr.
Lieutenant Colonel

Enslow says
we have to
give Mr Darling
an answer
by 9:30
Wed morning

SPECIAL
SERVICE

Tuesday 10/26/71

MEETING
2/15/72

9:45 Checked with Ed David's secretary. She indicated they have been in touch with Charles Darling and Reginald Holland many times -- the Conference Board is a legitimate thing. Dr. David has spoken and met with them several times.

1:50 Mr. Darling called again. He is under extreme pressure. Had a deadline of last week -- needs to contact three others for their participation. Suggests either being a panel chairman or luncheon speaker.

3:30 Requested Enslow to talk to Mr. Darling; he has checked and is writing a note to urge Mr. Whitehead to talk with Darling and most likely to be the luncheon speaker.

MEMORANDUM OF CALL

TO: CTW

☑ YOU WERE CALLED BY— ☐ YOU WERE VISITED BY—

Mr Darling

OF (Organization)

☐ PLEASE CALL ⟶ PHONE NO. CODE/EXT.

☑ WILL CALL AGAIN ☐ IS WAITING TO SEE YOU

☐ RETURNED YOUR CALL ☐ WISHES AN APPOINTMENT

MESSAGE

about 11:30.

talk w/ David & Enslow

RECEIVED BY	DATE	TIME
Judy	10/26	9:25

STANDARD FORM 63
REVISED AUGUST 1967
GSA FPMR (41 CFR) 101-11.6

GPO : 1969—e48—16—80341-1 332-389

63-108

Thursday 10/21/71

5:00 Charles Darling called again to talk withyou. Wanted very much to talk with you personally -- to discuss your being a luncheon speaker at a conference (the first of its kind in this country on information technology overrun). Would be held on February 15 at the Waldorf-Astoria in New York. There will be approximately 400 Chief Executives, including people from Case Western Reserve, IBM, Isaac Auerbach, Jean Fubini, Dr. David, Paul Baran, Tom Wikker, Jim Webb, Tom Paine, Robert Anderson, Emilio Daddario, John Gardner. (212)Plaza 9-0900

This will be a conference on a $250,000 study completed by some very eminent people -- report to be out in January. They would prefer you speak on something within the study itself (you would receive an advance copy). Study sponsored by Henry Ford, Rockefeller -- overview of information technology...sponsored by some 25 organizations.

Stanton and Fubini both suggested that you would be a very thoughtful speaker to wind up the conference -- not in a narrow way but in a broader way. Not interested in defending the Administration or with dealing with public interest. You can probe in ways that let the chips fall where they may. You could take the opportunity for a major policy statement if you so desire. Yours would be the only major speech -- and would be on the final day of the conference. Would apparently be sent to Paris, translated and put out through USIA -- Fortune Magazine - Maxways translations.

Indicated National Academy had heard of it; mentioned Bob Lowe was to have lunch with Mr. Darling on the following day in connection with the report.

He feels it is quite important that he talk with you about this.

Tuesday 10/19/71

45 Charles Darling, Conference Board of New York, called to talk to you about a study and meetings concerning information technology that Dr. David and others are participating in.

He said it was quite important that he talk with you today (before 5:00) and that you were the only one who could help him.

calling again (212) PL9-0900

O/