

MANAGEMENT IN A DYNAMIC AGE

30 September 1964

CONTENTS

	<u>Page</u>
INTRODUCTION--Major General William S. Steele, USAF, Deputy Commandant, Industrial College of the Armed Forces	1
SPEAKER--Dr. Courtney C. Brown, Dean, Graduate School of Business, Columbia University . . .	1
GENERAL DISCUSSION	13

NOTICE

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Publication No. L65-39

INDUSTRIAL COLLEGE OF THE ARMED FORCES

Washington, D. C. 20315

Dr. Courtney C. Brown, Dean of the Columbia Graduate School of Business, was born in St. Louis, Missouri, on 15 October 1904. After graduation from Dartmouth College in 1926 with the B. S. degree, he spent 10 years in investment management work in New York City before returning to an academic campus to take the doctorate and teach at Columbia University. When World War II intervened, he entered 3-1/2 years of service with the Department of State and the Commodity Credit Corporation. Primarily, his work was that of negotiation with foreign governments and others to procure exportable surpluses of needed supplies for the national war effort. Following the war he was associated with the Standard Oil Company (N. J.), where his duties included serving as Economist, Assistant to the Chairman of the Board, and as a Director of Esso Standard Oil Company. He returned again to Columbia University on 1 February 1954, as dean of the Graduate School of Business. Since that date, he has additionally served for interim periods as vice president in charge of the business affairs of the university and as the Executive Director of the American Assembly. He is a member of the Board of Directors of the American Electric Power Company, Associated Dry Goods Corporation, the Union Pacific Railroad Company, Uris Buildings Corporations, and was a public governor of the New York Stock Exchange, from 1959 to 1962. Additionally, he serves as a Trustee of the Council for Financial Aid to Education, the American Assembly, and as a member of the Executive Committee of the U. S. Council of the International Chamber of Commerce. This is Dr. Brown's first lecture to the College.

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GENERAL STEELE: Gentlemen: During the management phase of Unit I we have discussed the basic principles, concepts, and functions of management, appraised the importance of the humanistic ingredient, and examined such modern management tools and techniques as operations research, mathematical analysis, information systems, network analysis, and computer-based management.

Our subject this morning will embrace an overview of management in today's world and will include a projection of future management concepts and techniques.

Our speaker, Dr. Courtney C. Brown, has unique qualifications which make him ideally suited to address us on this subject. He not only is an outstanding educational leader, being currently the Dean of the Graduate School of Business at Columbia University, but he has extensive experience in the business world and Government, including being a director of four of the Nation's major companies and a former public governor of the New York Stock Exchange.

It gives me great pleasure to introduce him to you this morning.

Dr. Courtney C. Brown.

DR. BROWN: Good morning. Gentlemen: As I have looked over the nature of the program that you have been through, and as I have heard succinctly expressed this morning what you have studied, I have begun to wonder what there is left to say.

I suppose there is always an opportunity, however, to talk about management, the art of getting things done through people. It is a fascinating subject, with many facets.

Since you have explored many of the specific phases of management, I think I will examine some of the environmental factors to

see if we can emerge with an overview that will give us an insight into the kinds of problems that will interest management perhaps during the next decade. Some of them I submit have not been fully apprehended, much less explored.

I will not attempt to provide answers to some of the problems that I will talk about, for the very good reason that I do not know the answers, but there is a tremendous challenge ahead of us. It is not altogether an optimistic picture in some of its aspects. In other of its phases it is highly optimistic, it seems to me.

I would like to start with a premise. The most conspicuous feature of our contemporary time is the fantastic expansion of our research and development work. I am not going to try to cite the data you have all heard on the number of scientists alive today in comparison to the number that existed for the first several thousand years of man's recorded history; the amount of money going into research and development today relative to earlier decades. The figures are highly explosive.

A second premise flows from this first, that perhaps we are on the threshold, in the early stages of a revolution in the technological basis of life.

This is not the first time something of this kind has happened. I suppose it happened in very early times with the discovery of fire, or the wheel, or explosives, the printing press, or the harnessing of steam. All of these technological changes did ultimately result in what we have all come to know as the industrial revolution.

The clustering of these early technologies in the 16th, 17th and 18th centuries created a new basis for life. Now, this did not occur without tremendous strains and stresses. The social pressures and the political changes accompanying those were traumatic, and in a sense they can be thought of, I think, as a measure of the kinds of things that we may be faced with in the next several decades.

Let me back up for just a moment. Since the last war a whole new vocabulary has come into our awareness. We were all talking about the vacuum tube before the war, but the development of the vacuum tube has been dramatic since the war. The transistor is a postwar development. Radar was developed during the war. The

mazer and the lazer, nuclear fission and nuclear fusion were not even words a half-century ago. They began to be words a quarter of a century ago.

I submit that we are beginning to witness the same kind of clustering of fundamental technology as that which resulted in what has come to be known as the first industrial revolution, and that we are probably in the early stages of the second industrial revolution, which may make the first look pale by comparison.

There are some five conspicuous expressions of these fundamental technological changes. I will mention them briefly and then I will go over to some of the implications that they have for management.

One is the shift in the nature of the prime mover. Some 35 years ago a book was written, called "Techniques and Civilization," by Lewis Mumford. The thesis of the book was that every epoch in the history of man was ultimately and fundamentally conditioned by the nature of the prime mover, its ready availability, its cost in terms of human effort, and the characteristics of the energy source. Even in recent years we have seen the shift from coal to liquid hydrocarbons and gaseous hydrocarbons which today are contributing 75 percent of the total energy market. When I was a petroleum economist 20 years ago for the Jersey Oil Company, I think it was only 60 percent. This has been a rapid, rapid change and a depletion of resources. And now we are beginning to see nuclear power come into the range of competitive realization. The figures that have been developed for the Jersey Central Power and Light plant, in Oyster Creek, I think it is, are beginning to look very competitive with coal-fired furnace electric power.

It is just a matter of time, I submit, and a much shorter period of time than we thought just a few years ago, when the abundance of energy at reasonable and comparatively cheap prices will become available through nuclear fission. Just when we will get fusion power in volume, some of you engineers can tell me rather than my attempting to tell you.

That is one of the five conspicuous expressions of this changing underlying technology.

Another is the extraordinary shift that is occurring in the nature of industrial products. No longer are we dependent upon raw materials

to the extent that we were. The substitution of synthetics made from almost limitless supplies of the materials that go into synthetics is beginning to make us wonder whether the Paley Report of a decade and one-half ago really had sufficient imagination. Not only are we shifting among the raw materials, the sources of industrial products, but we are shifting among the products themselves. Many business organizations are today offering on their sales sheets products that account for as much as 50 percent of their total sales or more, that did not exist 10 years before.

The raw material source and the nature of products rather strongly suggest that we are moving into a period of greater abundance.

This leads to the third of these conspicuous expressions of the changes wrought by technology, a change in the competitive patterns that exist within industries and that exist across industry lines. We are beginning to wonder if we can define a market. Is the building supply market the typical list of building supplies, or is it something that now includes fiberglass, for example.

I was going out to the World's Fair with Harold Beckenstein recently, and I asked him if he had an exhibit out there. He is the head of Owen Corning Fiberglas Corporation. He said, "no, we haven't got an exhibit, but 12 or 13 of the exhibits are made out of fiberglass, including some of the major exhibits." This is going to have a great impact on our thinking with respect to the flexibility that management must develop in connection with its whole program of production and sales.

The fourth area of basic change is in something that you have spent a lot of time thinking about and talking about, namely, information technology. The combination of rapid data processing with more sophisticated mathematics has gone far already to enhance the effectiveness of human effort, and within limits it is changing the nature of the management job. I dare say you have traced the changes that have occurred in the thinking and writing about management from Taylor's "Scientific Management" where we began to program the job of the man on the workbench, to the great emphasis on participative management and the ideas of decentralization, of the allocation of authority as far down the line as you can go. Now we are beginning to wonder whether the greater precision and the more effective tools of analysis that are available to us may not

move Taylor's programmed management from the workbench into the front office, at least into the offices of our middle managements, the vice presidents.

The rapid processing of vast volumes of information is making it more feasible for the men in the front office to make more of the decisions. The application of statistical and mathematical methods to decision making is developing so fast that most of us who got our education some years ago are having an awfully hard time keeping up. The impression I have of it is that this is an area of decision making that is far more effectively applied to the production process than it has been to other phases of management.

The technique of simulation is one that the front office, I think, is better able to understand in most cases than some of the other procedures. But it is too early, I submit, to say what the basic effect of this is going to have on the structure of organizations and on the basic theories of management. Let us just say that there is a catalyst at work here that is going to change a lot of things. What the precise contours of the change will be I think we must defer for a few more years before trying to foresee precisely.

The fifth and last of these expressions of the technological revolution that is underway is in some respects perhaps the most important, namely, our ability to produce more with fewer man-hours. We have learned to automate our machines with electronic controls, with feedback, and with self-adjusting mechanisms that are making them effective production units with very few men indeed.

Just 3 weeks ago I took a field trip as a board member of a company that is building a new hydraulic installation on the Roanoke River in Virginia, which will develop 540,000 kilowatts when it is finally finished. There are two dams. On the down-river dam there is just one man who has a house up on a hill and he is available if something goes wrong. The major installation is going to have a good many more people than that, maybe 25 or 30, but the unit will be controlled on an interconnecting computer that will control the power production in the whole system. This is located in Dayton, Ohio. This is just one evidence of the kind of thing that is rapidly coming into focus.

On the other side of this, let me say that we have not seen this as yet in our data on productivity. We have not had the dramatic upward change of direction in the curves of productivity that some of this would imply. I rather suspect we will begin to see it more visibly in the immediate years ahead. But you can get some feeling of it by looking backward just a bit.

In the last 15 years our agricultural production has gone up 10 percent and the number of people working on the farms has gone down 25 percent. If we go still further back we see that this is simply a projection of earlier trends. In the last 15 years in manufacturing our production has gone up 30 percent--these are rounded figures--and the number of jobs have remained about stable. There have been very few jobs added in manufacturing and a diminution of jobs in agriculture. There has been an increase in service jobs and in government jobs, but some close observers are beginning to wonder whether this technology is not finding increasingly frequent opportunities of application in the service fields.

Another way of putting this and comparing this situation with the one that existed in the first industrial revolution: At that time the application of steam power enhanced the muscle power of man. Today the application of our new technology is not only enhancing the muscle power of man at accelerating rates but is enhancing his mental power as well.

The startling consequence, when we reflect about it, that has such puzzling implications is that we are rapidly approaching an affluent society. This is not true throughout the world. I am talking primarily about the conditions that exist in this country and, with gradations of degree, that are beginning to show up in some other parts of the world.

We are certainly approaching a different society as well as an affluent society. One author recently characterized it as a massive shift from the blue-collar, manual worker to white-collar services, from man-hours to computer seconds, from saving to spending. This is the dynamo of the economy, a shift that turns the theories of Ricardo upside-down.

To make this thing still more complicated in our time we have some strange things happening in demography. This would be a hard

enough adjustment if we had a straight curve on the population scale, but we have not, as you know. The war intervened there also, and the babies that were born in 1946 and 1947--and there was a large increase, as you know, with the returning servicemen, and, I suppose, the returning warriors from the battle of Washington, of which I was one--these babies are just beginning to hit the labor market now and, incidentally, the colleges.

Whereas to stay even with the situation we have had to create until recent years about 800,000 jobs a year. Now, after attrition, retirements, and everything else, we suddenly find ourselves with a 50 percent increase in requirements to 1,200,000 jobs a year. We are not doing it. In other words, we have two forces at work. One is technology and the other is demography, which is only indirectly related to technology.

What does all this mean for the management job as we look down the road? There are four matters, it seems to me, that are worth some of our time, regarding the prospective shifts in management interest that are implied in this. The most obvious is that management must become increasingly concerned with the task of distributing surpluses in contrast with the job of processing scarce products. We are getting pretty far down the road in licking the problem of production. Agriculture was perhaps the first major field in our society--and this is not particularly well known--to begin to reach the point of satiation. The technical advances in agriculture, relative to the antiquated methods of agriculture, have been phenomenal, and we have been working with chronic agricultural surpluses for a long time in this country. Not so in other parts of the world--India, for example.

Bituminous coal is becoming an increasingly difficult problem. You see it expressed politically in our discussions of Appalachia. Some of the people who are trying to make a living in the textile business would, I think, include their activity in the field of surpluses, undesired, unwanted surpluses. Even the services of the corner merchant have become surplus in his relationship to other means of distribution.

The second shift--the first being the importance of getting rid of product in contrast with the job of producing--is that we are probably going to have to change our fundamental economics. Our attitudes and our policies have been built over the years on a rationale

designed to cope with scarcity. Our attitudes toward competition and monopoly have been built on the classical formulation of free markets; free markets that would provide the barometer for individuals seeking their enlightened self-interest; shifting their resources and efforts from one activity to another; free markets that would ultimately distribute to each of us a reward related to our contribution; and free markets that protected the public from exploitation.

These free markets operate well only in cases of scarcity, and to the extent that we are compelled to cope with problems of abundance, free markets are intervened either by Government or by some other policies or programs. I again cite agriculture. To what extent do we have free markets in agriculture? To what extent is it possible to have free markets in agriculture?

To the extent the operation of competition in a system of free markets ceases to be effective, it has been general policy to expect the Government to intervene and to develop a set of rules that would guide public policy and personal behavior.

As a member of the business community, and I regard myself as such, I find this a most deplorable prospect, and yet I do not know exactly what to do about it. I do not like the notion that we are going to become a society of rulemakers, instead of a society that is responding intelligently, voluntarily to changing motivations, incentives, and circumstances in free markets.

One of the reasons I dislike this is not that I distrust Government officers. I would be a poor man to be on this platform if I did, having been a Government officer myself. But, one of the conditions that are so essential to the adaptation to this technological revolution is mobility and flexibility in our economy and in our society, and rulemaking is the worst of all possible ways to achieve that fluidity.

I will just ask one question in passing. Has abundance begun to strangle the free economy operating in a free society? I do not know. I see it in agriculture. I see it in the railroad business. I am a director of a railroad, and I know full well that when we pontificate about some problem at the board table the chances of our conclusions becoming effective are very small, because there are so many layers of rules that we must work through to make effective and to translate

into action the basic policies that we would like to follow. This is the third of the changes that I think are going to occupy the attention of management, this question of how to adjust their operations to the problems of abundance and surpluses in contrast to the problems of scarcity.

All these things are not going to be of equal significance in every kind of activity or every kind of company. They will change first in some and then in others as surpluses begin to supplant scarcities, as indeed they have in the field of agriculture and in the field of transportation.

Even the processes of collective bargaining, which is another phase of mobility and change and adjustment, are beginning to bog down in numerous instances. They are in terrible shape in the railroad business. You find more and more--and this is the kind of thing that worries me--frequently an irreconcilable conflict at the collective bargaining table. The first one to suggest compulsory arbitration is the businessman; in other words, inviting the extension of the rulemaking society. In compulsory arbitration the word "compulsory" is the antithesis of free.

Finally, there is one more shift in this picture that I think is going to compel the attention of management. That is the shift from interest in the production of goods and services to preoccupation with the task of producing jobs and job satisfactions.

Why in the world should a businessman be primarily concerned with jobs and job satisfactions? He is in business to make a profit. He makes a profit by producing a product and selling it in competition with his competitors, and selling it for more than it costs him to make it. The job is a byproduct. He is delighted that he is able to produce the job, but how and why should it become a focus of his major interest?

There are two reasons. One is that a business organization in producing goods and services also produces incomes which flow out to the society in the form of salaries and wages. Without producing those incomes the market dries up. That is one reason business must necessarily interest itself in jobs and job satisfactions.

The other reason is that business is increasingly coming to realize that its ultimate sanction is not found in law nearly so much

as it is in public approval and public acceptance. And if our business community fails to satisfy the public--and that means wage earners up and down the line--its sanction will become increasingly challenged.

Let us turn to this matter of income generation for a moment. A month or so ago there was a frightening headline in the press. A group out in California had recommended--and it had 25 signatures on it or more--that the traditional link between jobs and incomes should be broken and that everybody should be guaranteed a minimum income regardless of whether he is a totally shiftless, unproductive member of society or whether he is a more useful member of the community. I think this caused a good deal of consternation and concern. It still causes me consternation and concern to harbor such a thought, and yet, when you reflect about it a little bit it does not appear so radical.

Let us go back to agriculture. How long have we been making payments to people for not working in the field of agriculture? Certainly a quarter of a century. We are taking fields out of production rather than putting them in. Now, that is a break between work contribution and income. How about unemployment insurance, social security, and pension arrangements? I dare say--I have not seen anyone develop a convincing figure, but--between \$50 and \$75 billion a year is now flowing through our economy that is unrelated to a job or to the contribution of the recipient. So it is already happening.

Is this going to set a pattern of what is going increasingly to happen as we move from scarcities to surpluses?

The steel union is today boldly embarked on a program to obtain guaranteed life security, guaranteed life income, guaranteed protection against hazards, guaranteed pensions after work stops. This is not an annual wage guarantee. This is more like the academic community where a man goes on tenure and he has got a life income guaranteed. A man with tenure on an academic faculty can begin to relax, because he does not get fired. The possibility of proving inadequacy is almost nonexistent.

To what extent are these patterns beginning to emerge in our society, and how will management cope with them? You see, management is a dynamic thing. We are in a dynamic age, but some of the consequences of a dynamic age have implications that to me

become very disturbing and very uncongenial to the dynamism and to the maintenance of vitality in management.

At the beginning of this lecture I told you that I was not going to try to resolve all the problems, that I was going to state the problems so that they would be in our stream of thinking and we will be at least aware that they are a possibility.

Let us return to this matter of job satisfaction and the provision of jobs. Here again I see no immediate solution available to management. Business organizations do operate for profit, and they can indulge themselves within limits in personnel policies that are costly. Up to a certain point expenditures for the enhancement of job satisfaction, greater loyalty, and dedication on the part of the work force pays off. Obviously there is a point beyond which it does not pay off, and that point will be reached and pressed against increasingly as this ability to produce more with fewer and fewer people continues to come into our realm of experience.

There are some things that can be done. Some of them will be a result of adjustments in the environment in which business operates, some of them will occur within the business organization itself. I am not particularly optimistic--although some of my colleagues and friends would feel more optimistic than I do--that the process of retraining and mobility of assignments can go very far in resolving some of these problems from the standpoint of the total economy. They can go far, I think, in helping to develop an effective and satisfied and happy labor group within an organization.

From the standpoint of the total society, however, I am beginning to wonder whether some of our cherished traditions may not be challenged, and I go back to such a fundamental tradition as the benefits of work, the joy of working, the satisfactions that come from work; work as a means of expressing yourself. To me leisure in a societal sense is perhaps the most dangerous time bomb we have in our future, because we do not know how to use it. It is too facile, it seems to me, as some have said, "There was never more beautiful and flourishing culture than that of ancient Greece, which was built on the premise of leisure for the few and slavery for the many, but these few with leisure learned how to use it. Why can't we on the same principle, it is asked, use our automated machines in place of human slavery and develop on a mass scale the kind of leisure for our people that will result in a new flourishing of culture in our time?"

It does not seem to me to be within the realm of reach, and yet I think we are going to be faced with greater leisure as a society. You see this beginning to emerge in people going to school for a longer period of time. I think business organizations, as I was saying to Colonel Muller before we came in, are beginning to catch up with the military in the realization that continuing education for their senior officers is an absolute essential if they are going to stay abreast of the contemporary society. This is going to take some of the people's time.

I think we may find a diminution in dropouts, I hope we do, and people staying in school longer. Those who leave school typically at the end of their elementary years might go through high school, and those who now go to college would go to graduate school. We are certainly beginning to feel it in graduate schools already. And probably, instead of having later retirements, as some companies like to think who are now going from 65 to 70, I think we are going to find the pressure of our situation forcing us to contemplate earlier retirements. But, what we are going to do with our time, I do not know.

It is interesting to read some of the books that have been written in recent years about leisure and its effective use. They inevitably end up by describing another kind of work. It may be painting a picture or something else creative. Anything that is creative, I can tell you, and most of you already know, is hard work. Try writing a book sometime.

This is going to be a particularly difficult thing for us to adapt to in the younger generations. This strange shape of the demographic curve is going to result in perhaps 50 percent of our total population by 1970 being under 25 years of age. So I do not know how management is going to adapt to it, but it is going to be a focus and center of their interest.

I might say in passing that our great interest in mathematics and the computer for the solution of business problems or management problems in quantitative terms is going to be challenged by this very thing. Management is not going to find these newer techniques that are so effective in the production field particularly applicable to solving some of these human problems. So it has been my feeling that those who are studying management would do well to maintain a balance in their interests among the various facets of the

basic academic disciplines. Yes, of course, keep current with the contemporary quantification of business problems, but do not overlook the behavioral sciences, and do not overlook the study of the fundamental concepts and analysis of intellectual history that have resulted in the kind of business society we now have.

All of these matters I have been talking about, some promising and some frightening, are underpinned by this thing I started with, the second industrial revolution, but they are rooted in the basic elements of human welfare. As General Eisenhower recently warned, a major threat to our social and economic stability seethes beneath the headlines of the day. It is embodied in our collective failure to provide adequately for the education, skills, and motivation, as well as the opportunity for every one of our citizens to be gainfully employed and to lead a full life in self-respect.

Gentlemen, these are some of the things that will interest management, I submit, in the decades ahead. They are subtle in some cases, they are new and novel in others, and they are not the typical things that are discussed when we discuss the jobs of management. But, I think they are going to come increasingly into the focus of attention of management, and into the attention of those who are studying management from here on out.

Thank you very much.

COLONEL MULLER: Gentlemen, Dr. Brown is ready for your questions.

QUESTION: Dr. Brown, I am interested in the effect that new ideas of top management will have on the way to become a manager. One writer has suggested that there will be a sharper distinction between top management and the lower levels, that experience may be less important, and that it will be harder to come up from the ranks. I would like your comments on this and perhaps some ideas on career progression that you think are produced.

DR BROWN: On the structure of authority I would say that it is unlikely to change basically. Maybe the people who have authority will have different training, different qualities, different knowledge, and different capabilities than those who now have authority. I would imagine that they would have greater confidence than many of our

authoritative officers in organizations today, in the field of quantified analysis of some of their problems.

However, I am not fully persuaded that we have seen enough of the application of the newer mathematics in business organizations and of the use of vast computation, to go so far as to say that it is going to create a separatism between top management and the large mass. The idea has been advanced that middle management will be broken in the middle. Some of them will float up to the top and some will be compressed to the routine jobs.

I do not think we have gone far enough to say that this is an inevitable consequence of the present situation. To further amplify that point I would again refer to the fact that many of the kinds of things that will interest management will not lend themselves readily to the mathematical technique for solution. There will be a growing importance in the personnel functions and in the sales and marketing functions. And here again, if you are looking at the thing just in terms of production you might get the results you are talking about but this is not the whole operation by any manner of means.

QUESTION: Doctor, do you expect the basic organizational structures of business enterprise to change gradually in the next 10 to 15 years?

DR. BROWN: No, I do not think I do. I think you will find companies getting bigger. The rapid assimilation of information and dissemination of information is going to facilitate this. But I think we are going to continue to have, except in those activities that require large units of initial capital, just as many new businesses starting and a similar number of small businesses relative to the big businesses, and the acquisition of small businesses and mergers with big businesses. Everything is going to get bigger and bigger in terms of organizational size, but I do not see anything to suggest a fundamental change in the structure of business.

I am going to put one footnote on the answer. I think businesses will become more and more multinational in character, in the sense of a home office putting plants or putting sales outlets or putting buying offices, or whatever it is, throughout the world. We are seeing this already. This has been a postwar development, and to me it is one of the most exciting of the postwar developments in the field of

business organizations. Companies with home offices in Western Europe, Britain, Latin America, Canada, Japan, and the United States have been establishing affiliates throughout the world, and we are beginning to see the development of an interwoven network of communication, of cultural exchange, of technological know-how, and of personal exchange which to me is one of the promising developments in the field of international understanding. Indeed I think in this quiet sort of way the business community may be making a contribution to international understanding that exceeds that of our religionists and perhaps even that of our political organizations.

QUESTION: Doctor could we accomplish this affluence that you speak of in support of the have-not nations and should we do this through the public or private segments of our system?

DR. BROWN: I think we are probably going to do it in both ways, and we are going to do it because whether people will it or not I think we are going to be forced to share it, by the circumstances that we will face.

Perhaps the most hopeful release from some of these pressures that we have been discussing will be in our developing international solutions to some of the problems we are working with. I think it will be done both by Government and by private organizations.

The development of the multinational corporation is perhaps the most significant and important way of getting at this that is available today. In some respects I think it has been even more important than our assistance program, which has run into a great many billions of dollars.

I do not know whether I really ought to mention this as a very significant thing except in terms of the idea. You have all heard of the International Executive Service Corps. It was an idea that was initially developed by David Rockefeller and Sol Linowitz of Xerox and C. D. Jackson of Time-Life. It is to make business managers who are either active in companies now or retired or approaching retirement available in foreign communities to do the kind of things at the business level and at the management level that are being done by the Peace Corps at an entirely different level. That is a going organization and now has an office in New York. We have not started to function. There is a meeting of the Executive

Committee today which I could not go to because I am here. We will elect a president today. I imagine it will be in the papers tomorrow. He is a man that all of you will recognize, for he had a distinguished career in Government and in business. Somebody called this, rather irreverently, the other day, The Paunch Corps.

I would say that all of us are going to become, in terms of management's interests, far more internationally oriented than we have ever been.

QUESTION: Maybe it is the influence of the school here, but I see a trend toward professional managers in lieu of the normal way of bringing people up from the ranks. Will you comment on that?

DR. BROWN: I like to think that we have something clearly in mind when we use the term "professional manager," and yet I am not sure that we do. If we could go all out on the quantification of business problems, we could begin to develop a body of precise information, practice and procedures that you could define exactly, I think, as a profession; and to the extent that management science becomes a reality, I think we can talk about professional management. Or we can talk about professional management in the sense of the manager thinking about the place of his organization in the society that gives it sanction and serving his fellow men in a professional sense by providing an increasingly meaningful service to the community.

Management is an art and will continue to be an art, in the sense of trying to get things done through others, and the motivations, reflexes, incentives, and reactions of each of us are so ramified that it must always be an art, I think. In this sense I do not think management is ever going to become so precise that, in the graduate schools of business or in programs like this one, we will find it possible to have a body of material and say, "This is management theory." But in terms of service to the public or in terms of a management science, I think we might begin to talk about it as a profession.

I would caution, however, we always run some risk of being a little bit pompous in thinking of management as a profession for which you could get a certificate.

QUESTION: If we were generally to adopt a 35-hour work week, what would be the impact on (1) the economy, and would it absorb this 25-year age group, (2) the social structure, and (3) management?

DR. BROWN: I am tempted to duck, by simply saying that it depends on how it is adopted. Perhaps, however, that is the answer. If you had asked this question when we were in a 45-hour week, and asked what would be the effect of our going to a 40-hour work week, I think the answer would have been the same. It depends on how it is done, and over what period of time it is done. If we did this by fiat tomorrow, I think it would be catastrophic. If we do it, however, by gradations and variations and over a period of time, with each decision moving in the direction of the objective, but being tested in terms of the circumstances that exist at the time it is taken, perhaps it will work.

There is a difference. How would you distribute it throughout the week? Would you lump it all in 3 days, and have 4 days off? Would you go to 4 days, or stay on 5 days and cut off part of each day?

Each one, you see, has to be a separate decision. Here I think the computer might be helpful. It has to be tested in terms of its result for any specific organization.

I think we are moving in that direction. As a matter of fact, a lot of people who are now on the payroll for 40 hours are working 35 hours already.

QUESTION: Dr. Brown, you have painted a fascinating and a somewhat disturbing picture of some future problems that management is going to have to face, with the underlying needs for new concepts and theories, for example, in economics and social relationships. Since we tend to look to universities to develop some of these fundamental theories and concepts, do you see them coming along now, or is this something that is still in the future?

DR. BROWN: I can only answer that by saying that I have disclosed to you all of the information and knowledge I have, and I did not provide the solutions. Let me, a little bit more seriously, say that these are problems that are being thought about and discussed and worked with in the universities. But we have no ready-made answers that I know of.

QUESTION: It has been suggested that one of the reasons for this proliferation of multinational companies has been frustration with the antitrust laws on attempts to merge or to establish new businesses in the United States. To what extent do you think this is true?

DR. BROWN: Let me preface my answer with a comment, that when I talk about the multinational corporations I am not talking just about companies with home offices in the United States which are putting affiliates abroad. I am talking about the Italian companies that are coming to the United States with affiliates and the British companies that are going to Latin America, or the German companies, or whatever country it is. It is not just the United States that develops these multinational corporations. As a matter of fact, some earlier ones were developed in other countries.

With regard to our own investment commitments abroad, the antitrust laws may have some influence. I do not know how to measure how much. I do not think it is the primary influence. Since you have brought up the question of the antitrust laws, perhaps I ought to relate them to some of the things we were talking about earlier. The antitrust laws are designed initially to maintain competition in the free market and to avoid monopoly. Today they have become a bit confused. On one end of the spectrum you have the Robinson-Patman and the Miller-Tydings, and that sort of thing, or the fair trade practice laws, which encourage the bringing together of the interests of a lot of the small businesses to avoid competition, in other words, to protect against the ravages of competition.

So on that end of the line they are at a 180-degree angle from what they started out to be. On the other side we have developed a large number of criteria through judicial law as well as through legislative law and, indeed, administrative law, that are beginning to look a little bit anachronistic. As you move from the scarcity situation to one of surplus and of surfeited markets, some of the opinions that are now being rendered in the field of antitrust may in a very few years begin to look somewhat ridiculous.

This is an area that needs a great deal of rethinking and ventilation, it seems to me.

COLONEL MULLER: I am afraid that is the last question as Dr. Brown has to catch an early plane back to New York. Dr. Brown, on behalf of all of us, I thank you for a very stimulating lecture. You have given us a lot to think about. Thank you very much.

(19 May 1965--5, 900)O/ca: eh:en