The Management Horizon

by

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Peter Drucker is probably the best-known writer in the world on the philosophical and practical aspects of industrial management. He is an adviser on business policies and management organisation and methods to some of the largest companies in the United States as well as several agencies of the U.S. Government. His latest book, "The Practice of Management", which first appeared in the United States in 1954, has since been re-published in six languages.

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The article which he has contributed to "Review" deals with a subject much in the public eye and will be of great interest to our readers.

MANAGEMENT faces new demands on its skill and competence in every one of the major areas in which it works: in the management of a business; in the management of the people who together make up the business; and in management's role and position in our free society

I.

We are on the threshold of a major technological revolution, indeed we are already in the midst of it. Yet "automation" is not primarily a matter of technology but primarily a matter of managing the business. It is indeed true that "automation" can be defined as "the use of machines to operate and control machines." And in this sense automation is a matter of technology. But we already know that this new technology simply cannot be used in a business that is organized and managed the way businesses have traditionally been organized. There can, in other words, be no "automatic factory"; there can only be an "automated business". And an "automated business" makes very much greater demands on management, requires very much higher competence and skill from the people in the management. It also requires more managers.

I shall not go into any of the technical questions regarding "automation". They are very important and very difficult questions. But they are not the most important things for managers to know, not even for managers in businesses which are actually applying "automation" in massive doses. The most important thing to know is that "automation" creates new risks and requires new methods of management.

Whatever "automation" may be it requires that production be fairly constant—or at least move within a fairly narrow range—over fairly long periods of time. Automatic equipment cannot be used—it cannot be used even uneconomically—except for long periods of time and at a pre-established rate of production.

But this means that the business can no longer adjust to economic fluctuations—at least not to short-run ones—the way business has always adjusted to them—the way which according to all the textbooks is the only way business can adjust to them: namely, by adjusting its rate of production. Since industrial activity first began we have always adjusted to changes in demand by changes in output. Production has always taken the main risk of economic activity. That will no longer be possible—at least it will only be possible to a very limited degree.

This means however that the burden of adjustment and with it the burden of risk-taking will fall increasingly on marketing. In order to be able to have an "automatic factory"—and I am not even thinking of anything so completely "automatic" as a "push-button factory" —a business will have to be able to create a stable, predictable and expanding market. The ability to market rather than the ability to produce is the critical factor under "automation". And the requirements on marketing competence and marketing knowledge will increase tremendously. In fact I am very dubious whether we today are capable to carry this marketing job—even though the United States has undergone a "distributive revolution" in the last twenty-five years and is indeed the one country in which marketing is known and understood. The companies I know, all of which have been very marketing-conscious, do not have enough marketing managers for today's needs; all they really have are sales managers. Men who can analyze a market and analyze the needs of the customer, his concepts of what he buys and his concepts of what he considers value in his purchases; men who can analyze a product, plan for new products or for the systematic and planned improvement of old products; men who can organize and manage customer service; men who can analyze and organize a distributive system—marketing managers in other words are scarcer than hen's teeth. Yet on our ability to market will very largely depend not only our ability to automate but our success in automation. Unless we learn how to market "automation" will mainly bring risks rather than gains.

Yet another basic result of this technological revolution lies in the area of capital investment decisions. Here again automation means new risks—risks which will require of managers greater competence. The time span for which capital investment decisions have to be made, the time that elapses before they begin to bear fruit, let alone before the investment has been repaid, has been steadily lengthening during our lifetime. Automation will again lengthen the time span. But it will at the same time introduce a new element. Automation requires—as all those industries that have come close to it, such as the petroleum industry, have found out—that a capital investment decision, once taken, be carried through regardless of business conditions. It must be carried through according to the original plan. Under "automation" the entire plant becomes in essence one integrated machine tool. You cannot tinker with one part of the plant without also making the necessary changes in all the other parts. You cannot begin building a plant without finishing it. You cannot improve one part of the process; you have to improve the entire process. If you stop in mid-way, if you try to adjust your capital investment program to your reading of the business cycle or to the fluctuations in your cash income, you run the severe danger of damaging the investment you have already made—to the point where you may lose it altogether.

Here is a new and a very serious risk. Most managers know that the calendar year in which we present our accounts, is pure fiction—and a fiction of very doubtful utility. The actual time span of economic performance, the actual time span against which results have to be measured, is the life span of capital investment—and that, practically without exception, is a much longer period than the calendar year. But now we will have to learn that our decisions on capital investment too will have to be made as decisions that commit us to a course of action for fairly long time spans, decisions that commit us almost regardless of economic fluctuations.

Finally automation has very definite consequences with regard to labour. In fact "labour" as the term has been commonly known, disappears.

In the first place there is no room —or very little room—in a truly "automated" business for "unskilled labour". Almost everybody in such a business is a highly skilled or a highly trained man. Automation very definitely will not employ fewer people than there are employed today. The main essence of automation is not labour-saving. Its benefits lie elsewhere. In fact it is very doubtful whether even in the individual enterprise there will be fewer people employed. In the economy there will undoubtedly be many more employed.

The essence of automation is a tremendous shift from "labour" to people who work with their minds, people who apply learning and knowledge rather than brawn or experience to their work. The "automated" business will employ a tremendous number of such people. There may not be one man on the production floor doing the semi-skilled work that the machine can do better—handling materials, bringing it to the machine, moving it into the machine or moving it away from the machine; exercising routine judgment: does the tool get too hot; does the machine work properly and so on; changing tools and machine set-ups and finally collecting routine information about the work. All this will be done by machines. But to make it possible for machines to operate and control machines an enormous number of people will be needed off the production floor to design, build and service these machines, to maintain them, to control them, to program them and so forth. And all this is highly trained and highly learned work. Automation in other words means that we increasingly substitute learning, knowledge and methods for the brawn and the skill which have historically identified "labour".

The first important result is that this kind of work force is an extremely expensive one and one that represents a tremendous investment. It simply cannot be dispersed—the business has much too much of an investment in it. The second thing is that under "automation" the work force will have to be kept employed fairly steadily. For production, as I said before, will have to be stable.

I am no friend of the "guaranteed annual wage"—precisely because I believe that it will actually create instability of employment and restrict employment. But I am deeply convinced that 'labour" from having been a "current cost" throughout history, a cost that fluctuated with the volume of production, is about to become a "fixed asset" and a "capital charge". In other words I am deeply convinced that a business that accepts any kind of "automation" will have to keep employment stable and will no longer be able to adjust its labour force to fluctuations in business.

This may be a much less radical change in practice than in theory. Very few businesses have actually looked at the work force and have asked themselves: how many people would we still have to keep on if business slackened—short of actually closing down the plant or the shop? But those few who have done it have found to their amazement that a very large part of their work force is actually more or less permanent and would have to be kept on as long as the plant operates. In fact the increase in this "break-even point of labour" may very well be the most significant development in our economy in the last twenty years. "Automation" only pushes this "break-even point of labour" up a little further. It will make it increasingly necessary—in the interest of the business—to consider the work force as a more or less fixed expense the maintenance of which is a major concern of the business.

Let me say that here lies a great economic opportunity—as does also lie in the need to maintain capital investment decisions once they have been made. These two areas have traditionally been both major cause and major effect of economic instability. As soon as business slips off we have cut back capital lnvestment and have cut back labour force. And these cut backs in turn accentuate the decline and tend to make a depression out of it. In both these areas automation will force us into a great deal of stability. And this is all to the good.

But at the same time this will force managers to learn entirely new things. It will force them to change not only their traditional ways of running a business but their traditional attitudes and viewpoints about a business. And it will undoubtedly impose new and very heavy risks on economic activity.

Let us sum up what I have said so far. I have been talking about managing a business, about managing as an economic activity. And what I have really said is that managing a business must become and will become a systematic activity, one that has to have principles, that has to be based on methods and knowledge —if not on sound theory. To manage a business in the age of "automation" is simply not possible on the basis of "intuition", "hunch" or even of experience. It requires systematic knowledge. Above all it requires of managers a real ability for decision-making as a logical and strict process following strict laws and requiring a great deal of systematic study and analysis.

Under "automation" the "intuitive" manager will simply not be able to manage. He will not be able to do the marketing job. He will not be able to make longe-range capital-investment decisions which have to be based on an analysis of underlying long-run economic facts and objectives rather than on a "reading" of the economic pulse. And he will not be able to correct his mistakes by laying off people or by hiring people as the day-to-day fluctuations of the business demand. The first conclusion—and it is a very big one—is that managers will increasingly have to know what they are doing and why, and have to understand basic principles, basic concepts and systematic methods.

II.

So far I have been talking exclusively about managing a business. But as every business man knows a business is people. Economics is indeed a very important dimension of business management; for the business enterprise is an economic institution. But in order to get the work done people are needed. And the next question I have is therefore what new demands in respect to the management of people can be seen.

As a consultant I sit in every day on management meetings in which decisions are being made that will not begin to be effective for three or five years and will not really have paid off until five or ten years after that. Indeed the lengthening of the time span of economic decisions is one of the major causes of our economic advance. But it is also an increasing problem. For no human being can really make decisions ten or fifteen or twenty years in the future. The only thing we know about the future is that we cannot know anything about it. And not even the greatest genius could be expected to foresee what will happen tomorrow. To make decisions ten or fifteen or twenty years ahead as every business man is forced to do almost every day, is therefore by definition an impossible if not an insane undertaking. Yet business men have to do it.

This means however that these decisions cannot be responsible or rational decisions, no matter how carefully they are made unless there is provision at the same time for the only means by which these decisions can ever be made rational and responsible; the managers of tomorrow who can bail out the decisions made today.

In a good many companies manager development is still considered a luxury today. Actually it is a bitter need—and a need that will grow by leaps and bounds.

But managers will only be a part, though a very important part, of our concern in the managing of people. We are about to witness a tremendous upgrading of our entire work force. Automation as I said before does not mean fewer people at work. But it means that people will do different work that they will apply knowledge and method rather than brawn or experience.

The mass-production revolution of yesterday converted the unskilled labourer who had nothing to contribute but his muscle into the semi-skilled machine operator of today—with a tremendous jump in income, in employment security and social status. It converted the skilled worker of yesterday into the foreman, technician or professional employee of today.

The automation revolution will again bring a similar—and an even bigger upgrading. But this also means that it will create a tremendous problem of the supply of trained and educated people. There is only one place where these workers of tomorrow can come from: that is the workers of today. We cannot hope to hire these new skills and new knowledge. We will have to create them. And this means that the people now at work will have to learn new skills, new knowledge, new methods. We thus face a long period during which management in many businesses will have to find people within their employment who are capable of learning new things—and, what may be more difficult, of unlearning the old ones. We face a period during which, in a great many businesses, managements will have to go in for employee training and employee education to fit people for the new job.

Experienced business men all know that the success and ultimately the survival of every business, large or small, depends in the last analysis on its ability to develop people. In that respect a business is no different from any other human institution. This ability to develop people is not measured by any of our conventional yardsticks of economic success; yet it is the final measurement. Increasingly from here on this ability to develop people will have to be organized in business. We can of course—and will—use our educational institutions to help us in the task of developing people, managers and workers. But both the ultimate responsibility and the major chore in the development of people will increasingly fall on management itself. In the period ahead the educational job of business—especially of big business—will become increasingly more prominent and increasingly more difficult. Ability to recognize its importance and willingness to shoulder the responsibility will increasingly be demanded of management.

III.

And finally management faces new challenges and new demands in its capacity as a leader in our society. It faces new demands on its responsibility and integrity.

Perhaps I should not have said "new demands". The demands are old. Indeed I cannot recall a single management meeting in twenty years or so at which these demands have not been presented. What is new however is that managers will be increasingly asked to practice what they themselves have been preaching.

Automation means a new increase in the importance of management —and a new growth in the number of management people. It will make management even more important a leading group in our society than it is today. It will also mean that managerial decisions will have even more impact on our society and economy than they already have today. For these reasons, if for no other, the integrity and responsibility of management will become more important—and more will be demanded of them.

There are two areas in which these demands will have to be met. It will first have to be met in the area in which management discharges its primary responsibility and has its most immediate impact, that is within the business enterprise. For it is within the business that management really has to prove itself, really has the power, the authority, the responsibility.

This means above all that management will have to show the validity of its basic beliefs and profession in the way it manages people and above all in the way it promotes people. For nothing tests the sincerity and validity of management's beliefs as much as whom it promotes and whom it does not promote. It is therefore important that managers realize that it is their responsibility never to promote a man who falls short of the basic integrity which a managerial position requires. And the development of basic, clear principles and practices that express this conviction and make reality out of it is one of the real challenges managers face.

And finally there is the demand, the increasing demand that managers, as every leading group has always done, live up to the basic social responsibility, the responsibility that they succeed in running their business enterprise in such a way as to make whatever is good and constructive for our society, profitable and constructive for their businesses. There is the demand that managers learn how to live up to the basic promise we in America believe today, that what is good for the American economy and society must also be good for the American business enterprise. This is a tremendous demand. But the fact that it can be made and is being made shows how such American management has achieved, how far it has come in building a free, responsible and dynamic industrial society.

The last twenty or twenty-five years have seen the emergence of American management as a leading group, as a central institution of our society. Indeed American management is clearly the leading and central institution of the free world today—to the point where most of the countries in the free world see in the imitation of American management their one best chance for survival, growth and prosperity. This is a tremendous achievement and one we have every reason to be proud of. But the next twenty years will be the crucial years in which this new institution, this new leading group, American management, will be challenged and will be tested.

"The management horizon" is almost unlimited—as wide a horizon as any that ever greeted our pioneer forefathers. But the tasks, the hardships, the achievements that this prospect will demand from us, is also as great as any we have ever faced.