The Management Horizon

by

Peter Drucker

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 auto-
mation 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 “auto-
matic factory”; there can only be an
“automated business”. And an
“automated business” makes very
much greater demands on manage-
ment, 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 tech-
nical questions regarding “automa-
tion”. 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 produc-
tion.

But this means that the business
can no longer adjust to economic
fluctuations—at least not to short-
run ones—the way business has al-
ways 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 eco-
nomic activity. That will no longer be
possible—at least it will only be pos-
sible to a very limited degree.

This means however that the bur-
den of adjustment and with it the
burden of risk-taking will fall in-
creasingly on marketing. In order
to be able to have an “automatic
factory”—and I am not even think-
ing of anything so completely “auto-
matic” as a “push-button factory”
—a business will have to be able to
create a stable, predictable and ex-
panding market. The ability to mar-
ket rather than the ability to pro-
duce is the critical factor under
“automation”. And the require-
ments on marketing competence and
marketing knowledge will increase
tremendously. In fact I am very
dubious whether we today are cap-
able to carry this marketing job—
even though the United States has
undergone a “distributive revolu-
tion” in the last twenty-five years
and is indeed the one country in
which marketing is known and un-
derstood. The companies I know,
all of which have been very market-
ing-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 sys-
tematic and planned improvement of
old products; men who can organize
and manage customer service; men
who can analyze and organize a dis-
tributive system—marketing man-
agers 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 judg-
ment: 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
everous number of people will be
needed off the production floor to de-
sign, build and service these
machines, to maintain them, to con-
trol 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 learn-
ing, knowledge and methods for the
brawn and the skill which have his-
torically identified “labour”.

The first important result is that
this kind of work force is an ex-
tremely 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 re-
strict 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 “cap-
ital charge”. In other words I am
deeplv convinced that a business
that accepts any kind of “automa-
tion” will have to keep employment
stable and will no longer be able to
adjust its labour force to fluctua-
tions 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 in-
creasingly 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 in-
stability. As soon as business slips
off we have cut back capital Invest-
ment and have cut back labour force.
And these cut backs in turn accen-
tuate the decline and tend to make
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.