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There are several approaches to management which interpret the management process in the light of various academic disciplines. All of them apply to military as well as industrial management, and all reveal a growing preoccupation with the manager's social responsibility as well as his concern for the organization of which he is a part.

THE MANAGEMENT PROCESS

A lecture delivered at the Naval War College

by

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Although management has been called a relatively new discipline, its development has been exceedingly rapid in the past 30 years. We might wonder at calling it new, because we have all been engaged in management in all our careers. The newness is simply a matter of growing complexity and technology and of management's attempts to meet these challenges by becoming a science as well as an art. Management has become more important as labor has become more specialized, as the scale of organized operations has increased, as technological developments have produced a greater number of factors requiring management, and as the complexities of human relationships have increased.

It is not enough today to manage solely for increased production or profit or whatever the old objectives may have been—today the human side of the

equation has become paramount. The dynamics of management now are concerned with people more than with production. If I were asked today what single ingredient in government or civilian enterprise is the most important, I would have to answer honestly that it is management. Good managers are our scarcest commodity in the United States in 1970, and I believe this is true of all countries. I further happen to believe that there are no underdeveloped countries—merely undermanaged ones.

Because of the increasing importance of management and the formidable challenges it faces, many academic disciplines have addressed it in the past 30 years. Today we find contributions being made to solving management's problems from the fields of psychology, sociology, social psychology, economics, accounting, public administration, business administration, political

science, history, mathematics, statistics, the physical sciences, and anthropology—to name a few.

Research on subjects important to management offers renewed hope to those of us who must face the increasing complexities of the operating manager. It has been determined that in the hard-core field of behavioral sciences alone (psychology, sociology, political science, economics, and anthropology), some 45,000 academicians in the United States are now engaged in the study of the human aspects of organization and management.

In examining the management process, I will start with a few definitions of management and then will look briefly at several "schools of management" which have led us to where we are today. In general usage the world management identifies a group of people whose job it is to direct effort toward common objectives through the activities of other people. Simply stated, "management is getting things done through people." This is the view held by the human relations management school within the broad field of behavioral science. This point of view had great prominence during the 1930's, partially as a late reaction to the oppression of the working classes.

While the emphasis of this definition is on people, it nevertheless implies that there is a group that gets things done by using other people. Who is this special group which does all the managing? Estimates have been made that it is about 7 percent of the working forces. You are part of that 7 percent by reason of your position and vocation as military officers and civilian administrators.

The second definition of management reflects an economic and systems analytic view of the world. "Management is the process of determining the most efficient allocation of limited resources to achieve organization objectives, under conditions of risk and uncertainty." In industry this means that

management should be intelligent enough to choose those objectives which promise the greatest return on invested resources and to allocate the resources to maximize productivity and minimize production costs. In the military, at least in this country during the McNamara era, this definition received special emphasis. However, in nonprofit organizations like the military, translating this definition into something meaningful for the military manager brings up a question of output value. Industry, by and large, uses profit as its measure of performance. What relevant yardstick do we have for measuring this Nation's security?

The third definition of management also concerns people: "Management can be described as a process by which a cooperative group directs actions toward common goals." Like the first one, this is a definition of management held by the human relations school. Notice the implications as to who is doing the managing. In the first definition we said managing is getting things done through people. That implied that an individual (the manager) is in an authoritative position and is superior to those people through whom things are getting done. In this case it is the people themselves, through the mechanism referred to as a cooperative group, who represent the directing force. This does not mean, however, that there is no difference in rank structure in the group. This particular definition is used by a relatively new school of thought called "participative management."

Following is a definition of management prepared by the Joint Chiefs of Staff of the U.S. military forces.

Management is a process of establishing and attaining objectives to carry out responsibilities. Management consists of those continuing actions of planning, organizing, directing, coordinating, controlling, and evaluating the use of

men, money, materials, and facilities to accomplish missions and tasks. Management is inherent in command, but it does not include as extensive authority and responsibility as command.

The first sentence is more or less of the same kind of general definition as the previous ones. However, note the phrase "to carry out responsibilities." This implies that there are constraints on managers, established by higher policy levels, which limit freedom of action. This definition is superior to the others because of this point, which they failed to make. But it is true for managers anywhere. The constraints may be economic; they may be social; they may be moral. For example, neither our military forces nor the Secretary of Defense nor even the President of the United States is permitted to develop a defense strategy which includes unprovoked attack on another nation. American society determined in the beginning that such an attack was morally unacceptable.

The middle section of this definition comes to grips with management as a process. It lists six subprocesses: planning, organizing, directing, coordinating, controlling, and evaluating.

Before departing from this description, I would like to cite a threefold concept of management. Management can be viewed as an economic resource (one of the factors of production like money or materials); a system of authority, a synthesis of the old hierarchical authoritarian concept and the more recent participative management approach; or a class or elite. As viewed by the sociologist, management is a class and status system. The complexity of relationships in modern society demands that its managers become an educated elite in order to cope with the tasks to be accomplished. Entrance into this class is based more on ability today and less on family or political connec-

tions than was the case some years ago. Some view this development as a so-called "managerial revolution," by which the managerial class will ultimately obtain power and become autonomous. I do not share that view for the simple reason that managers, as a class, will probably never have as much allegiance to their "class" as to their country, organization, profession, or military service. These three perspectives of economic resources, system of authority, and class or elite are a few of many ways in which to categorize management.

The Evolution of Management Theory and Practice. Management problems are not new. The Bible, for example, explains that even Moses had some organizational problems in leading his people. The history of the Roman Empire is filled with information on how complicated administrative problems were handled. The Roman Catholic Church hit upon a hierarchical form of organization that has worked well for 2,000 years.

However, no important managerial tools of analysis developed until the Middle Ages, when merchants conceived of a means of keeping business records called "double entry bookkeeping," first described by an Italian writer in 1494. After the rise of the capitalistic system, students began to give attention to economics. The inevitable "division of labor" to get things done became a principle that sparked the industrial revolution.

In the early 19th century the corporation came into being, and with it came the division of labor at the top. Managers of various functions of industry now appeared who could handle a complex business entrusted to them by the stockholders. They, the stockholders, could own the business, but they needed professionals to run it.

By 1886 an Englishman, Henry R. Towne, was asking society to recognize

management as a separate field of study. An American, Frederick W. Taylor, was at the same time making contributions to the study of management which were to give him recognition as "the father of scientific management."

What was this early "scientific management" which was expounded by Taylor? It was not so much individual techniques as it was a new attitude toward management. Its essence can be found in four general areas:

1. The discovery, through the use of the scientific method, of basic elements of man's work to replace "rules of thumb."

2. The identification of management's function of planning work, instead of allowing workmen to choose their own methods.

3. The selection and training of workers and the development of cooperation, instead of encouraging individualistic efforts by employees.

4. The division of work between management and the workers so that each would perform those duties for which he was best fitted, with the resultant increase in efficiency.

While Taylor was a major contributor to "scientific management," he was by no means alone. Henri Fayol arrived at many similar conclusions before Taylor did—but unfortunately there was no suitable translation of his works. Henry Gantt next emphasized the psychology of the worker and the importance of morale. He devised a wage-payment system which stimulated management and workers to do more. Then Frank Gilbreth originated motion study and revolutionized the construction industry. Later, Urwich, a Britisher; Davis, an American college professor; Mooney and Reiley, two industrial executives; and many others also expounded the views of the early "scientific management" or "management process" school.

The management process school was one of the earliest approaches, and it is

still viable. This approach perceives management as a process of getting things done through and with people operating in groups. This school analyzes the process of management, establishes a conceptual framework, identifies underlying principles, and builds a theory of management upon them. It is often referred to as the "traditional" school.

The school bases its approach on several fundamental beliefs. It feels that managing is a process which can be analyzed and dissected. It feels that long experience with management can produce useful generalizations of predictive value. It feels, also, that management is an art learned principally from practice. The experience which results, however, can furnish the elements of a useful theory of management.

The empirical school, on the other hand, identifies management as a study of experiences, sometimes to draw generalizations from them, but usually merely to teach experience in order to transfer it to the practitioner. The analysis of cases by means of the "comparative approach"—comparing a proposed style of management with an experienced one—is its keystone.

It is based on the premise that if we study the experience of successful managers or solve tough management problems, we will learn how to apply the most effective management techniques. In other words, what worked or did not work in individual circumstances is applicable in comparable situations.

One drawback of this school is that management is not yet a science based wholly on precedent, and exact, comparable situations are not likely to occur. But to the extent that this school draws generalizations from its research, it is similar to the "management process" school.

The approach of the human behavior school is based on interpersonal relations. Since managing involves getting

things done through and with people, this school believes we must study human relations in light of the "behavioral science" approach. It brings to bear the theories and techniques of the social sciences upon the study of inter and intrapersonal phenomena. It ranges from individual personality dynamics to the relations among cultures.

In other words, this school concentrates on the people part of management and the principle that people should understand people. Psychologists and social psychologists are among the scholars in this school, and their studies in the last three decades have included practically every facet of the managerial process.

Often confused with the human behavioral school, and closely related to it, is the social system approach. This school looks upon management as a system of cultural relationships. Sometimes it is limited to the formal organization. Sometimes the approach encompasses any kind of human relationship, including the informal organization. Mainly sociological, the study identifies the nature of cultural relationships of various groups and shows how these are related in an integrated system. The spiritual father of this school is Chester Barnard, who developed a theory of cooperation grounded in the needs of the individual to solve, through cooperation, the biological, physical, and social limitations of himself and his environment—from which he carved a set of interrelationships he called the "formal organization." He came up with a rather ingenious concept that any cooperative system can exist in which there are persons able to communicate and who are willing to contribute their actions toward a conscious common purpose. He arrived at his classic theory without benefit of higher mathematics, quantitative methods, or questionnaires.

Still another recent approach by a scholarly and growing number is the decision theory school. This group

believes in developing an array of alternatives, by rational approach, and the selection of a course of action from the alternatives. It is similar to the military planning process. The approach can be one of dealing with the decision itself or with the group or the person making the decision. It has its roots in such concepts as "economic" consumer's-choice theory and such things as utility maximization, indifference curves, marginal utility, risk, and uncertainties.

The decision school has gone well beyond merely evaluating alternatives, and today its proponents look at the very nature of organization structure, the reactions of groups and individuals, the development of basic information necessary for decision management, and many other areas. As one practitioner put it, the "keyhole" look at management, which began as merely decision-making, has led to a consideration of the entire field of organization, management, and their environment. There are problems, however, in attempting to build a theory of management exclusively around decisionmaking.

The mathematical school is yet another interpretation of management. Mathematics can be used by any school or theory, but here management is seen as a system of mathematical models and processes. The idea is that if management is a logical process, it can then be expressed in terms of mathematical symbols and relationships. The main approach is the model, and it can be constructed to simulate basic relationships and principles in terms of goals or objectives.¹

Listing the main schools of thought here is one way of portraying the evolution of management. Still another way is to look at it the way one writer,

¹This categorization of schools of management adapted from Koontz, H., "The Management Theory Jungle," *Journal of the Academy of Management*, vol. 4, no. 3, p. 174-180, December 1961.

Joseph L. Massie, has done. He lists these five contributions in order of their appearance on the managerial scene:

- 1910-1940 Industrial Engineering (Scientific Management)
- 1910-1970 Human Relations and Behavioral Science
- 1920-1970 Organizational Theory
- 1930-1970 Managerial Economics
- 1930-1950 Managerial Accounting

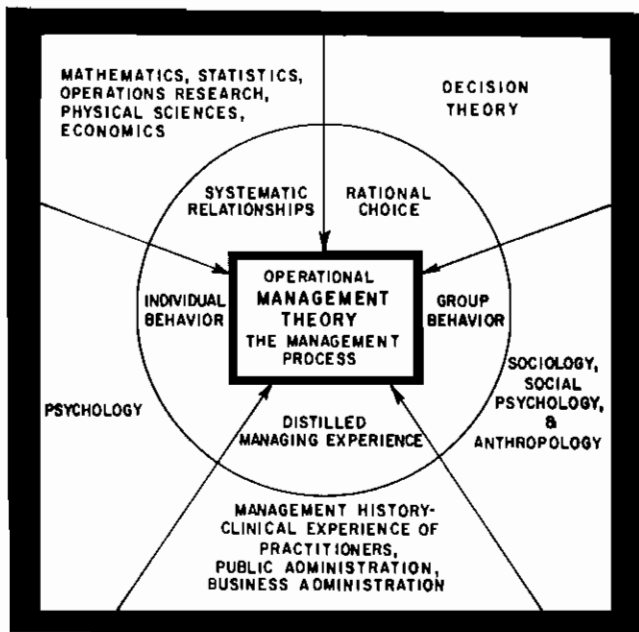
Naturally, there is overlap and continuity among the contributions, and all of them are still contributing even today. Note this expert excludes mathematics except as it may be a part of economics, engineering, and accounting. This list does not contain a significant segment of management which is today grounded in decision theory and quantitative tools.

The Management Functions—an Integrated, Interrelated Process. The so-called processes of management are really the functional ways in which management theory was brought to bear

on what management is, what management does, and what it should be. A fairly good way to visualize this structure or process is by the accompanying chart, adapted from one by Harold Koontz.

Out on the peripheral areas we have depicted the sources of the learning which has taken place. The broad disciplines of mathematics, physical sciences and statistics, psychology, public administration, business administration, anthropology, and, for want of a better name, decision theory, all have been the foundations for the more precise theory shown in the inner circle: systematic (quantitative) relationships, individual behavior, management experience (principles), group behavior, and rational choice. The target of all these disciplines and research has been the process or function one finds in managing an organization.

The first of these processes, or functions, is planning. Planning is the initial, but also the continuing, process by which an organization is conceived and kept running.



Planning is concerned, first of all, with the objectives of an organization and their clear definition. It is concerned with developing alternative courses of action to reach these objectives, courses of action which are in harmony with the capabilities of the components of the organization. It is concerned with developing courses of action which are flexible enough to adapt to changing circumstances. It is concerned, finally, with its own periodic, continual review.

Planning is so essential that it usually heads the list of any functions or processes and is referred to as the primary principle of organization or the "primacy of planning." Planning is what the manager should be doing most of his time.

The second subprocess is that of organization. It should be created, not as a final structure to be maintained at all costs, but again as a framework through which a vast, complex, and changing set of functions can be best carried out. The questions one must ask in planning a new organization or making additions to an already existing one are numerous. Is the organization necessary? How do its costs compare with the importance of its objectives? Does the head of the organization have authority to match his responsibilities? Do any subordinates report to more than one person? These and other questions assist the manager in evaluating the projected organization.

As you can see by these questions, organization is more than a hierarchical chart. It is a living, changing structure and scheme for the relationships of management to workers, of top management to lower management, of worker to worker.

The next process to examine is that of staffing. Once plans have been made and an organization created in concept, it must be staffed by people. They are both the means and the ends of endeavor, whether it be for profit in

business or for protection in the military. In the process of staffing one must define clearly the authority, responsibilities, and duties of each individual. Job descriptions must be carefully composed. Promotion procedures must be carefully defined. Constant attention must be given to personality styles in reference to the requirements of the job. In other words, through dynamic, ever-changing staffing, human beings are put to work and constantly reviewed in an effort to obtain the best possible in each job.

Once the organization is planned, built, and staffed, it must be given constant direction toward the objectives or goals which have been set.

In directing the organization, the manager must ensure that he is communicating his plans and objectives to his subordinates and that they understand his instructions. He must seek to inspire confidence in his subordinates so that they will feel their best interests are served by following his guidance. He must always remain aware of the fact that his subordinates have interests unrelated to their jobs.

Over all of the previous processes, management must maintain and practice control. This is one of the most important day-to-day functions of managers, despite the fact that many controls now have become mechanized. The practice of control is an activity which seeks, among other things, to detect deviations from planned operations early enough for prompt corrective action to be taken; The actions which managers take in light of these deviations must be effective and proportionate in cost to the seriousness of the original problems. Objective standards of performance must be set whenever possible. Most important, control techniques are dynamic and must be constantly reviewed.

Coordination, which is relevant to and a prerequisite of all the processes mentioned thus far, is a continuous and essential process that pervades all the

others. Indeed, there have been great management theorists and practitioners who feel that this is the cardinal process of all. Without it all the others cease to function correctly.

Coordination and all the other processes depend largely upon good communications. Communication channels must be free, open, unrestricted, up and down, crossways, and in all directions to bring about the desired ends.

Still another process, or function, that takes place from beginning to end and then takes place all over again and again in organized effort is that of decisionmaking. In management the decisionmaking process is affected by the environment of the decisionmaker and by the role he assumes as chief decisionmaker. By role I mean what kind of decisionmaker he is. This can range all the way from a manager who personally makes all decisions to one who simply gives his approval to decisions made by his subordinates. A decision can be defined as a course of action consciously chosen from available alternatives for the purpose of achieving a desired result. If there are no alternatives, there is no decision process. Three essential ideas are inherent in decisions.

- First, a decision involves a choice— if there is only one alternative, there is no need for a decision.

- Second, a decision involves mental processes at the conscious level. Logic is supposed to prevail throughout, but, unfortunately, emotion, nonrational and subconscious factors do enter into the process. The process is greatly assisted in many cases today by techniques we call systems analysis and other quantitative approaches.

- Third, a decision is for a purpose. The only reason it is necessary is to facilitate attainment of some objective.

Today, decisionmaking by groups is receiving a lot of emphasis, and some new principles of good group participation in decisionmaking have been arrived at by research. These include the

absence of a "threat" factor, the formulation of goals by the group, the reaching of a consensus after deliberation, and group interaction and participation by the entire group in the interaction.

Finally, policy formulation is the process of development of understandings for members of the organization so that the actions of each member of the group in a given set of circumstances will be more predictable to other members. Policy is simply a guide for making decisions. It is usually made by top management. It is not a rule, not law or a procedure, practice, or principle. Policies may originate at the top by executive deliberation, or they may be imposed from outside the firm by the Government or an association, or they may be something simply implied from consistent actions by top management.

Some examples of policy are whether to diversify or not; whether to integrate or not; whether to undersell competition or not; whether nepotism will be permitted or not; racial discrimination; mandatory retirement because of age— and so on.

Current Trends in Management. All of what I have said thus far should help us to see how important and complex management has become. Indeed, there are many who say, and I am one of them, that management is today the key ingredient in all organized effort. Should you feel that military management is any different, let me remind you that all of the processes just discussed are part of the military management process, just as they are in industry.

If we ponder the various fields of specialization in management as depicted below, we can get still another perspective on the vastness and specialization in the field of management today.

- **Personnel Management**
National—International
- **Public Personnel Management**
National—International

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- **Industrial Management**
 - Manufacturing/Production Management
 - National—International
 - Business Management
 - National—International
- **Research and Development Management**
 - National—International
- **Financial Management**
 - Management Accounting
 - Management Economics
- **Marketing Management**
- **Institutional Management**
 - Hotel Management
 - Hospital Management
 - Educational Management
 - Exchange Management
 - Club Management
 - et cetera
- **Military Management**

As a naval officer engaged in military management, one can be thrust into any one or all of these fields in the span of a naval career! Add command responsibility to this picture, and you have a most formidable array of challenges for each and every one of you. So much for the fields of management.

There are several trends taking place in management today. The first is that of greater and greater specialization within management itself, as we have just seen from the preceding lists of management fields. A second area is that of an even greater specialization with regard to basic problems within a specific kind of management. For example, in the field of managing the production of goods or services alone, some of the areas in which you can now find specialists attempting to solve particular functional problems are these:

- **Inventory**—wherein highly trained specialists, usually operations researchers closely related to production control, attempt to solve the questions of (1) What is the optimum amount to carry? (2) What is the economic lot size to order or to produce? (3) What system of controlling inventory should be used? In our own Navy, for example, there are now Supply Corps officers who have as their main specialty just this function of inventory control.

- **Resource Allocation**—a new look in the military, and one which has assumed a great importance, attempts to bring specialization to bear on what amounts of what kinds of resources will be made. Again, we have controller-type managers today engaged wholly in this aspect of management.

- **Sequencing and Routing**—the determination of what operations will be performed, their sequencing, and the path or flow of materials through a series of operations. We have specialists in our Navy, for example, who are concerned solely with the proper routing, operations, and functions of materials handling and packaging and preserving of materials alone.

- **Sales and Promotion**—specialization of sales management need not be elaborated upon. Advertising and sales promotion have been with us for some time but are even more precise fields of specialty today.

- **Replacement**—in addition to mere replacement problems for the usual resources, the deliberate, planned obsolescence to create new products is now a way of life. Automobiles and even some weapons fit this category, and specialists are hard at work “managing” the trends.

- **Search**—in product management, the search for new products, for new brand names, symbols, or designs. The systematic gathering, recording, and analyzing of data relating to distribution and sales is now a profession for some.

Two other management trends I see coming about in the future are: first, in addition to the need for good managers and for specialized managers being greater than ever, there is the need for managers to expand their horizons beyond their business, beyond their military service, beyond their particular corps and specialty—and to appreciate their place in society. They must, in the future, see beyond national boundaries to international fields of management. Management can no longer look only to the product or to profit or to their

military services' welfare—they must be concerned with their national and international "social role." Society has awakened to the fact that every organization is a social system. It has influence beyond itself. It has responsibility to those who fall within the organization and to those without the organization. The manager, whether he likes it or not, has an important function in the social system, and he must be held responsible for his unique social function. His is a moral responsibility, not amoral, as he has been prone to think and certainly not immoral. His role in the moral realm must be evaluated as such. If he is made aware that he is a cocreator of a social system, he will make decisions and act upon that awareness. This is true whether he is a businessman, scientist, politician, union leader, professor, or military commander.

The other trend I foresee is the continued and accelerated growth of a managerial elite. We already have military elite groups, but I think that within the military, as in business life, there will come to pass an increased awareness of the fact that educated, brilliant, experienced managers are running a great deal more of our lives and our world than has been heretofore realized. One day, who knows, perhaps the managerial elite will become organized and become powerful in politics as it has become powerful in economics and in social life. I say who knows, because if anyone had told me 10 years ago I would live to see a strike against the U.S. Government, as we recently had with our post office, I would not have

believed him. Or if anyone had told me that the military itself would be approached from within and without to consider being unionized, again I would have scoffed at him. But it is being suggested now.

In summary, I believe the need for managers will continue to increase. The world has awakened to the fact that managers do not simply manage a going organization. They change organizations, they make things happen, they shape the economic, social, political, and technical course of history. The manager, I would offer you in conclusion, is the most important single ingredient of all enterprise and of progress.

BIOGRAPHIC SUMMARY



Capt. Alexander H. Cornell, SC, U.S. Navy, has had extensive experience in the field of business administration. His degrees include a B.A. from Union College, an M.A. in history from Connecticut University, an M.S. in administration from Ohio State University, and a Ph.D. degree from American University, also in administration. As a supply officer he has served in a variety of administrative positions, including a tour of duty as Director of Warehouse Operations with the Naval Supply Systems Command in Washington, D.C. Captain Cornell served as Plans Officer for the School of Naval Warfare during the last academic year and is presently occupying the James V. Forrestal Chair of Military Management at the Naval War College.

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