MANAGEMENT: THE PLANNING PROCESS

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M A N A G E M E N T

THE PLANNING PROCESS

by

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13. ABSTRACT

This report is one of a series of monographs relating to the system of management. In this monograph the process of planning is discussed as one of the elements of the management system in which all the elements are intricately related with each other. The system is viewed in terms of a three-dimensional model in which one dimension consists of the functions of establishing objectives, formulating policies, and making decisions; with the second dimension being comprised of the traditional management processes of planning, organizing, directing, and controlling; and with the third dimension representing the bonds of communication tying together all the other elements of the management system.

Included in this monograph on the planning process are the following topics: System of Management; The Process of Planning; Functions of Planning; Need for Planning; Planning Concepts, including Matching Means and Ends, Decision Making Framework, System Inputs and Outputs; Definition of a Plan; Hierarchy, Futurity, and Specificity; Types of Plans, including Goals and Objectives, Non-Repetitive Actions, and Repetitive Actions; The Planning Process; The Planning Cycle; Programming; Long-Range Planning; and Concluding Remarks.

Individually, each of these monographs presents a relatively detailed view of the many theories and approaches to the various elements of management; collectively, the monographs provide an integrated overview of the interrelationships of the various elements which comprise the overall system of management.

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Preface

This series of monographs on the processes and elements of the system of management are based upon the lecture notes developed by myself and my colleague, Alan J. Goldstein, in teaching the Advanced Management Course to eight successive classes of students in the Air Force Institute of Technology's Graduate Logistics Management Program. The monographs, entitled "Establishing Objectives and Formulating Policies," "The Planning Process," "The Organizing Process," "The Directing Process," "The Controlling Process," "Decision Making," and "Communicating," are published by the School as seven separate but related reports -- AU-AFIT-SL-1-72 through 7-72, respectively.

Since four different textbooks were used over the past few years in teaching the management course, the lecture notes consequently reflected a great deal of the philosophy and views of William Scott in his Organization Theory: A Behavioral Analysis for Management, of Joseph Massie in his Essentials of Management, of Ralph Currier Davis in his Fundamentals of Top Management, and of Max Richards and Paul Greenlaw in their Management Decision Making. Also liberally drawn upon was material presented by Richard Johnson, Fremont Kast, and James Rosensweig in their book The Theory and Management of Systems, and by William Newman, Charles Summer, and Warren Kirby in their text The Process of Management: Concepts, Behavior, and Practice.

Both Al Goldstein and I are indebted to all these authors, as well as many others, for the material used in developing these monographs. And, of course, all of us -- management professors, students, and practitioners alike -- are indebted to them for their significant contributions to management thought, philosophy, and education. Thus it is to them that this series of monographs on management is dedicated.

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THE PLANNING PROCESS

Management is not new. Early man, for instance, in joining with other primitives in tribal communes, needed some degree of managerial ability and organizational skills to survive the hostile environment of his times. Indeed, throughout recorded history, management has always been essential to the functioning of any purposeful organization.

Things have little changed today. Man and organization -- in order to function, to develop, and to endure in our complex contemporary environment -- must depend to the utmost on all the theories and concepts, tools and techniques, and applications of management. Decision-making, coordination of a multitude of activities, and interrelating the people and the processes of management with the purposes and goals of the organization are functions universal to all segments of society -- past, present, and future. Management has never been so important as it is now in resolving the problems of today and in meeting the challenges of tomorrow.

But what is management? Many different definitions have been offered; many new ones will likely evolve. The various definitions depend upon the orientation and basic discipline of the definer. To an economist, for instance, management is but one of the factors of production -- the others being land, labor,

and capital. To a political scientist, on the other hand, management is a system of authority, a hierarchy of command, a power function of the organization. To the sociologist, it is a class and status system; to the psychologist, it is a system of pressures interrelated to human needs; and to the behavioral scientist, management is viewed as the system of relationships between individuals within the organization and the environment surrounding the organization.[1]

Management theorists themselves, however, often look upon management simply as "the function of getting things done through people." In fact, John F. Mee, one of the foremost writers on management thought today, cites an early definition by Frederick Taylor, at the turn of the century, as still being reasonably valid even now. Taylor, usually considered as the Father of Scientific Management, stated that management is "knowing exactly what you want men to do, and then seeing that they do it in the best and cheapest way."[2] In Taylor's definition are the elements of all later management definitions: First, there must be some goal or desired result -- an established and accepted objective for achievement by group effort. Second, some process or ways and means of obtaining the goal is required -- a process based on logical and effective thinking for guidance to achieve the objective. And third, human effort must be utilized in the process -- human effort, facilitated by other resources, to achieve the objective which has been established. Thus, management might be viewed as "The process of setting and achieving objectives or desired results in a given environment by the

use of people and facilitating resources," a definition which may be expressed by the simple equation: "Management = Objective + Process + Human Effort and Resources."[3]

System of Management

Management might be alternatively viewed as a system whose elements are intricately related with one another. A diagrammatic model which may be helpful in illustrating the relationships between these elements is shown in the accompanying figure.

Three dimensions comprise the cubical model of the management system. Within the first dimension are the management functions of establishing objectives, formulating policies, and making decisions. In the second dimension are the traditional management processes of planning, organizing, directing, and controlling. The third dimension represents the bonds of communication which tie together all the elements of the management system.

Within the first dimension of management are certain overlapping functions which are common to all the other functions and processes of management. Any purposeful organization must have clearly established objectives toward which its members may direct their energies and efforts. Policies must be formulated to provide guidelines or general parameters within which actions may be taken to attain these objectives. And, decision-making is necessary throughout all the management processes if the members of the organization are

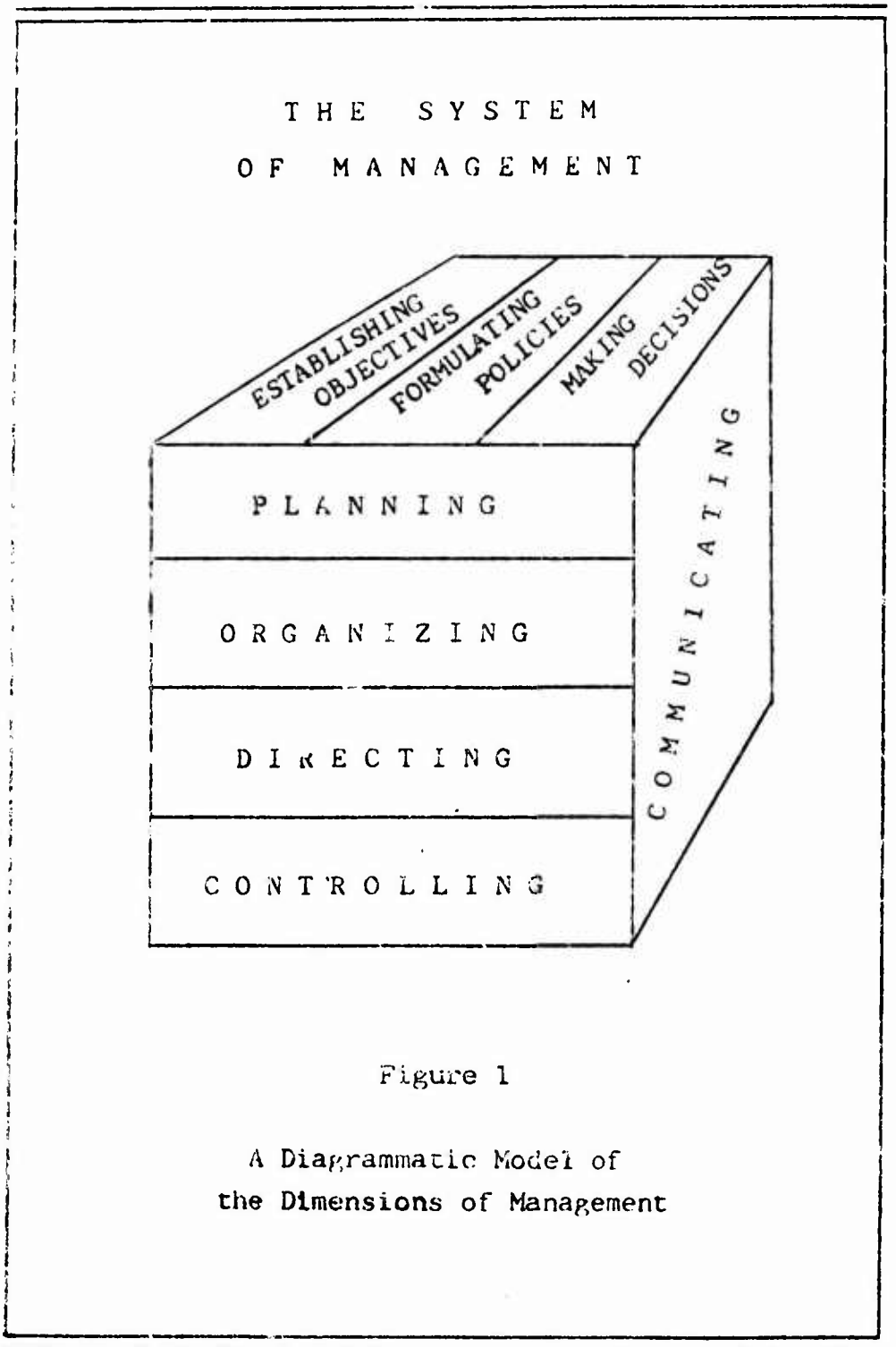

Figure 1

A Diagrammatic Model of
the Dimensions of Management

to achieve the established goals within the guidelines prescribed for their actions.

The second dimension includes the traditional processes of management. The planning process delineates the specific steps which should be taken to attain the organizational goals within the policy guidelines. The organizing process establishes structural relationships and functional responsibilities for the tasks required of the organization and its members. Directing is the process by which the members of the organization are motivated and guided in making decisions in accordance with the plans and within the structural design and policy constraints of the organization. And, controlling is the process in which actual performance is measured against specified plans and is redirected, as necessary, to attain the pre-established objectives.

The final dimension that ties together all the other elements, functions, and processes of management are the bonds of communication. Without communication, the objectives could not be established, the policies formulated, or the decisions made. Nor could the processes of planning, organizing, directing, and controlling be effectively accomplished and interrelated with each other so that decisions could be made within policy guidelines to achieve organizational objectives.

Thus it is evident that each of the elements of the three-dimensional model is an absolutely essential part of the management system. Although each element has been separately identified, the elements are all

dependent upon and interrelated with each and every element in the management model. Although artificial boundaries are drawn between the dimensions shown in the model and the elements illustrated within each dimension, it must be re-emphasized that no boundaries exist within a dynamic model of management. Static divisions are dissolved and flexible interrelationships exist to the extent that the cubical design separating the dimensions and elements of management should be viewed, instead, as a spheroid within which all the parts are intermingled with one another. Furthermore, the sphere itself would have no defined boundaries, since it would be but a subsystem of a larger system in which management is a part of the total environment in which social, political, economic, and technological factors interface with and impact upon all the elements within the management system.

Nevertheless, for purposes of study, the various elements of the system must independently and separately considered so that their interdependence with one another and their contribution to the overall system of management may be more fully appreciated. Thus, to facilitate understanding of these interrelationships, a microstudy of each element must be made in order to achieve a macroview of the management system as a whole.

The Process of Planning

The process of planning is very closely related to the process of controlling. Planning looks to the future; controlling checks the past. The two, thus, jointly serve as perspectives for the manager who makes

decisions in the present.[4] In this paper, only the planning process will be addressed; discussion of the controlling process will be held in abeyance until a later paper in this series of monographs.

Although this approach would appear to clearly separate these two processes, the close relationship between planning and controlling cannot be overemphasized. Indeed, all the processes of management are closely interelated, one with the other.

Functions of Planning

What is the function of planning? In its simplest context, planning is merely putting a set of elements in order.[5] But this is only a static functional definition. Perhaps a more dynamic description may be formulated by relating planning to the other management processes. For instance, objectives and policies constitute the semipermanent framework within which the managers of an organization must operate. The question for the manager is just what activities the organization should undertake and how they will be undertaken in order to achieve the objectives within the policy framework?

The function of planning, then, is to develop specific plans that will assist the manager in making decisions to take specific and realistic action in attaining the organization's objectives in accordance with policy guidelines.[6] Thus, it is seen that planning is based on objectives, and objectives are set by using some sort of planning process. And, as policy

is a more detailed way of expressing or delineating objectives, so too is planning a way of further specifying policy in a more detailed manner.

Similar examples could also be given to show how planning is closely related to and interfaces with the other management processes discussed in this series of monographs. For example, decision-making may be looked upon as the culmination of the planning process. Decision-making is inextricably linked to planning, since decisions are necessary at every stage of the planning process.[7] Decision-making, however, is also directly related to all the management processes, since decisions are involved in establishing objectives, formulating policies, and in organizing, directing, and controlling the elements and activities of the organization. Further elaboration of the relation between planning and decision-making will be made later in this paper in discussing various conceptual approaches or ways to look at planning. First, however, some of the obvious requirements for planning will be considered.

Need for Planning

Ours is a dynamic society, and the modern industrial environment is characterized by increasing change and complexity. The general political, economic, social, ethical, and moral philosophies of our country and of many of the free nations of the world have promoted an atmosphere of freedom of change for the enterprise. At the same time, rapidly advancing technology

has fostered greatly increasing complexity in the operations of the organization. As the social, political, technological, and industrial environments have become more dynamic and complex, business organizations have come to recognize that to grow, even to survive, in such a dynamic climate requires an ever greater emphasis upon the use of planning as a means of coping with the uncertainty of the future.

Planning Concepts

With a stable environment and uncomplicated operations, fairly simple planning could be carried out relatively easily with a short-range viewpoint. But with a more dynamic environment and greater complexity, the organization, as a subsystem within the total economic system, must employ comprehensive planning in order to adapt to the changing requirements. Thus, from a systems context, planning might be broadly defined as the process by which the system adapts its resources to changing environmental and internal forces, the purpose being to provide an integrated decision system which establishes the framework for its activities.[6]

This systems concept of planning, forwarded by Johnson, Kast, and Rosensweig, considers the enterprise as an integration of numerous decision-making subsystems, and that the function of management planning is to design an integrated system enhancing the organizational performance. This involves (1) the establishment of goals, objectives, policies,

procedures, and organizational relationships on a systematic basis for guidance of decision-making and planning at various organizational levels, and (2) the provision for the flow of information to and from these planning centers.[9]

In his "Perspectives in the Planning Process," Wroe Alderson cites three ways or perspectives of looking at planning, all of which are closely related.[10]

Matching Means and Ends

The first approach cited by Alderson is the matching of means and ends. To recognize the need for planning is to concede that there is considerable complexity either in the means or in the ends, or in both. Thus, in contemplating a plurality of both means and ends, planning is the design of a patter of activity to promote the achievement of a set of objectives. But problems arise as to the ways in which plural objectives may be related to each other, and parallel problems arise as to the classification and management of means to achieve these ends.[11]

Alderson points out that, within a plurality of ends, a pair of specific goals may be related to one another in three different ways -- they may be neutral toward each other, complementary, or conflicting. First, if the goals are neutral toward each other, they are related chiefly through their competitive claims on the available means. In this case, the planner has the relatively simple task of allocating the resources or effort to each in the proportions relating

to their relative priorities or degrees of dominance. Second, in the event that a pair of goals may support and complement each other, the degree of complementarity between the two goals may be either relatively moderate or so great as to make each goal an essential condition for the attainment of the other. In this case, the planner must still make a decision as to which goal is the dominant one. Third, two goals may be in direct conflict so that success in one may increase the risk of failure in the other. In this case, the planner may have to eliminate one of the goals or create separate organizations to give concentrated attention to each.[12]

The means themselves may be classified in various ways. First, they may be classified by function. For instance, in the marketing function, the means employed could be classified by the functions of transportation, advertising, or selling of goods. But a second and perhaps more important classification of means would be by the factors affecting their manageability. For instance, resources vary as to their degree of scarcity or abundance, the extent to which they can be divided into smaller units or must remain indivisible, and their fitness for broad, general use, or for narrow, specialized use.[13]

Decision-Making Framework

Alderson describes a second way of looking at planning by using a decision-making framework. Planning can be characterized as a process of dealing with groups of interdependent decisions. The interrelationship of

decisions is fairly obvious. The information required in making one decision has a bearing on many others. One particular decision may set a limit on answers to other questions. And two or more decisions may form a decision complex which must be considered as a whole. These decisons may be linked to each other over time, over space, or among components of an organizational structure. There is also the hierarchy of decisions represented in the distinction between strategy and tactics.[14]

The key decisions which set the basic pattern of a plan are properly called strategic decisions. The choice of a strategy embodies a core idea concerning the relation of means and ends. On the other hand, tactical decisions relate to the detailed application of effort in the execution of the core idea. The choice of strategy establishes the framework for tactical or routine decisions. The test of strategy is how well it can be implemented in other decision areas. And, since these decisions constitute the substance of planning, the test of planning is how well it deals with the complex structure of means and ends in such a way as to promote an optimal result for the organization.[15]

System Inputs and Outputs

Alderson states that a third way to look at planning is to begin by looking at the inputs and outputs of the management system. The connection between the inputs and outputs is obviously related to that between the means and ends. The outputs are the ends toward which the operation is directed. The objectives of

planning are to increase these outputs or to improve the ratio between the inputs and outputs. Means may be comprehensively defined as the resources available to management. Inputs represent the use and application of such resources in a stated operating period.[16]

The relation between inputs and outputs is characteristically different according to the length of the planning period. Planning assignments are distinguished as short-range, intermediate, and long-range, but the distinction cannot be sharply drawn in terms of the length of time that is involved. For convenient reference, however, short-range planning might be taken to refer to a period of a year or less, intermediate planning from one to five years, and long-range planning any period greater than five years.[17]

In short-range planning, the output which can be measured at the end of the period is set off against inputs committed at the beginning. In planning for so short a span the planner is usually given a specific goal or desired level of output as his target. His job is to utilize the resources available to him, so as to give the highest probability of achieving the specified outputs. The management requirements are exacting with respect to the detailed programming of activities, but usually involving no change in the basic strategy or structure of the operation.[18]

At the opposite extreme is long-range planning, in which the planner visualizes the relation between inputs and outputs in quite a different way. Some of the inputs will almost certainly be capital inputs, and, in

fact, long-range planning often starts with a consideration of capital requirements. Planning which looks so far ahead is concerned, primarily, with fundamental decisions. With respect to long-range planning assignments, the planner can seldom hope to start with sharply defined objectives. The function of such planning is to clarify objectives as much as to detail the strategies and programs for achieving them. The planner does not attempt to determine a pattern of action for the distant future but to keep the possibilities open and to preserve the power to act as the need for action approaches. The planner uses forecasts or predictions of the future to construct a vision of developing needs and possibilities. This practice of peering into the future provides a framework for rational decision-making today.[19]

Planning of the intermediate range of from one to five years is in some respects a blend of short-range and long-range planning and in other respects is the prototype of planning, with the other two being the limiting cases. Again, the real distinguishing feature is the characteristic relationship of means and ends. It couples an open mind as to the exact formulation of objectives with a fairly precise detailing of the program to reach these objectives. The period is long enough to realize desired outputs at the end of successive fiscal years. Correspondingly, there is a range of discretion as to whether inputs should be increased or decreased as the period proceeds or as objectives are gradually modified. The period is short enough to predict with some confidence the principal contours of the environment in which decisions will take place.[20]

Definition of a Plan

So much for the approaches used to describe the planning function. It might be noted that the approaches cited by Wroe Alderson embody many of the factors discussed in the systems/decision-making approach of Johnson, Kast, and Rosensweig. Alderson has provided, however, a much broader and multiple-faced view of the function of planning.

Attention will now be turned to the product of the planning process -- the plan itself. A plan may be simply defined as a predetermined course of action. This definition indicates that a plan has three basic characteristics. First, it must involve the future. Second, it must involve action. Third, there is an element of personal or organizational identification or causation; that is, the future course of action will be taken by the planner or someone designated by or for him within the organization. Thus, futurity, action, and personal or organizational causation are the necessary elements in every plan.[21]

A more comprehensive definition of a plan is provided by Richards and Greenlaw, who state that a plan is "any information output from a substantive decision transformation which either specifies or guides the taking of future actions by its members geared toward overcoming existing or anticipated problems."[22] Four observations are made concerning this definition. First, the term "information output" views plans as messages or communications transmitted by the planners to other members of the organization. Second, the phrase "either specifies or guides" recognizes that not all organiza-

tional plans explicitly prescribe courses of action. That is, some plans assume the form of overall objectives, while others serve both as subobjectives and means toward accomplishing overall ends or goals. Third, the term "future" recognizes that there is a time interval between the statement of a plan and the subsequent actions to be taken. Depending on the purpose of the plan, the time interval will vary from almost immediate action to activities to be undertaken years in the future. Finally, the term "anticipated problems" indicates that the action specified in any plan may or may not take place, depending upon whether the anticipated problems become a reality or not.[23]

Several characteristics of a plan are described by R. C. Davis. A plan involves futurity in that it usually specifies a time relationship for specified actions. A good plan must also be objective, logically sound, flexible but stable, comprehensive yet clear and simple. A plan must be based upon objectives. It must be factual, logical, and realistic with respect to the requirements of the mission and its various undertakings. It must be flexible enough to adjust smoothly and quickly to changing requirements, yet be stable enough that it will not have to be abandoned or subjected to fundamental modifications. It should be sufficiently comprehensive to adequately cover all required action, yet not specify the nature and conditions of the action in such detail as to be unduly restrictive. Obviously, it should be unambiguous and simple enough to be understood by those who must use it.[24]

Hierarchy, Futurity, and Specificity

Although touched upon somewhat in the preceding discussions, there is a definite relationship between the level or hierarchy of planning, the futurity or time interval between the statement of the plan and the action contemplated or prescribed by it, and the degree of specificity of the plan itself.

The hierarchy of plans is described by Johnson, Kast, and Rosensweig, essentially as follows. Broad plans are established in the form of goals and objectives at a higher organizational level. The top-management planning function, under systems concepts, is really one of systems design and should give consideration to the overall goals of the organization and to the integration of the operation of the subsystems toward those goals. These broad goals and objectives are then translated into more detailed and specific plans, which are further translated throughout the organization to even more detailed and more specific plans. In effect, the planning process is one of spreading out the planning functions throughout the entire organizational system. The abstract nature of the highest-level goals and their value-oriented determination makes it vitally necessary for the managerial planning function to translate these broad goals into more tangible operating objectives. Thus, a systematic planning hierarchy is absolutely necessary to insure that effective future action is undertaken to achieve desired goals.[25]

As R. C. Davis emphasizes, planning always involves futurity. A time relationship for specified actions is

normally expressed in quantitative rather than chronological times. At the higher management level, where plans are concerned with organizational goals and objectives, planning frequently involves a time span covering years. But as we go down the hierarchical structure, the required degree of futurity in planning decreases until, at the operative level of the organization, the time span may be nil.[26]

Richards and Greenlaw point out that there is a decision problem associated with determination of the time interval between planning and action -- a problem which is, incidentally, faced by planners at any organizational level. The problem is simply that if the interval between planning and action is either too short or too long, the particular objectives for that level of organization may not be fully met. Failure to plan far enough in advance may result in insufficient lead time for the desired actions to be taken or it may incur additional costs -- either monetary or psycho-physiological. On the other hand, planning too far in advance may also incur additional planning costs, because the plans may have to be revised as a result of the increased probability that circumstances will have changed over the longer time interval.[27]

Alderson described the planning relationships in terms of the concern and responsibilities of planners at various organizational levels. Long-range planning is, primarily, the responsibility of top management, assisted by the planning staff of the organization. It is concerned with orientation to change and contem-

plates a future that is open to many possibilities, and it leads toward some conclusions as to structure or shape of things to come. Intermediate planning is, primarily, the responsibility of the planning staff. It is concerned with strategy, taking structure as largely determined and making some judgments about the quantities of inputs and outputs within this framework. Short-range planning involves greater participation on the part of those managers who are close to the line operation of the organization. It is the responsibility of line executives, assisted by the planning staff. It is concerned with current programs, taking both the structure and quantity of inputs and outputs as fixed. The short-range planner merely specifies the application of the budgeted input to minimize lost motion in achieving the target output.[28]

These relationships between futurity, hierarchy, and specificity are illustrated in the accompanying diagram of the three dimensions of planning (Figure 2). The level of hierarchy is represented by the vertical axis, the futurity of planning by the horizontal axis, and the specificity of plans by the diagonal plot between these axes. Thus, planning activities and responsibilities range from the highest to lowest levels of the organization; planning intervals range from concern with immediate actions to consideration of future contingencies; and the plans themselves may range from the highly specific to the broadly general in nature, depending upon the level of hierarchy and the degree of futurity involved.

THE PLANNING PROCESS

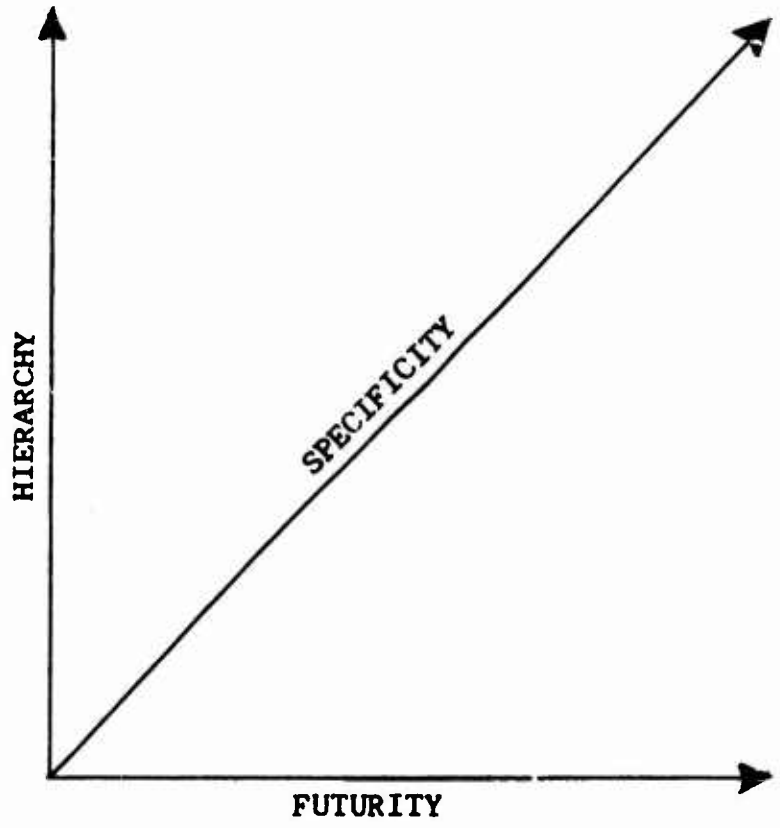

Figure 2

The Relationships Between
Futurity, Hierarchy, and Specificity

Perhaps an even better way of viewing these relationships is shown in the next diagram (Figure 3), which uses an indifference curve approach to express or illustrate the dimensions of the planning process. This representation has certain advantages over the previous figure in that it shows that the higher levels of organization are normally concerned with long-range planning of a general nature but that they can also be involved in developing short-range, detailed plans. On the other hand, as one moves down the organizational hierarchy, the planning emphasis shifts more and more toward shorter-range, specific plans and less and less on long-range, general plans. The diagram shows that lower echelons of the organization will rarely, if ever, be involved planning of a general nature. Indeed, at the operating level, no matter what may be the interval between the planning and the contemplated actions, management is always concerned with specific, detailed planning of a procedural rather than policy nature.

Types of Plans

According to Johnson, Kast, and Rosensweig, plans may be divided into three broad groups: (1) plans for goals and objectives, (2) plans for non-repetitive action, and (3) plans for repetitive action. Within each of these broad groupings are a wide variety of plans, ranging from the broadest type of long-range goals and objectives covering the operation of the entire organization down to the detailed planning for

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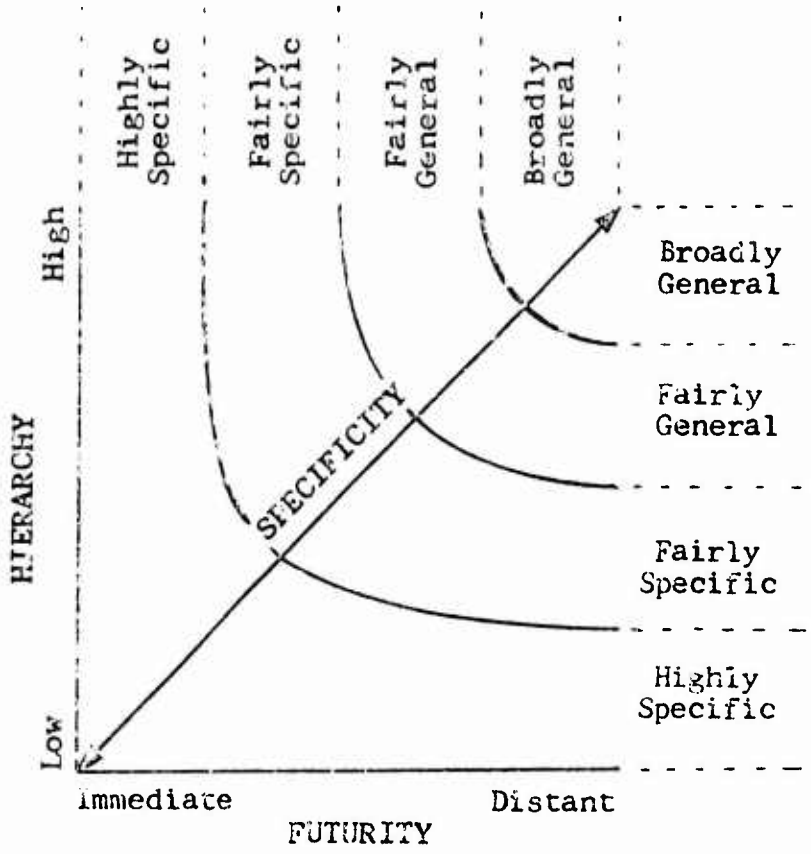

Figure 3

The Dimensions of Planning

the short-range activities of every individual within the organization.[29]

Goals and Objectives

The establishing of goals and objectives was previously discussed in relation to the hierarchy of planning. Basically, goals are plans expressed as results to be achieved. Used in this sense, goals include objectives, purposes, missions, standards, deadlines, targets, and quotas. Long-range, higher-level, strategic organizational goals are translated by plans into more specific, shorter-range, tactical objectives for the lower organizational levels.[30]

Non-Repetitive Actions

Plans for non-repetitive actions, often called single-use plans, are designed to deal with unique problems not normally encountered in the routine operations of the organization. They set forth a particular course of action to fit a specific situation and may be obsolete when the goal is reached.

There is a hierarchy of single-use plans ranging from (1) major programs, (2) projects, (3) special programs, to (4) detailed plans. There are innumerable examples of planning complex programs, such as the design, development, and production of a new space system. Rapidly advancing technology demands long-range planning of large-scale programs. The success of a major program depends upon the establishment of more detailed single-use plans, such as special programs and detailed plans. These single-use plans all

should be integrated into an overall system or hierarchy of planning.[31]

Repetitive Actions

Plans for repetitive action, often called standing plans, include policies, standard methods, and standard operating procedures designed to cover the variety of repetitive situations which the organization frequently faces. Plans for repetitive action become the habit pattern of the organization.[32]

Although the monograph on policy-making in this series of papers cites R. C. Davis in stating that a policy is not a plan, nevertheless, in the very broadest sense, a policy is a plan of action that guides the members of the organization in the conduct of its operation. Policies generally set broad premises and limitations within which further planning activities take place.[33]

Methods and procedures are what one generally thinks of when one thinks of standing plans. They are geared toward providing responses to repetitive, routine situations. There are several advantages gained from the use of standing plans. First, they relieve the manager from routine decision-making, by providing him with pre-programmed decision rules that may be applied whenever they are required. Second, they provide an important vehicle for delegating responsibility to the lower organizational levels. Third, they create uniformity of operations throughout the organization, a similarity of action in meeting

certain similar situations. Fourth, they provide for more equitable treatment of both the organizational members and the organization's clients, by assuring them of the uniformity of decision rules. And finally, they provide a vehicle by which the influence of higher managers may be extended down through all organizational levels.[34]

Despite the advantages of standing plans, some disadvantages or problems are associated with their use. Standing plans are of no use when the situation changes so abruptly that the plan does not fit the new situation. They may not permit the organizational members sufficient flexibility in their responses to decision problems. They may continue to be used after the conditions which led to their establishment no longer exist. And they may be so detailed as to stifle initiative, lead to monotony, foster boredom, and thwart the higher-level psychological needs of the members of the organization.[35]

The Planning Process

Attention is now focused on what is often called the planning process by which plans are developed. The steps in the process are essentially the same as those discussed in the monograph on the decision-making process -- which should not be too surprising since decision-making is a highly important factor in planning.

The first step in the planning process is establishing or identifying objectives. This step may

require a planning process in itself, especially at the top level of the planning hierarchy where management is concerned with long-range, strategic objectives for the organization. On the other hand, at the lower levels within the organization, the objectives may be merely derived from the given higher-level objectives or policy guidelines. Nevertheless, an objective is required in all plans at all hierarchical levels.[36]

The next step in the process is to establish planning premises. These may be derived from either physical facts and policies or they may be based upon assumptions about the future; i.e., forecasts or predictions. Two examples of how the results from planning may vary with the validity of the assumptions or planning premises are those of Sears Roebuck and of Montgomery Ward in planning for post-war operations following the Second World War. Montgomery Ward's Avery planned the company's operations after the war on the premise that there would be a postwar depression. Ward's is only now beginning to recover from the almost disastrous effects of a faulty assumption which limited the company's rate of expansion. In contrast, Sears Roebuck extensively expanded its retail outlets in the postwar period. Sears' actions were based on the premise by Wood that there would be a major population movement to urban areas, coupled with a greatly increased use of cars when the war was over. Wood is alleged to have arrived at this premise by thumbing through the statistical abstracts published by the government and noting the trends reported therein.

The translation of his idea into a planning premise would seem to be a key factor accounting for Sears' outstanding growth success. One other example of the importance of planning premises might be the military planning which structured our forces for massive retaliation, based on the premise that our superior nuclear weapons capability would provide full deterence to aggression.[37]

The third step in the planning process is the search for and the examination of alternative courses of action. The only points to be made regarding this step in the planning process are that the planner should proceed with an open, creative mind and that all plans involve a decision choice between alternatives. The fourth step in the process is the evaluation of alternatives, weighing the factors relating to each. The fifth step is the selection of the course of action deemed most feasible or appropriate -- the point of decision-making itself. As has been mentioned, these steps are all quite similar to those discussed for the decision-making process, so there is little need for further elaboration. The final step in the planning process is the formulation of any necessary derivative plans for subordinate echelons of the organization.[38]

The requirement for derivative plans is quite obvious, since planned actions must be undertaken by the operating elements of the organization. The higher the level of planning, then the greater the need for derivative plans that will translate the

planning into action. Less obvious, however, is that derivative plans may be parallel in nature. Although it is true that what is planned in one functional area of the organization will have a determining impact on other areas, planning in all affected areas should proceed in parallel to the fullest extent that is possible in order to save time. The latter requirement is essentially the same as the "concurrency concept" developed by our military R & D planners to cut the lead times for development and deployment of our weapons and aerospace systems.[39]

The Planning Cycle

Some authorities prefer to describe the planning process in terms of a planning cycle that takes into consideration the time interval factor previously mentioned. First, the objective is established or stated. Second, the actions are planned -- who is to perform the action, how and where it will be performed, and with what resources. Third, the actions are scheduled in quantitative, sometimes chronological, time sequences, depending on the hierarchical level of the plan. Fourth, the planned actions are evaluated and measured, either by logical analysis, simulation, or actual dry runs or pilot projects. Next, the plan is corrected, as may be required, with feedback to changing and revising either the objectives, the plan, the schedule, or all three, as the case may dictate. Next, if correction is indicated and after the adjustment is made, the plan may either be re-evaluated and

re-measured, or it may be implemented, depending upon the degree of confidence the planner has in the adjustments that were made.[40]

Programming

Ever increasing use is being made of programming--a particular type of planning--within the military services, the research and development activities, and many other business organizations. Many organizational actions are not routine. They are distinctive, or special in at least some respects, and their timing for implementation calls for specific focus and detailed attention. For such activities, whether they relate to the opening of a new branch office or the planning of an interplanetary space venture, a program is needed. A program is simply a detailed, time-scheduled, single-use plan. It lays out the principal steps for accomplishing the mission, and it sets an approximate time for each step or action to be accomplished. The program also indicates who should take each step and what resources are at his command and disposal.[41]

Many programming problems can be solved by following six basic steps, although variations will be made to meet individual situations. The basic stages in programming are to: (1) divide into steps the activities necessary to achieve the objective, (2) note the relations between each of the steps, especially any necessary sequences, (3) decide who is to be responsible for doing each step, (4) determine the resources

that will be needed for each step, (5) estimate the time required for each step, and (6) assign definite dates for each part.[42]

These steps are quite similar to those involved in setting up a PERT (Program Evaluation and Reporting Technique) network. Although PERT is a special technique primarily used to schedule and control highly complex programs, one of the important benefits gained from its use is the fact that is focuses attention on the detailed planning for a program.[43]

The steps just listed are basically representative of static programming which assumes that (1) the actions necessary to achieve an objective are subject to direction and manipulation by management, and (2) management can forecast the time factors -- both availability and elapsed time -- and the resources required with considerable accuracy. However, neither of these assumptions may be valid in many cases -- where actions, timing, and resources are uncertain or outside the control of management or are influenced by extraneous variables. In this event, instead of an inflexible blueprint, the program should be an evolving pattern of action -- a dynamic program in which feedback data is used as the work progresses in order to adjust the program when necessary to deal with unpredictable and uncontrollable conditions. Dynamic programming, then, includes both the processes of planning and of controlling.[44]

Long-Range Planning

Long-range planning, like programming, is receiving increasing emphasis within both government and industry. In fact, long-range planning is becoming an extremely vital function in all types of organizations faced with the dynamic forces working within our society.

There is no precise meaning for the term "long-range planning," but three concepts may be helpful in giving it meaning. First, as was previously discussed, long-range planning may be looked upon as the establishing of the basic strategy of an organization, the planning that is a necessary requisite to strategic decision-making, the process of setting organizational goals and objectives. However, long-range planning may also be looked upon either as thinking of long-run results of current decisions, or as developing an integrated long-range program for the entire organization. The former concept is one of "tomorrow's results of today's actions," while the latter is "today's actions to prepare for tomorrow's results."[45]

In looking first at the former concept, we know that during the course of a year, managers make decisions taking many actions that will have a direct effect on the health of the organization in future years. These decisions should be analyzed by extrapolating their impact into the future. For instance, a decision by a railroad to buy or not to buy a thousand frieght cars will affect its income for a quarter of a century. The future impact of this

present decision should be closely analyzed. Instead of basing actions on the assumption that present conditions will continue, managers should try to read the future, challenge the status quo, and apply imagination in appraising the likely value of an action in years to come. The latter concept is the one most generally thought of as long-range planning -- planning today's actions to prepare for tomorrow's results.[46]

The long-range planning concept involves developing a master program for the entire organization in order to achieve long-range objectives. This concept presupposes that long-range planning has already been employed to establish the long-range objectives. After the goals are set, the actions necessary to achieve them are laid out for each part or aspect of the organization. Typically, the progress to made in each part of the total program is specified for annual intervals ranging anywhere from 5 to even 50 years. For example, the Department of Defense employs a 15 year plan; and Crown Zellerback, a pulp and paper manufacturer, must plan ahead for 50 years, the normal period for a seedling to grow into a tree ready to provide timber for the market.[47]

Another example of long-range planning is that of Bell Telephone Systems. In 1910, the company initiated studies that, given the projected growth rate of the company, found the number of switchboard operators needed to handle the forecasted demand for telephone services would likely exceed the available labor supply. Thus the decision was made to switch over to the use of dial telephones instead operator-processed calls -- a decision

involving considerable costs for implementation at a time period when such action was not then required to handle the existing demand. However, the decision subsequently proved to be wise since it is estimated that by 1954, had Bell continued under the old system, over one and a half million telephone operators would have been needed to handle the demand for services.[48]

One more detailed illustration of long-range planning can be found in the planning procedures of electric utility companies, described by Newman, Summer, and Warren. Long-term projections of the demand for electricity are made for 15 to 20 years in advance. These projections are later revised and broken down by geographic areas for a ten-year advance period; at that time sites are purchased for generating plants and for transmission lines. Five years in advance of the anticipated need for service, estimates of capital requirements are prepared and tentative financial plans are laid. Two years later a formal construction budget based on engineering studies is prepared. Actual orders for equipment and construction are issued as late as possible but still in time to have service available when it is needed. At any of these stages, adjustment is likely in anticipated dates, volume, technology, or other aspects of the program.[49]

Generally, then, the essential characteristics of a master plan or program are (1) that it is comprehensive in that it encompasses the entire organization and all its elements in the plan, (2) that it is integrated into a balanced and synchronized program for the entire operation, (3) that it is sequential in that it uses milestones for

feedback purposes, (4) that it is continually reviewed and updated, usually annually, and (5) that it is integrated with short-range plans designed to implement the phasing of actions required by the long-range plan.[50]

Concluding Remarks

In this monograph the process of planning has been discussed as one of the elements of the management system in which all the elements are intricately related with each other. The management system has been viewed in terms of a three-dimensional model in which one dimension consists of the functions of establishing objectives, formulating policies, and making decisions; with the second dimension being comprised of the traditional management processes of planning, organizing, directing, and controlling; and with the third dimension representing the bonds of communication tying together all the other elements of the management system.

Although the process of planning is very closely related to the process of controlling, in that planning looks to the future and controlling checks the past, planning is also an integral part of all the other elements of the management system. Objectives, policies, and decisions must be planned. Planning is necessary to achieve effective communications. And, planning is absolutely essential in organizing the elements, directing the actions, and controlling the activities of any organization.

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