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NAVAL POSTGRADUATE SCHOOL

Monterey, California

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EXECUTIVE JOBS AND EXECUTIVE CONTINUITY

"An Investigation with Special Reference
to
Swiss Army Instructors"

by

Robert Hans Feller

December 1981

Thesis Advisor: John W. Creighton

Approved for public release; distribution unlimited.

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The issue of the development of executive potential in instructors is discussed in the concluding chapter. Sixty percent of the responses state a need for improved education, with the rationale that there is too great a difference between civilian and military problems and leadership. The objectives are defined, and possibilities for improvements are discussed. Three recommendations are given.

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"An Investigation with Special Reference to Swiss Army Instructors"

by

Robert Hans Feller
Major, G. S.
Swiss Army

Submitted in partial fulfillment of the
requirements for the degree of

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from the

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ABBREVIATIONS

DoD	Department of Defense (in Switzerland EMD)
DSS	Decision Support System
E	Prefix for executive addressees (e.g. E3)
EDP	Electronic Data Processing
M	Prefix for managerial addressees (e.g. M8)
MBA	Master of Business Administration
MBO	Management by Objectives
MIS	Management Information System
MS	Management Science
OR	Operations Research
R&D	Research and Development

To Heidi,

who patiently supported me.

I. INTRODUCTION

A. OBJECTIVES

The purpose of this thesis is to explore the problems involved in the transfer of senior instructors to civilian executive jobs in the Swiss Department of Defense, and to help analyze means of enhancing this transfer.

Thus, the objectives are:

-- to explore the requirements for executive jobs, including the public sector and focusing on those elements which may be new to senior instructors;

-- to explore methods and criteria for the appraisal and identification of executives, with special reference to instructors;

-- to explore the need and possible means for enhancing the civilian executive capabilities of senior instructors.

B. SCOPE

The discussions focus on executive functions in the civilian administration of the Swiss Department of Defense and on those aspects which may be new to senior instructors. Some more general subjects may be of broader interest.

The survey includes a sample of 27 answers to open-ended questions. These responses are intended to shed practical light on the subject, rather than test an hypothesis.

C. METHODOLOGY

1. Working Sequence

The study encompasses four phases as follows:

I. Development of the questionnaire

II. Analysis of questionnaire responses

III. Literature search

IV. Design of concept and presentation of findings

2. Sources of Information

a. Addressees and Questionnaire Responses

Thirty-three questionnaires (100%) were mailed to selected persons; 27 replies (82%) and 4 excuses (12%) were received. Two addressees gave no reply (6%).

The questionnaire responses include answers from 16 executives (59%) and 11 managers (41%). Twelve answers (44%) come from the private sector and 15 (56%) from the public sector. Instructors or former instructors contributed 12 answers (44%). Twenty-two of the 27 answers are from Swiss Army officers (81%). For more details see Appendix A.

b. The Questionnaire

The questionnaire includes the following questions:

(1) Of the management functions which you generally carry out yourself, which one(s) do you consider (a) the most important? (b) the most difficult? (c) the most time-consuming?

(2) In the selection of co-workers: (a) What qualities do you consider most important? (b) How highly do you rate professional competence? (c) How highly do you rate personal or behavioral qualities?

(3) (a) What goals do you feel are essential for management training (upper-level)? (b) What should such training include? (c) What forms of training (formal, on-the-job, etc.) do you consider efficient?

Question 4 was addressed only to persons having knowledge of the Swiss Army and its instructors:

(4) (a) Do you believe that senior instructors generally are adequately prepared for the function of an executive office? (b) In what areas do you believe additional training would be necessary or desirable?

c. Personal Experience

The author draws on more than 20 years' job experience in the military and the civilian sector, including technical. staff, management and command functions.

3. Analysis and Presentation

a. Analysis

Since the objective is to "explore," rather than "test an hypothesis," preference was given to questions of an open-ended nature. This provided a wealth of ideas and opinions, but involved a sacrifice of structure.

No statistical analysis of the responses was undertaken. Relevance was rated above precision. The findings of the survey influenced the focus of the literature search and the emphasis of the presentation. Thus, the questionnaire responses helped to reconcile theory with practice. The analysis of the questionnaire responses is integrated into the relevant portions of the text.

b. Presentation

First the purpose and the functions of executives are discussed in general terms. Then four main concerns of executives are examined in more detail: leadership, decision making, innovation and executive development.

The issue of the executive development of Swiss Army instructors is discussed as a conclusion in the final chapter.

D. SUMMARY

The executive's prime purpose is to ensure that his organization is efficient in the production of specific goods or services. He must design and maintain the stability of his organization's operation and see that it functions as an integrated unit. He must develop and sustain the work atmosphere.

The executive takes charge of his organization's strategy-making system, thereby adapting his organization to its changing environment in a controlled way. The maintenance of a balance between stability and change is among the executive's most difficult tasks.

Some role variations in managerial jobs were discussed: executives versus managers, line versus staff, private versus public sector and civilian versus military. Studies have produced more evidence of similarities than of differences. Nevertheless, the variations are of some importance with respect to the topic.

Four elements of executive work emerged to be of prime importance: leadership, decision making, innovation and executive development. These are not management functions per se, but rather are an inseparable part of all other managerial functions. The four subjects were explored in some detail, focusing on those elements which account for the differences between military and civilian jobs and which may be new to senior instructors.

Leadership is perceived by the surveyed executives as their most important and most difficult job. To understand the work of a leader, it is necessary to study the sources of power and the extent to which the leader is able to control his own job. Beside the interpersonal sources of power, attention must be given to the organizational sources of power: the lines of supply, of information and of support.

To exercise authority, leaders must learn how to arouse followers to accept orders, how to gain credibility as a legitimate source of initiation and how to cope with confrontations in which orders are ignored or disputed. To place reliance on formal authority alone is not effective. An understanding of the interactive process between leader and follower is needed. But to practice leadership includes not only asserting authority, but also building commitment and motivation. Leadership is not a technique. It must be "lived" by the leader; authority must be exercised and must be true, never cynical.

The decisional roles are probably the most crucial part of an executive's work--the part that justifies his great authority and his powerful access to information.

Decision-making under conditions of certainty, risk, uncertainty and stress is well understood by senior instructors. But executives face more than that: decision-making under ambiguity. Thus, our analysis does not focus on the techniques of rational decision-making, but rather examines decisions in terms of their processes and their dimensions. The "satisficing" view, the organizational view, the political view and the view on individual differences are discussed in addition to the rational view of decision-making. The group decision-making process is considered as an extension of the individual-differences view.

A framework of organizational activities describes the level of decision-making in terms of strategic planning, management control and operational control on one dimension, and the nature of problems to be solved (structured, semi-structured, unstructured) on a second dimension. The possibilities and limits of supporting managerial decision-making through electronic means are discussed.

Innovation and the related changes in organizations represent a growing challenge to the executive and a touchstone of his competence, since the environment and the values which are important to people are subject to change. Innovation may be in the form of initiation and exploitation of opportunities. However, if the contemporary pace and scale of change continue to accelerate, then the problem may become one of achieving reasonable stability and conservation of those things that seem good.

Innovation is creativity followed up by entrepreneurial management action to the point where it has an impact on the organization's economy or environment. Most technological innovations affect organizational structure and human behavior, in turn resulting in organizational and social change. Innovation may be a single, specific item of technology or may occur in the everyday world of industry and government, step by step, in small increments and on all hierarchical levels. Innovation is often made possible by some improvement elsewhere.

The stages in the innovative process move from perceiving a need to analyzing the problem, recognizing a need for obtaining pertinent knowledge, considering alternative courses of action, entering the implementation phase and ending with a "follow through."

What actions can management take to develop an organizational environment that will spontaneously and continuously seek out and introduce new ideas? This is a key question in the field of technology transfer. Organizational factors that are most important in terms of providing a favorable environment for innovation are discussed, and characteristics which tend to show in people who are good at linking ideas and technology with potential users, are isolated.

Executive development begins with the question, "What kind of executives will this organization need tomorrow in order to achieve its objectives and to perform in a different economy, technology and society?" Trends in the environment and life cycles of people are discussed, and a systems approach to achieving successful results in replacement and career planning is presented.

Basic issued relevant to the demands on executives were considered: The dominance of character over skills, the problem of performance appraisal and of potential recognition. Integrity of character is unanimously considered the most important prerequisite for executive jobs, and leadership experience early in the career enhances the probability of getting selected. Performance appraisal is an excellent tool for coaching purposes but has weaknesses in evaluating potential executives. The critical decisions having to do with candidates for future executive jobs are too important to rely on written performance appraisal. To submit experienced managers to a thorough accomplishment analysis may be more appropriate.

On-the-job coaching has been generally recognized as the most important factor in the development of executives. The way the "coaches" treat their subordinates is subtly influenced by what they expect from them. It is a unique characteristic of superior executives that they are able to create high performance expectations that subordinates fulfill. Studies confirm that it is difficult to improve coaching practice. Nevertheless, a course of action is suggested.

Off-the-job methods are best for providing knowledge and for initiating behavior changes. Role playing, case studies and simulation are closest to practical reality.

The issue of the development of executive potential in Swiss Army instructors is discussed in the concluding chapter.

Some background information concerning the Swiss Armed Forces, the role of instructors, their career path and their management training is provided, followed by some statistical data.

The need for improved education is analyzed, mainly on the basis of the questionnaire responses. Sixty percent of the responses state a need for improvement, with the rationale that "there is too great a difference between civilian and military problems and leadership."

Based on the questionnaire responses, the objectives of the improvements are then defined:

-- to stretch and prepare the individual;

-- to enhance his ability to recognize present and future relationships in the social, political, economic and technological environment and their bearing on the actions and duties of a DoD executive;

-- to adapt his leadership behavior to the civilian environment and his decision-making ability to the organization's and to the political point of view;

-- to enhance his ability to recognize and structure relevant problems, to foster innovative behavior and to balance stability and change.

Possibilities for improvements are discussed, bearing in mind that limited funds and the federal personnel ceiling call for trade-offs, commitments and decisions. This thesis represents a proposal, based on a modest survey, a literature review and personal experience. The problems cannot be resolved quickly. They must be repeatedly attacked through marginal adjustments.

Three recommendations are presented in the last section.

II. THE NATURE OF MANAGERIAL WORK

Section A combines the analysis of the questionnaire responses (Appendix B) with a literature survey and the personal experiences of the author in civilian management and engineering work, as well as in military command and general staff functions.

Section B distills the top management functions.

Section C analyzes variances and emphasizes the differences between the private and public sectors and the civilian and military sectors.

A. PERCEIVED AND OBSERVED MANAGEMENT FUNCTIONS

1. Introduction

The manager's work, roles or functions may be broken down and discussed in different segments. This may be useful for didactic purposes. But it is important to remember that managerial work needs a systems approach, and that all activities are interrelated.

Drucker [Ref. 30, p. 40] defines management in terms of its tasks:

> "There are three tasks, equally important but essentially different, which management has to perform to enable the institution in its charge to function and to make its contribution:
>
> (1) The specific purpose and mission of the institution.
>
> (2) Making work productive and worker achieving.
>
> (3) Managing social impacts and social responsibilities."

He then defines the work of a manager as planning, organizing, integrating and measuring and divides what managers do into five basic operations:

(1) He sets objectives: He determines what the objectives should be and he decides what has to be done to reach these objectives.

(2) He organizes: Analyzes the activities, decisions and relations needed. He divides the work into manageable jobs and groups them into an organization structure.

(3) He motivates and communicates. He makes a team out of his people. He does this through his own relationship with the men with whom he works, and through constant communication to and from his subordinates, to and from his superior, and to and from his colleagues.

(4) He measures and, even more important, he establishes the criterion against which performance is measured.

(5) He develops people, including himself.

These five basic operations together result in the integration of resources into a viable growing organism.

In the first section we will analyze how the addressees of our questionnaire perceive their functions. The next section discusses findings from Mintzberg's empirical observations of managerial work.

2. Analysis of Questionnaire Responses

a. Qualitative

Question 1 is open-ended: "Of the management functions which you generally carry out yourself, which one(s) do you consider (a) the most important? (b) The most difficult? and (c) The most time-consuming?

Analysis disclosed that the framework used by Mintzberg [Ref. 91] could be employed. The functions were divided into Decisional, Interpersonal and Informal roles. The details are embodied in Appendix B. If we consider only those functions which got a score of more than two points in at least one response, we can summarize as follows:

Table 1: Answers to Question 1, Overview

	Functions considered most:	important	difficult	time-consuming	Cumulative
Decisional Roles	Recognize Problems	***	*****	****	12
	Strategic Planning	*****	**	**	9
	Implement Change	****	*		5
	Setting Objectives	******	*		7
	Allocate Tasks, Coordinate	******	****	*	11
	Approve Decisions	****			4
	Control	*****	**	**	9
	Negotiate Resources	***	***	*	7
Interpersonal Roles	Leadership	*********	**********	*****	24
	Hire, Fire, Transfer, Promote	***	*****	****	12
	Performance Appraisal		***	**	5
	Personnel Development	***	***	***	9
Informational Roles	Process Information	**		******	8
	Inform subordinates	*	*	******	8

The results suggest that our respondents perceive their principal activities to be:

- Leadership
- Selecting and promoting personnel
- Recognizing relevant problems
- Allocating tasks and coordinating subordinates' work.

b. Selected Excerpts

(Including translated material)

(1) The most time-consuming is managing a large variety of incoming correspondence, directives and other paperwork common to large organizations, (E1)

(2) The most time-consuming? Communications! Listening to problems both big and small; getting people to clearly understand what is being directed or said. (M1)

(3) I believe the most important function is the delegation of ...authority...combined with adequate supervision...without robbing the subordinates' initiative. (E11)

(4) The most difficult would be evaluating subordinates and handling disciplinary problems. (E2)

(5) I believe that the most important, most difficult and most time-consuming of the management functions are the planning, selection and guidance of personnel... Today it is no longer enough to motivate workers at the lower levels. It is much more important to encourage and establish a climate of cooperation between workers and management. (E15)

(6) Offhand, I would say that my most important management function is the timely selection and preparation of top-level executives. I also consider this task to be the most difficult and most time-consuming. It is my firm conviction that if the chief executives of a corporation are both skilled and fortunate enough to exercise this function well, they have gone far toward succeeding in their management role. (E3)

(7) According to my judgment of management models, based on literature studies and personal experience, the systematizing of management must be contingent upon, and thus limited by, a number of human criteria. I believe that oversystematizing management creates more problems than a more loosely structured management. This conclusion is obvious if we take as our primary index the motivation and associated creativity of the workers in an organization.

Thus, I believe my most important function is the fostering of cooperation on all hierarchical levels, the cultivation of my own personal relationships with all hierarchical levels, and the control of personal relationships among the various hierarchical levels.

The most difficult function is personnel management in the areas of job qualifications; career, job and promotion planning; and the compiling of job descriptions. Equally difficult is the job of adapting organizational forms and structures to meet changing demands. (E18)

(8) The most important function is the making of key decisions affecting the entire business, particularly in terms of the future development of the business with regard to technological change, capital investments, and the preparation and disposition of personnel. My most difficult job is neither technological nor administrative; it is definitely in the area of management and guidance, especially as regards motivation, coordination, implementation of policy and goals, and the day-to-day supervision of business operations. (E17)

3. Managerial Work

a. Rhetoric versus Reality

Managers would like to have a neat, static, compartmentalized world of clear goals, well-defined resources and obvious performance measures; instead they find almost the opposite. Sayles [Ref. 102: p. 12] points out the differences between rhetoric and reality:

Rhetoric	Reality
Thoughtful decision-making	Most of the workday is devoted to interaction with other people; getting and exchanging information, persuading and negotiating.
Clearly scheduled and logically planned workday.	Impromptu, sporadic, and unplanned contacts; jumping from issue to issue and among different people.
Efforts devoted to "leading" subordinates, who defer to higher status.	Most of the time with outsiders; even subordinates challenge frequently the manager's authority.
Decisions made by rational judgment of individual in correct position to evaluate all the factors.	Decisions are the product of a complex brokerage and negotiation process, extending over time and involving large numbers of interested parties.
Objectives and goals clear and consistent.	Multiplicity of goals identified with different groups and interests that are conflicting and even contradictory; often-changing priorities.
Results proportionate to individual effort and capability; steady progress; decisive accomplishment.	Results are the product of many uncontrollable forces which are slow to emerge and difficult to predict; incremental steps--two back, three forward.
Authority equal to responsibilities.	Significant deficiencies in the power to command resources and permissions necessary to fulfill assigned objectives.
Clear goals established and sub-divided into milestones and benchmarks.	While managers need to break down larger activities into explicit goals and subgoals, in fact, most of the managers' tasks have no beginning or end; problems flow through, and there is often little possibility of neatly completing activities or solving organizational problems "once and for all."

The manager's job is sometimes contradictory and ambiguous. Rules and standards are important constraints that cannot be ignored, but, inevitably, they are also inconsistent, and the manager must be able to violate or ignore some in order to meet others.

The following pages are an attempt to describe managerial work in the language of the "Work Activity School." Our basis is Mintzberg's [Ref. 91] study on managerial tasks. His statements are important, because many of them are based on empirical research data derived directly from observing managers at work. Some are plausible hypotheses which need to be tested through further research.

The study analyzes the manager's working roles. The statements have the meaning of typical or "mean" functions, and are discussed below in more detail. Mintzberg stresses that empirical studies have produced more evidence of similarities than of differences in jobs.

In addition to work roles, Mintzberg presents distinguishing characteristics of managerial work. Some of them are discussed at the conclusion of this section.

b. The Manager's Work Roles

Mintzberg divides managerial work into ten roles, which in turn are subdivided into three groups [Ref. 91: pp. 55-93].

(I) Interpersonal roles

(1) Figurehead role (representing his organization formally).

(2) Liaison role (interacts with peers and outsiders).

(3) Leader (interrelates with subordinates).

(II) Informational roles

(4) Monitor role (receives and collects information, develops understanding).

(5) Disseminator role (transmits selected information to his organization).

(6) Spokesman role (disseminates the organization's information to its environment).

(III) Decisional roles

(7) Entrepreneur role (initiates change).

(8) Disturbance handler role (reacts when his organization is threatened).

(9) Resource allocator role (decides where to spend effort).

(10) Negotiator role (conducts nonroutine negotiations with other organizations or individuals).

The interpersonal roles place the manager in a unique position to get information. The result is that the manager emerges as the key nerve center of a special kind of organizational information. His unique access to information and his special status and authority place him at the control point in the system by which significant strategic organizational decisions are made.

As _figurehead_, the manager is a symbol required because of his status to carry out a number of social, inspirational, legal and ceremonial duties. He must be available to certain parties who demand to deal with him because of his status and authority.

The _leader_ role defines the manager's interpersonal relationships with his subordinates. He must bring together their needs and those of the organization to create a milieu in which they will work effectively. He takes responsibility for training, and the promoting of those closest to him. The societal shift toward greater organizational democracy will cause managers to spend more time in the leader role. Leadership permeates all activities.

The _liaison_ role focuses on the manager's dealings with people outside his own organizational unit. He develops a network of contacts in which information and favors are traded for mutual benefit. The manager spends a considerable amount of time performing this role. For some managers this role is paramount. Management may be seen as a process of working interfaces. Lateral relations are to facilitate coordination, to ensure that there is "consistency and complementarity between individual tasks" [Ref. 102: p. 72]. Lateral relations pose distinct challenges for the managers, because they are irregular and interfere with routines, and because the required relationship is often ambiguous [Ref. 102: p. 81].

Through the leader and liaison roles the manager gains access to privileged information, and he emerges as the nerve center of his organization. He is his organization's "information generalist."

As monitor [Ref. 91: p. 67], the manager continually seeks and receives internal and external information from a variety of sources to develop a thorough knowledge of his milieu. Because a good part of this information is current and undocumented, the manager must take prime responsibility for the design of his own information system, which is necessarily informal. Managers in new jobs spend considerable time on the monitor and liaison roles in order to build up their information systems and bring them up to the level of knowledge needed for effective strategy-making.

As disseminator, the manager transmits some of his internal and external information to subordinates. In this way he maintains their only access to certain privileged information.

As spokesman, the manager transmits information to individuals outside his organizational unit. He acts in a public relations capacity, lobbies for his organization, tells the others about the organization's performance and sends useful information to his liaison contacts. Furthermore, the manager must serve outsides as an expert in the function in which his organization operates. Managers of staff groups, because their subordinates are highly specialized and oriented toward analysis, spend considerable time in this expert capacity.

Because of his formal authority and special information, the manager must take responsibility for his organization's strategy-making system--the means by which decisions important to his organizational unit are made and interrelated.

As entrepreneur, the manager is responsible for the initiation and design of much of the controlled change in his organization. An improvement project may involve the manager in one of three ways: He may delegate all responsibility to a subordinate, implicitly retaining the right to replace him; he may delegate responsibility for the design work but retain responsibility for authorizing the project before implementation; or he may supervise the design work himself.

As disturbance handler, the manager is required to take charge when his organization faces a major disturbance. He deals with involuntary situations and change that are partially beyond the manager's control. Since each subordinate is charged with a special function, only the manager is able to intervene when the organization faces a novel stimulus that is unrelated to any particular function and for which it has no programmed response. In effect, the manager again acts as his organization's generalist--the problem-solver who can deal with any kind of stimulus. Disturbances may reflect an insensitivity to problems, but they may also result from the unanticipated consequences of bold innovation. One can expect to find the disturbance-handler role emphasized following a period of intense innovation; a period of major change must be followed by a period in which the change is consolidated.

As resource allocator, the manager oversees the allocation of all his organization's resources and thereby maintains control of its strategy-making process. He does this in three ways: First, by scheduling his own time the manager implicitly sets organizational priorities. Issues that fail to reach him fail to get support. Second, the manager designs the basic work system of his organization and programs the work of subordinates. He decides what will be done, who will do it, and what structure will be used. Third, the manager maintains ultimate control by authorizing, before implementation, all major decisions made by his organization. The authorization decisions are difficult ones to make; the issues are complex, and the time that can be devoted to them is often short. The manager can ease the difficulty by choosing the person rather than the proposal.

As negotiator, the manager takes charge when his organization must have important negotiations with another organization. As figurehead he represents his organization; as spokesman he speaks for it; and as resource allocator he trades resources in real-time with the opposite party. Sayles [Ref. 101: p. 131] identified negotiation as a significant part of lower-level managers' job, at the core of their horizontal relationship.

c. Characteristics of Managerial Work [Ref. 91: pp. 28-53]

There are no clear milestones in the job of managing, never an indication that nothing more need to be done for the moment, always the thought that something could be improved if only the time could be found.

The manager's activities are characterized by brevity, variety and fragmentation. The vast majority are of brief duration. A great variety of activities are performed, but with no obvious patterns. The trivial are interspersed with the consequential so that the managers must shift moods quickly and frequently.

The manager shows signs of preference for brevity and interruption in his work. A tendency toward superficiality becomes his prime occupational hazard.

The manager's job is not one that breeds reflective planners; rather it produces adaptive information manipulators who favor a stimulus-response milieu. His work is essentially that of communication and his tools are the five basic media--mail, telephone, unscheduled meetings, scheduled meetings and tours. Managers clearly favor the three verbal media. Mail processing tends to be treated as a burden. Tours provide the manager with the opportunity to observe activity informally without prearrangement. But he spends little of his time in open-ended touring.

The manager's interactions with other people show that he stands between his own organizational unit and an extensive network of contacts. Nonline relationships are significant components, generally consuming more than one-third of a manager's time. Much of the horizontal communication appears to be with small cliques of colleagues that serve as centers for specialized information.

Subordinates consume about one-third to one-half of the manager's time. He interacts with a wide variety of subordinates, freely bypassing formal channels of authority to get the information he desires. Managers spend relatively little time with their superiors.

An analysis of the roles suggests a blend of duties and rights. The duties come with the roles of figurehead, spokesman, disturbance handler and negotiator. In the roles of leader, entrepreneur and resource allocator, the manager has the opportunity to put his stamp on his organizational unit and set its course.

B. EXECUTIVE FUNCTIONS

The activities of managers on all levels have a number of similarities. Nevertheless, there are differences in the emphasis given to specific functions. In this section we explore the peculiarities of top management, approaching the question from three aspects:

(1) the expectation: what executives should do;

(2) the behavior: how executives are perceived and self-perceives;

(3) the process: what executives do.

In a final note we consider (4) executive time and the dilemma of delegation.

1. <u>Expectations</u>

> "People do not expect perfection. They know that the boss is also a human being. But people who take responsibility for their own work demand that 'executives' do what they are being paid for: that they plan; that they set objectives and think through priorities; that they think through assignments and set standards. Above all, they expect that the 'executive' take responsibility for his own work and performance...The 'great leader' is rarely 'warm'; a good many have been icy...he tends to be austere and aloof... But a leader always inspires confidence, always commands respect." [Ref. 30: p. 303]

The effective executive focuses on contribution. He looks up from his work and outward toward goals. His stress is on responsibility. "The man who takes responsibilities, no matter how junior, is in the most literal sense of the phrase 'Top Management.' But the man who focuses on efforts and who stresses his downward authority is a subordinate, no matter how exalted his title and rank" [Ref. 28: pp. 52-53].

There are many ways to enumerate the tasks and functions of top management and executives. We will define an executive as a person who does all of the following six functions (after Drucker [Ref. 29: p. 281] and Levinson [Ref. 73: p. 103]):

(1) Setting objectives and overall policies. This includes the task of thinking through the mission of the organization. This can be done only by one who can see the organization in its environment, who can balance the objectives and needs of today against the needs of tomorrow.

(2) Making or approving decisions which significantly affect the performance of the organization.

(3) Coordinating several functions; setting standards and examples.

(4) Maintaining and developing an organization of trained subordinates to achieve the organization's goal. Creating the spirit of the organization.

(5) Delegating responsibilities and controlling performance through at least one level of supervision. This includes thinking through the organization's structure and job designs, and making jobs demanding and challenging in order to develop people. This requires accepting different ways of doing things; evaluating worker potential; and seeing the consequences beyond the results.

(6) Managing innovation. This includes knowing how to anticipate innovation and how to make innovation economically effective. This implies seeing innovation as part of our socio-economic system, and knowing the dynamics of technology and its relationship to economic resources and results.

A number of authors claim that true executive work involves only unprogrammed activity, dealing with activity that is new and different. Katz [Ref. 64: pp. 304-308] identifies four reasons for leadership that relate to imperfections and unpredictabilities both inside and outside the organization:

"The incompleteness of organizational design.

Changing environmental conditions.

The internal dynamics of organization.

The nature of human membership in organizations."

Mintzberg [Ref. 91: p. 95] comments: "Certainly (executives) must take the broad view, they must do unprogrammed work... but they must also involve themselves in certain regular operations (like negotiations); they have their share of ordinary work to do (as figurehead and spokesman); and they must make decisions that are fully expected (as resource allocator)."

Combining these regular duties with the unprogrammed work of executives, Mintzberg describes the executive's basic purposes:

(1) The prime purpose is to ensure that his organization be efficient in the production of specific goods or services.

(2) The executive must design and maintain the stability of his organization's operation. He must ensure that the organization functions as an integrated unit. He must program, monitor and correct. He must develop and sustain the work atmosphere.

(3) The executive must take charge of his organization's strategy-making system, and therein adapt his organization in a controlled way to its changing environment. The maintenance of a balance between stability and change is among the executive's most difficult tasks.

(4) The executive must ensure that his organization serves the ends of those persons who control it.

(5) He must serve as the key informational link between his organization and its environment.

(6) As formal authority, the executive is responsible for the operating of his organization's status system.

Sayles [Ref. 102: p. 26] condenses the roles of executives even more: "Their major job is to facilitate the recombination of elements separated by the division of labor." He sees the basic elements of systems management as to be:

(1) Contingency responses: the coping with potential or actual threats to the integrity of the work system and its ongoing regularities.

(2) Uncertainty reduction: the adaption to an ever-changing environment. Uncertainties are psychologically oppressive and economically costly. They require difficult negotiations with unpredictable outcomes. Uncertainty reduction requires the ability to introduce changes, to implement and make something workable in an organizational context in which routine (short-run efficiency) has been rewarded.

2. Behavior of Executives

Argyris [Ref. 8: pp. 55-64] observed, recorded and analyzed the activities of top management. To understand the interaction between executives and their subordinates, he studied how executives perceived themselves to be. He identified four characteristics basic to their leadership styles:

(1) They set difficult goals for themselves.

(2) They are strongly committed to achieving their goals.

(3) They need continuous feedback. Consequently they set goals that will provide immediate results.

(4) They want their achievements to bear the stamp of their unique ability and drive.

Argyris then reveals five related leadership phenomena:

(1) Most executives have three characteristics in common: they are articulate, competitive and persuasive.

(2) Executives are more competitive than managers, and (unconsciously) encourage conformity among their subordinates and discourage others from taking risks.

(3) Executives claim to value direct subordinates who, like themselves, are articulate, persuasive, competitive and speak their minds. They believe that this "fit" between their own and their subordinate's leadership styles creates a self-reinforcing system.

(4) Argyris' findings however suggest that the system is self-reinforcing in ways not understood by most executives. The direct subordinates reported that they do not always speak their minds. The stronger the win-lose dynamics within the top management group, the more carefully they measure and plan their statements. Yet they try to disguise their caution because success within their organizations depends on a show of forcefulness.

(5) In most cases, the executives whose direct subordinates feel the need to exercise caution, claim to put a high premium on candor in their relationships with their subordinates. They support management programs which emphasize personal growth, risk-taking and trust.

Argyris is convinced that the typical executive whom he interviewed and observed is sincerely motivated. He wants to create an environment within his organization which will stimulate organizational development and simultaneously encourage human development. He believes that the primary reason for the executive's inability to follow through on his good intentions is a lack of training. Nothing prepares the executive to develop behavior consistent with his values.

3. Activities and Roles of Executives

The empirical studies of managerial work to date have produced more evidence of similarities than of differences in jobs [Ref. 91: p. 101]. But there are some variations. The level of the job and the function supervised appear to account for more of the variations in managers' work than any other variables [Ref. 91: p. 130]. We will discuss in more detail some variations in the next section and concentrate here more on the manager's working roles, with emphasis on the executive level. These ideas follow Mintzberg's [Ref. 91: p. 93] presentation of the ten work roles and the basic description which was given in Section II.A.3.b.

In his leader role, the executive defines the atmosphere in which the organization will work. The tone of the organization is usually sounded by its executive. This is illustrated by a personal letter (July 9, 1981) which I received from an assistant of one of the executives. After the boss retired and his successor was in charge, she wrote me:

> "As far as I'm concerned, the change has been entirely positive. We do as much work as before, but the atmosphere is different, and its effects are felt at all levels..."

The leader role is clearly among the most significant of all roles and permeates all activities. Only some activities may be categorized as concerned primarily with executive leadership: hiring, training, judging, remunerating, promoting and dismissing subordinates. (This also emerges clearly from the analysis of our questionnaire responses). In addition to these activities, Mintzberg [Ref. 91: pp. 61-62] finds another set in which the executive probes into the actions of his subordinates. In touring, in reading, in much of what he does, the executive seeks information on his organization. When he is exposed to something he does not like, the executive does not hesitate to act. It is up to him to maintain a certain degree of alertness in the organization. He is not constrained by well-defined boundaries of authority; he is the only one in the organization with a very broad mandate; he can meddle at will--and the observations of his activities clearly reflect this.

The figurehead role is most important at the highest level of the hierarchy. The executive is empowered to represent and to speak and act for his organization. He forms the "image" of the corporation in the minds of outside parties.

The liaison role: Executives build and maintain their system of status contacts in a variety of formal and informal ways. They strengthen this role through the development of their reputation. In the liaison role the executive connects his organization to its environment.

The executive as a monitor is continually seeking information that enables him to understand what is taking place in his organization and its environment. He receives information concerning clients, competitors, suppliers, market changes, political moves and developments in technology. Frequently the executive requests a report or briefing on factors associated with an upcoming decision. In addition to the usual types of information, the executive's channels also bring information in the form of pressures of various kinds. Subordinates and outsiders make a variety of demands. Mintzberg [Ref. 91: p. 70] notes in his analysis of where executives find external information, that personal sources greatly exceed impersonal sources in importance, and that the internal information channels of the executive do not coincide with the formal lines of authority. This indicates the relatively heavy reliance on a personal network of communication.

As <u>disseminator</u> the executive looks into his organization and integrates the organizational interests with the public interests. As <u>spokesman</u> the executive transmits information out to his organization's environment, to the key influencers (e.g., board of directors) and to the public (suppliers, government agencies, press, etc.). The dissemination of expert information is a minor part of an executive job and may be considered a part of his spokesman role.

In the <u>decisional roles</u> the executive is involved in the strategy-making process, the process by which significant organizational decisions are made and interrelated. This is so because (1) as formal authority the executive is the only one allowed to commit his organization to new and important courses of action. (2) as nerve center the executive can best ensure that significant decisions reflect current knowledge and organizational values, and (3) strategic decisions can most easily be integrated by having one man control all of them. Decisions span a continuum ranging from the purely voluntary innovative ones (entrepreneurial decisions) to the involuntary reactive ones (disturbance or crises decisions). What are commonly called "problems" fall somewhere in the middle.

As entrepreneur the executive spends much of his time scanning his organization, looking for opportunities and for situations that may be considered problems. Particularly in this role the executive has a need for tangible information in the form of stimuli (specific events and ad hoc data) rather than the gradual trends displayed in routine reports: He questions subordinates at random, holds functional review sessions, makes the occasional unannounced tour, searches for possible problems in the mail and in the comments of deputies and others, constantly on the lookout for areas of possible improvement. The result may be an improvement project, a series of smaller decisions and activities designed to improve a particular organizational situation. The executive may choose to involve himself in the design and choice phases of an important project on one of the three levels of delegation, authorization or supervision. Executives appear to maintain supervision at any one time over a large inventory of improvement projects in widely differing stages of development. "A prime (executive) skill may be the capacity to keep a number of 'issues' in play over a large number of episodes, and long periods of time" [Ref. 83: p. 287]. Features of executive decision-making are: splitting up of decisions, sequencing steps, timing and juggling a number of projects [Ref. 91: p. 81].

Whereas the entrepreneur role focuses on voluntary action, the disturbance handler role deals with involuntary situations and change that is partially beyond the executive's control. Disturbances may be of three types: (1) conflicts between subordinates because of resource demands, personality clashes or overlap of specialties; (2) exposure difficulties between one organization and another; and (3) resource losses or threats thereof. Timing enters importantly into the handling of disturbances. The executive does not appear to find his own disturbances; others recognize them for him (management by exception). He allows disturbance handling to take priority over most other kinds of activity, and it seems that leaders have more influence during periods of crisis. In Sayles' [Ref. 101: p. 162] view, the executive seeks to maintain as much equilibrium as possible in his organization, but he can never succeed perfectly--disturbances occur and changes must be initiated. The great significance of the disturbance-handler role is due to the impact that resulting decisions can have on the organization's strategy because of the precedents they set [Ref. 91: p. 85].

The executive as <u>resource allocator</u> controls the heart of the organization's strategy-making system. Requests for authorization are usually presented individually. They involve difficult choices. He must consider factors of timing when deciding on requests for authorization. By authorizing too quickly, he may be denying himself important information. By delaying, he may be losing an opportunity. And the executive's success in his leader role depends in large part on the extent to which he does not inhibit innovative ideas that come to him in the form of requests for authorization. Mintzberg [Ref. 91: pp. 89-90] analyzed the decision-making processes as follows:

> "In effect, the (executive) absorbs the information that continually bombards him and forms it into a series of mental models--of the internal workings of his organization, the behavior of subordinates, the trends in the organization's environment, the habits of (peers)... When choices must be made, these models can be used to test alternatives...My own impression is that (executive's) plans are not explicit, documented in detail in the organization's files...By making choices with regard to them, the (executive) is able to interrelate various decisions and to ensure that they all lead in one general direction."

He stresses that plans tend to be flexible. Unanticipated disturbances, unpredictable timing factors, and possible new information and alternatives do not allow the luxury of rigid planning.

Negotiation is a vital part of the executive's job. He participates because as figurehead his presence adds credibility to the proceedings, and as spokesman he represents his organization's information and value system to outsiders. As resource allocator he has the authority to commit organizational resources. Negotiation is resource trading in real-time. It requires the presence of someone with enough authority.

4. Executive Time and the Dilemma of Delegation

Effective executives know that time is the limiting factor, particularly their own time. There are constant pressures toward unproductive and wasteful time use.

Systematic time management is important therefore. Drucker [Ref. 28: pp. 25-51] suggests starting with three diagnostic questions:

(1) What would happen if this were not done at all?

(2) Which of the activities on my time log could be done by somebody else just as easily?

(3) Ask <u>other</u> people: "What do I do that wastes your time?"

Mackenzie [Ref. 80: p. 16] distinguishes between efficiency and effectiveness in the use of executive time: "The effective executive realizes that it is possible to be highly efficient but on the wrong tasks--for example, on those he should have delegated...He may also be efficient on the right tasks but at the wrong time..." In his trouble-shooting chart for time wasters he shows the possible causes and suggests solutions for lack of delegation:

<u>Possible causes</u>:	<u>Solutions</u>:
- Fear of subordinate's inadequacy	- Train, allow mistakes, replace.
- Fear of subordinate's competence	- Delegate fully, give credit. Ensure corporate growth to maintain challenge.
- Subordinate's overload	- Balance workload. Staff up. Reorder priorities.

The executive must find a balance whereby certain issues receive the concentration and depth of understanding they require, and those that require marginal involvement receive just that [Ref. 91: p. 179]. A great number must be delegated, even though the executive knows that, given the time, he could deal with them more effectively than anyone else. The executive must deal with some other issues himself, but in a marginal way. He must be involved only to authorize the final proposal, ensuring that the proposal is compatible with other projects. But in these cases, the executive has to realize that he may understand the issue only superficially and that a hasty "no" on a proposal he does not fully understand may discourage an otherwise enthusiastic subordinate. Finally, there is a third group of issues that require special attention by the executive. These are the most important as well as the most complex and sensitive: reorganizing structure, expanding the organization, dealing with a major conflict.

The nature of an executive's job is such that he cannot give any one issue much time at an uninterrupted stretch. Hence, each complex issue must be dealt with intermittently over a long period of time. To make progress on an issue in incremental steps is to run the risk of veering off course without realizing it. The executive may become so involved with the latest increment that he may forget about the broad issue in all its complexity.

There is still another problem which Mintzberg calls the dilemma of delegation [Ref. 91: pp. 74-75]. The current and speculative nature of so much of the executive's information means that it is verbal. But the dissemination of verbal information is time-consuming. Thus, the executive faces a dilemma. He has unique access to much important information, but he lacks a formal and efficient means of disseminating it.

The result is that the executive finds it difficult to delegate certain tasks with confidence, since he has neither the time nor the means to send along all the necessary information. "Hence the executive is damned by his own information system either to a life of overwork or to one of frustration" [Ref. 91: p. 75].

The net effect of all this is that executives' time assumes a great opportunity cost. As organizations become increasingly larger and complex, senior executives face the real danger of becoming major obstructions in the flow of decisions and information.

On the behavioral side, the hardest part of delegation as Linneman [Ref. 75: p. 163] sees it, is to keep from stepping in and offering advice or personally taking corrective action. He explains this with a number of psychological factors that make delegation difficult:

- Executives have achieved their position by reaching for responsibility, and find it difficult to reverse their role and let others take over.
- They are self-confident and often feel they could do the job better than anyone else.
- It is often easier and quicker to do things personally than it is to explain the job to others.
- They are action-oriented and want to get things done immediately.

The specific structural conditions under which effective delegation to a unit or an individual can occur, are:

(1) The unit must have a reasonably well-defined objective of output, so that output can be measured.

(2) The unit must be relatively self-contained, or self-sufficient, having within its control most of the resources and abilities needed for the achievement of its objectives.

(3) There must be sufficient technical competence on the part of the unit management and confidence in that competence by the executive [Ref. 89: p. 170].

But there are other aspects of delegation, beside the need of easing the executive's time pressure: Human aspects. Effective executives use delegation as a means of expanding (or contracting) the discretionary component of the job of subordinates. Their job may be broadened to include new responsibilities or there may be less frequent review. "The ability to demonstrate good control over the discretionary component of one's job encourages (executives) to offer still more discretion" [Ref. 102: p. 146]. This may be a source of motivation for the subordinate, because "the ideal motivator is one that employees control themselves" [Ref. 102: p. 54]. This is what Herzberg would call a "motivator."

The greatest strength of delegation and decentralization is with respect to manager development. "It alone... prepares and tests people for top management responsibility at an early stage" [Ref. 30: p. 575]. And Drucker comments elsewhere [Ref. 30: p. 405] that the most common mistake is to design the job so small that a good manager cannot grow; even worse is the job that is not really a job--the job of the typical "assistant to." He thinks the problem through, not limiting himself to management:

> "Responsibility built into the work force from the top to bottom is needed, above all, to reverse the erosion of management authority which is a threat to the functioning of management and of our institutions all together. Carrot and stick no longer suffice. But nothing has truly taken their place. As a result there is an authority vacuum. It is most noticeable among the knowledge workers in business, in the government agency, and in the other service institutions. Its symptom is cynicism--a more dangerous disease than rebellion against authority. The only way to counteract it, and to restore management's authority, is to demand responsibility of each member of the work force" [Ref. 30: p. 302].

There are limits, of course. Levinson [Ref. 73: p. 319] points out that an executive instituting participative management does not have less work to do, just a different kind of work, that delegation and participation do not mean abdication. The contribution that people can make in participatory management programs are limited by their capacity to abstract, to think conceptually, and to project into the future. A major problem with democratic management is that people are not willing to work hard at it. And even if employees participate by raising issues, ideas and suggestions, someone has to shape these ideas into programs for action. Even a democracy needs leaders.

C. VARIATIONS

1. Introduction

Mintzberg [Ref. 91: p. 101] stresses that empirical studies have produced more evidence of similarities than of differences in managerial jobs. Nevertheless, he analyzes role variations and their causes. A nested framework for a contingency theory of managerial work was developed for this purpose. (Figure 1)

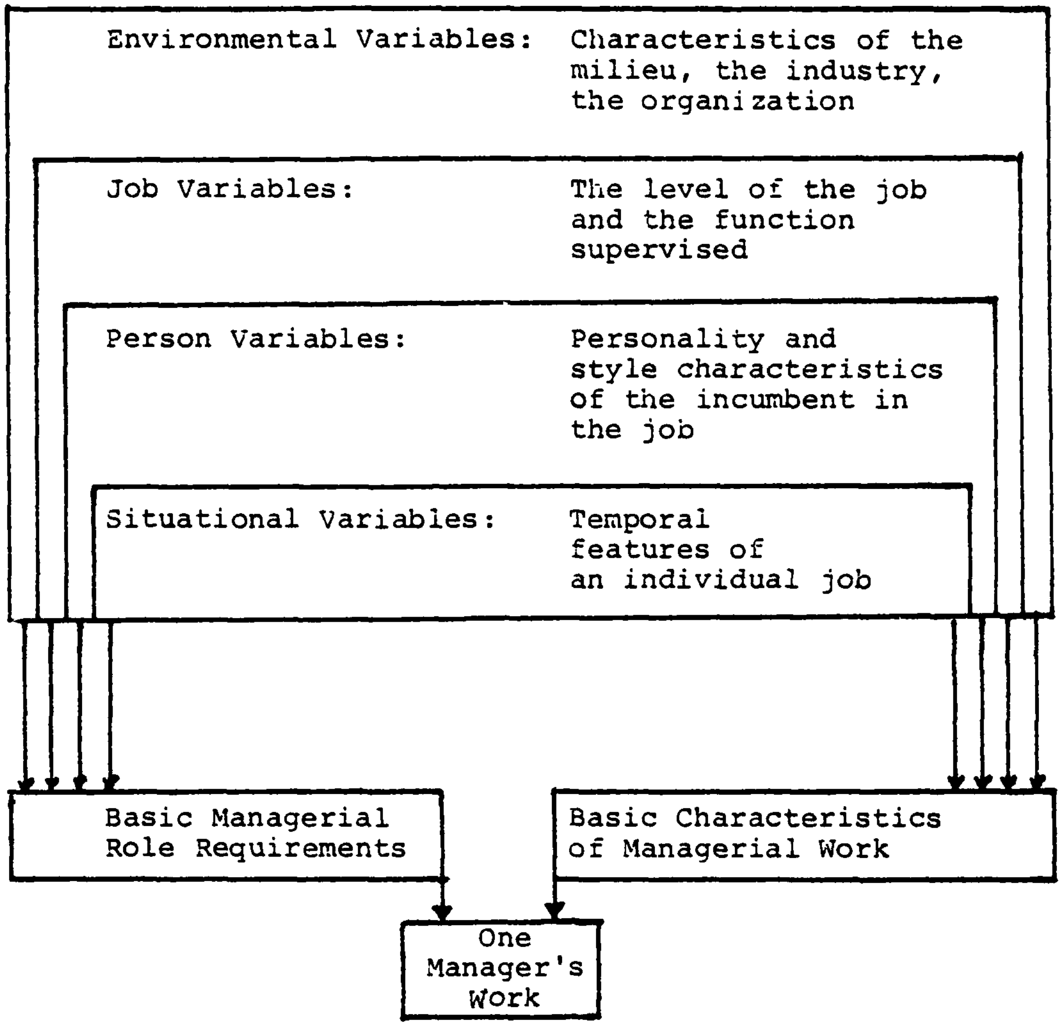

Figure 1: Contingency View of Managerial Work [Ref. 91: p. 103]

In the sections that follow we will discuss variations along the dimensions:

a) Executives versus Managers
b) Line versus Staff
c) Private versus Public
d) Civilian versus Military

2. Executives versus Managers

a. Analysis of Questionnaire Responses (Appendix B)

If we analyze the differences between executives and managers, considering only those answers where the ratio of the weighted scores exceeds the factor 2(.5) and where at least three scores have been given, we can summarize the results as follows:

Table 2: Answers to Question 1, Executives versus Managers

	Absolute Executive	Score Manager	Weighted Ratio[1]
1a) Functions considered most important			
- Setting Objectives	5	1	3.4
- Control	4	1	2.7
- Negotiate Resources	1	2	.34
- Hire, Fire, Transfer, Promote	3	0	***
- Personnel Development	3	0	***
1b) Functions considered most difficult			
- Recognize Problems	2	3	.46
- Allocate Tasks, Coordinate	3	1	2.1
- Hire, Fire, Transfer, Promote	5	0	***
- Performance Appraisal	3	0	***
- Personnel Development	3	0	***
1c Functions considered most time-consuming			
- Recognize Problems	1	3	.23
- Hire, Fire, Transfer, Promote	4	0	***
- Personnel Development	3	0	***

[1]Ratio = [# of Executives ÷ 16] ÷ [# of Managers ÷ 11]

Functions which seem to be more of a <u>concern to executives</u> than to managers:

- Selection, appraisal, development and promotion of personnel
- Setting of objectives and control performance
- Allocation of tasks and coordination of subordinates.

Functions which seem to be more of a <u>concern to managers</u> than to executives:

- Recognize relevant problems
- Negotiate resources (the fight of [public] managers for funds and personnel)

b. Time Study

Table 3: The General Electric Time Study [Ref. 114]

	Thinking ahead	Doing work that cannot be delegated	Working with people on the same or higher levels	Working with people on lower levels
President & Group Executives	30%	25%	20%	25%
Division Managers & Services Officers	25%	20%	30%	25%
Department General Managers	25%	15%	20%	40%
Unit Managers & Superintendents	20%	15%	20%	45%
Supervisors	15%	15%	15%	55%

Percent of time

c. Mintzberg's Empirical Study [Ref. 91: pp. 109-131]

The level of the job (and the function supervised) appears to account for more of the variation in the manager's work than any other variable.

The higher the level of the manager in the hierarchy, the more unstructured, unspecialized and long-range the job; and the more complex, interwoven and extended in time the issues handled, the less focused the work. Senior managers work longer hours than others, both on the job and in their off-hours.

The lower the level, the more informal the job and the less time spent in the figurehead role. Managers at lower levels are oriented more directly toward maintaining a steady work flow than those at higher levels; hence the former spends more time in the real-time roles--disturbance handler and negotiator. The lower the level, the more pronounced the characteristics of brevity and fragmentation, and the greater the focus on the current and specific issues.

d. Executive Teams

Mintzberg [Ref. 91: p. 119] comments that in some ortanizations top managers informally create executive teams of two or three that share responsibility for the performance of the ten roles of a simple managerial job. These team arrangements succeed to the extent that nerve center information can be shared efficiently. Most common is the team of two in which the executive concentrates on the external roles (figurehead, liaison, spokesman, negotiator), leaving much of the responsibility for the internal roles (leader, disseminator, resource allocator, disturbance handler) to his deputy.

Senger [Ref. 106] suggests that if leading frequently places conflicting demands on leaders, and if most leaders tend to have preference for concentrating on the task demands or concentrating on the social-emotional demands of their job, it might be a feasible solution to divide the job up between the leaders. This concept is practiced in some sectors: The commanding naval officer aboard ship must often perform the role of the social-emotional, crew-oriented leader. The second-in-command, the executive officer, must often assume the task role. A similar situation exists in Swiss Army Artillery Battalions, where two majors "share" the command: The commander concentrates on the external roles (collaborating artillery with infantry and tanks), leaving to the second-in-command the internal roles (leadership, implementation). In communist organizations there is always an administrative leader and a political leader. This situation is, of course, not without its complications, On the one hand, the leader and co-leader must supplement each other; on the other, they must be able to reach a mutually satisfactory agreement in difficult situations.

David Wright [Ref. 137] discusses the "team concept for the chief executive office." He points out that this concept is not a fixed one and that it is susceptible to many variations in its application. One variation might involve a two-man office with a chairman concentrating his time and energy on policy, future planning and communications with the shareholders, the financial community and the rest of the outside world; while a president acts as chief administrative officer or chief operating officer, being responsible for the success of the ongoing, current business of the company. Wright emphasizes that the team concept does not mean "management by committee," that the CEO is clearly the chairman, and that each team member makes only decisions for the whole organization in assigned and understood areas. The team concept must be planned, implemented and operated with great care. Then only does an organization have the advantage over companies headed by an individualist.

Drucker [Ref. 30: pp. 610-626] presents similar arguments. For him, "Top management work is work for a team rather than for one man" [p. 618]. He points out that top management tasks differ fundamentally from the tasks of the other management groups; that they are multi-dimensional; that they make different and often conflicting demands on personality and temperament; that they require at least four different kinds of human being: The "thought man," the "action man," the "people man" and the "front man." The team members need not like each other. They need not even respect each other. But they must not agitate against each other.

In public, they have to have no opinion of each other. To enforce these rules is the team captain's job.

3. Line versus Staff

One must be an expert in order to manage experts. Managers of staff specialists spend more time alone, are more involved with paperwork, and demonstrate the least amount of fragmentation and variety in their work. They spend more time advising outsiders in peer and lateral relationships, and spend considerable time in their specialty functions; they serve as experts as well as managers; they spend more time in the informational roles (monitor, spokesman, disseminator) [Ref. 91: pp. 116-118].

Staff specialists often work under conditions that can lead to organizational powerlessness [Ref. 62: pp. 70-71]. They are often seen as useful adjuncts to the primary tasks of the organization but inessential in a day-to-day operating sense. This occurs particularly when staff jobs consist of easily routinized administrative functions which are out of the mainstream of the currently relevant areas and involve little innovative decision-making. Furthermore, unless they have had previous line experience, staff people tend to be limited in the number of jobs into which they can move. Kanter [Ref. 62: p. 73] describes the common symptoms and sources of powerlessness for staff professionals: Symptoms: "Turf protection," information control, retreat into professionalism, conservative resistance to change, or staff groups battle with each other for control of new "problem areas." The <u>sources</u> may be: Routine tasks seen as peripheral to "real tasks" of the line organization, blocked careers and easy replacement by outside experts.

Project managers seem to be somewhere in the middle. The executive must provide them with adequate legal authority to develop the needed amount of reward and punishment power [Ref. 6: p. 45].

Dibbs [Ref. 27] recommends that a senior management development program, which aims to select and train people for executive posts, should include experience in supportive as well as operational divisions.

> "If at some stage in his (the executive's) career he has worked in a supportive division, he is much more likely to be able to appreciate both (line and staff) points of view and it will be clear to all that his judgment is unlikely to be clouded by any elements of partisanship" [Ref. 27: p. 184]

4. <u>Private versus Public</u>

a. Analysis of Questionnaire Responses (Appendix B)

If we consider analyzing the differences between private and public sectors, considering only those answers where the ratio of the weighted scores exceeds the factor 2(.5), and where at least 3 scores have been given, we can summarize:

Table 4: Answers to Question 1, Private versus Public

	Absolute Score Executive	Absolute Score Manager	Weighted Ratio[1]
1a) Functions considered most important			
- Recognize Problems	3	0	***
- Strategic Planning	1	4	.31
- Approve Decisions	3	1	3.75
- Negotiate Resources	0	3	***
- Leadership	2	7	.36
- Hire, Fire, Transfer, Promote	2	1	2.5
1b) Functions considered most difficult			
- Allocate Tasks, Coordinate	1	3	.42
- Negotiate Resources	0	3	***
- Performance Appraisal	2	1	2.5
1c) Functions considered most time-consuming			
- Leadership	4	1	5.0
- Hire, Fire, Transfer, Promote	1	3	.42
- Process Information	4	2	2.5

These findings suggest the hypothesis that private managers are more concerned with identifying the relevant problems than are public managers. It may be that identification of public problems is more a concern of parliament and government

[1]Ratio= [# of Private ÷ 12] ÷ [# of Public ÷ 15]

than of the executives and managers of the administration. The same line of arguments may account for the emphasis of strategic planning in the public sector. But the open-ended nature of the questionnaire, and the small sample size, do not allow formulating more than a hint for further research.

The "negotiate resources" function relates to the competition for funds in the budgeting process. It seems to be of less concern in the revenue- and-profit-oriented private sector than in the cost- and service-oriented public sector.

b. Mintzberg's Empirical Study [Ref. 91: pp. 107-109]

Top managers of public organizations and institutions spend more time in formal activity (such as scheduled, clocked meetings) and more time meeting directors and outside groups, than do managers of private organizations. Top managers of service organizations spend more time in the liaison role than do those of product organizations. Decisions made in public organizations are more sensitive politically; hence there is a need to weight more carefully the concerns of special interest groups and to be more careful about legitimating the actions taken.

Based on an unpublished MBA Thesis, Mintzberg [Ref. 91: p. 108] argues that for middle-level management the situation may be different. He found that there were no significant differences between private and public managers, with one exception: "A significantly greater proportion of businessmen are involved in a more active search for new ways to involve their organizations and in improvements which they can bring to their organizations." We can conclude that because the private sector faces more competitive environments than the public sector, their managers tend to perceive the entrepreneur role as more significant in their work. These facts may be related to the orientation of private managers toward "relevant problems" which are found in the analysis of our questionnaire responses (Appendix B).

c. Distinctions between the Public and the Private Sectors

The private sector is not capable of organizing all institutions. Public service institutions include natural monopolies, which are economic institutions and include non-economic institutions, such as the administration of justice or defense. The one thing they have in common is that they cannot be organized under a competitive market test. The critical distinctions are to be found in the purpose, irrespective of the organizational setting. The ends can be readily distinguished.

According to Drucker [Ref. 30: p. 141], the one basic difference between a service institution and a business is the way the service institution is paid. Non-monopolistic businesses are paid for satisfying the customer. They are paid only when they produce what the customer wants. Customer satisfaction is the basis for assuring performance and results.

Service institutions, by contrast, are paid out of a budget allocation. Their revenues are allocated from a general tax stream which is not tied to what they are doing. Being paid this way changes what is meant by performance or results. Results in the budget-based institution mean a larger budget, the contributions to the achievement toward objectives are secondary. The budget is not, by definition, related to contribution, it is related to good intentions.

McKinney [Ref. 88: pp. 37-55] approaches the differences between private and public sectors similarly: He points out that the vital differences are in purpose and accountability. If the market responds to what the private manager produces, the effort has been successful. In the public sector we attend to the process. The methods used are evaluated against the publicly-determined purpose. Executives in private organizations are free to deploy people and resources as they perceive market situations require. They operate on their own schedule. On the other hand are the constraints under which public managers work: They must accept goals set by other organizations, they operate structures that can be changed only at great political cost, they work with people who can hardly be dismissed. Table 5 summarizes the distinctions between the public and the private sectors [Ref. 88: p. 43]:

Table 5: Distinctions Between the Public and Private Sectors [Ref. 88, p. 43]

Public	Private
1. MAJOR PURPOSE	
A. Provide nonprofit goods and services.	A. Sell goods and services for a profit.
B. Individual agencies survive based upon continuing legislative authorization.	B. Survival depends upon both profits and growth.
C. Decisions reflect client or constituent preferences.	C. Decisions are governed partly at least by market factors (consumer demands).
2. CONSTRAINTS	
A. Legal constraints permeate the entire administrative process.	A. Laws provide the outside limits of business activity. There is a large body of regulation, but compliance is secondary to profit-making.
B. Administrators are sensitive to the political climate in which their agencies must operate. Solutions reached through compromise are standard.	B. The market is the major constraining force and format. As long as customers are willing to buy, producers will endeavor to provide the quantity yielding the maximum profit.
3. FINANCIAL BASE	
A. Resources obtained through the ability to borrow and to tax.	A. Resources obtained from return on investments.
B. The budget process is fragmented and politicized.	B. Financial planning is integrated and related to income.
4. MANAGING PERSONNEL	
A. The public service comprises persons selected through merit systems or by political appointment. The effort is to build a career service. Much of recruitment and the monitoring of promotions is handled by an independent regulatory commission.	A. The private workforce is generally selected on the basis of qualifications for a needed task, although nepotism is also common. There is usually little assurance of tenure. The promotion or separation of personnel is free of external rules and procedures.

B. The idea prevails that government is staffed by less efficient personnel, although supporting evidence for this view is limited.	B. The idea prevails that business operates with efficiency and free from the influence of politics. What might be called waste in government is often hidden under labels of research and development.
5. MEASURES OF EFFECTIVENESS	
A. The legitimacy of the acts performed is a primary measure of effectiveness. Also concerns with building consensus and reducing conflict rank ahead of assessment of the costs of providing a public good. The criteria for effectiveness are likely to be subjective.	A. Effectiveness is gauged by such measures as the ratio of net sales to working capital, profit per dollar of sales, and net return on capital. The social costs associated with making a profit are seldom assessed.

5. Civilian versus Military

a. The Problem

The military commander is often perceived as relying on formal authority, stressing an authoritarian leadership style, and having little concern for his people. Some comments in our questionnaire responses substantiate these ideas. One Swiss executive (E5, private sector) suggests that Swiss Army Instructors who intend to become executive officials in the Department of Defense should learn that the human being is the prime factor in civilian organizations (E5 is not an officer). Another Swiss executive (E6, private sector) criticizes that Swiss instructors rely too much on formal authority (E6 is a high-ranking officer and former instructor). Thorton [Ref. 127] concludes in his comparisons of naval and civilian leadership that civilian leadership practices were generally perceived more positively than those typical of the navy. Civilian leadership was described as involving more egalitarian decision-making, less formal superior-subordinate relations, less punitive handling of mistakes, less close supervision and more considerate supervision. Naval leaders were felt to rely less than their civilian counterparts on the use of expert, reward and referent power, and more on power based on rank and coercion. Broedling [Ref. 15: p. 6] points out in his "Navy Civilian Executive Study" that "many military executives are confronted with civilians for the first time when they reach the captain or admiral level. They express a need for preparation for, and information about, civilian personnel administration..." And that "Some statistically significant differences in attitudes...were identified between military and civilian executives."

There are obviously differences. The reason probably lies in the different leadership situation that prevails in the armed forces, especially in combat situations. As Fiedler [Ref. 36: p. 134 and p. 152] sees it, leadership style is part of the personality, and the most effective style is contingent upon the situation. It may be that the military community prefers and selects personalities for professional full-time jobs which best match the military situation. It may also be that these personalities are less effective in other situations. In the next two sections we will examine the differences in (b.) situational factors and (c.) behavioral aspects of civilian and military leadership.

b. Situational Factors

Three major situational variables determine whether a given situation is favorable to a particular leadership style:

(1) The leader's personal relations with the members of his group, (2) the degree of structure in the task that has been assigned to perform and (3) the power and authority that the leader's position provides [Ref. 35]. Fiedler's situational variables may be compared with Mintzberg's [Ref. 91: p. 103] nested framework for a contingency theory of managerial work[1]. The variables influencing the role requirements and characteristics of a leader's work are: (a) Environmental (characteristics of the milieu and the organization); (b) Job (the level of the job and the function); (c) Situation (temporal features of an individual job; (d) Personality (style chacteristics).

> "In peacetime an army general has time for leisurely figurehead, spokesman and entrepreneur activities--reviewing the troops, making speeches, improving the overall system. In wartime, his time horizon likely shortens considerably, and the roles of disturbance handler and leader no doubt emerge as the critical ones" [Ref. 91: p. 124].

Under peacetime situations, and even under wartime but noncombat situations, there are many similarities between civilian and military tasks and roles: To recognize the problems, to analyze the threat and opportunities, to make decisions systematically, to implement them and to control the effects, to train, develop, appraise and promote people; all these are activities common to the civilian and the military community.

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[1]Figure 1, page 57

But under noncombat situations certain differences still remain between military leadership and industrial leadership. Most of those differences center around the characteristics of the superior-subordinate relationship. The military member is not a free agent to the extent that his counterpart in industry is. The military member cannot quit. He cannot choose his job or place of residence. He cannot choose his commander, and he will face frequent changes of superiors. The fact that the military member must be prepared for combat, even in peacetime, suggests that the leader behavior will be different.

In combat situations decisions have to be made under great uncertainty; situations may be unclear and rapidly changing. Long "standby" periods may be suddenly followed by hectic and stressful periods. Hardships can reduce the willingness or ability to fight. The organizational structure and immediate superiors are subject to frequent changes. The actions of thousands of men have to be synchronized, often under time pressure, to achieve a common goal. In instances when an organization faces a major threat, leaders must (and will) alter their behavior during this period. Subordinates allow their leaders to have more influence over them in times of crises [Ref. 91: p. 124]. In combat the primary motive is survival. Other needs are probably present, but to a lesser degree. This does not deny the presence of social needs, nor the importance of good human relations in combat. It does mean that subordinates will follow a combat leader who they believe is able to help them survive [Ref. 55: p. 60]. And what is good for the whole may be a hardship and risk of life for individuals. It may be necessary to command with lack of consideration.

The major characteristics and impacts of crisis that are relevant to the decision-making process are listed by Jung [Ref. 61: p. 7 and p. 51] in the form of key words:

- Uncertain outcome with survival at risk; fear, anxiety, stress, shock, panic and destructions.
- Necessity for extraordinary resources; but it is necesary to determine if the effects will take place early enough to exceed costs (obsolescence of objectives).
- Multiple simultaneous problems; it is the combination of multitude and time constraints which creates special organizational problems, besides the stress involved.
- Changes of power structures and changes in communication and information; emergency commands, information overload.

c. Behavioral Differences

Fox [Ref. 38] concludes that consultative participative types of leader behavior are less important to success in combat than are decisive, work-facilitating, goal-emphasizing behavior. Helme [Ref. 52] identified the dimensions of leadership in a combat situation. His research data indicates that the types of officer behavior which he observed and evaluated can be explained in terms of two major dimensions: "combat leadership" and "technical/managerial leadership." Both display a strong drive to accomplish their mission. The combat leader is successful primarily by virtue of his forcefulness in the command of men and his timely direction of the team. His key behaviors are decisive response to emergencies, clear direction and active example associated with consideration for men. The technical (managerial) leader relies more on his ability to organize, to plan, to allocate resources, manpower and responsibilities under varying degrees of stress.

Blake and U.S. Army Colonel Bryson [Ref. 12, see also Ref. 13] expect the 9.9 Leadership Style to be most successful in the military environment (9.9 = high in task orientation and high in consideration). This concept of team unity recognizes the phenomenon that a well-led unit is more than the sum of its parts.

> "...it is not suggested that the tank commander or the airplane commander hesitate to make a decision, take a risk or commit his forces when he should...The difference in the combat situation is what has gone on before: When a leader has operated in a 9.9 way in garrison, through training cycles, during the planning phases and in his administration and logistics, he has built his team on a strong foundation of interdependence. He has undergirded his relationships with his subordinates with mutual respect, common goals, trust and understanding...and the same results are...likely to be achieved by his successor... The test of any man's leadership style, in combat or non-combat situations, is what happens when he is no longer present" [Ref. 12: p. 18].

Sloan [Ref. 113] describes differences between Army Officers and Civilian Managers. He found that civilian managers placed greater importance on cooperation, while the military placed somewhat more importance on loyalty. He found that military officers placed significantly more emphasis on prestige, influence, power and security, while civilian managers viewed creativity, job satisfaction and money as being more important in achieving success. The responses of civilian managers indicate that they are more willing to take risks and innovate change, while the military group placed higher value on rational and cautious action. The military officer evaluates risk-taking in a combat situation where the costs are lives. The civilian sees the need to be creative and take risks in order to get a larger return on investment. The ideas of authority, force and conflict are viewed as more important by the military. Emotions play a very low role in influencing the behavior of both groups, and both groups' primary orientations are pragmatic.

Hicks [Ref. 54] compared successful military officers with their civilian counterparts (middle-managers) on the two dimensions of leadership: consideration and structure (task orientation). It was found that age impacts most heavily on these dimensions of leadership: Older, more senior, higher-ranking officers are more considerate and less structured than their associates. It was also found that military commanders compare unfavorably with their civilian counterparts on the dimension of consideration. Fleishman [Ref. 37: p. 140] comments that high consideration can compensate for low structure, but that high structure cannot offset low consideration. Thus, he postulates that high turnover, accident rates, and worker dissatisfaction will be correlated with high structure and low consideration (with consideration being the dominant factor).

III. REFLECTIONS ON ESSENTIAL ELEMENTS OF EXECUTIVE WORK

This chapter concentrates on three elements which are of prime importance for executives. These may be inferred from an analysis of chapter II. The fourth element, which is particularly important at higher hierarchical levels, is personnel development. The next chapter (IV) is devoted to this topic.

Leadership and Decision-Making, as well as Innovation and Change, are elements in the activities of a military commander and of a senior instructor. This thesis analyzes the transfer of senior instructors to a civilian executive position. The approach concentrates, therefore, on what is different in civilian jobs.

Section A on leadership emphasizes civilian leadership, giving little attention to crisis situations.

Section B focuses on the viewpoints of decision-making rather than on the decision process or decision-making techniques. Officers are well-trained in rational decision-making under conditions of uncertainty and risk. They are less accustomed to looking at the problem from the points of view addressed in this section.

Section C analyzes aspects of innovation and organizational change. Instructors are often confronted with change, with the implementation of innovation. Initiating innovation is of minor importance to them. That is the emphasis of Section C.

A. LEADERSHIP AND POWER

Leadership is the most widely recognized of managerial roles. It pervades all activities. It is hard to identify; "it is most clearly recognized in its absence" [Ref. 39: p. 62]. Leadership descriebe the manager's relationship with his subordinates--his attempts to motivate them and his development of the milieu in which they work. Each time a manager encourages a subordinate, or meddles in his affairs, or replies to one of his requests, he is acting as leader.

1. Definitions

a. Leadership

A basic definition is given in the glossary of Psychology and Life [Ref. 138: xii]: Leadership: A capacity possessed by individuals who exert more influence than other members of a group; the traits possessed by an effective leader include intelligence, achievement, responsibility, participation and status.

For our purpose we use Tannenbaum's definition [Ref. 122: p. 24]:

> "We define leadership as interpersonal influence, exercised in a situation and directed, through the communication process, toward the attainment of a specified goal(s). Leadership always involves attempts on the part of a leader to effect the behavior of follower(s) in a situation."

b. Effective Leadership

It may be useful to distinguish between successful and effective leadership: Success has to do with how the led individual or group behaves. The resultant behavior may be measured as an indicator of the degree of success. Effectiveness describes the internal state or predisposition of the led individual or group and thus is attitudinal in nature. Success may be attained in the short run, with close supervision. But leadership is effective only if its influence fosters long-range success without close supervision [Ref. 53: pp. 114-117].

Hersey describes management effectiveness as a subset of leadership effectiveness limited by organizational goals (and excluding personal goals [p. 112].

c. Power

Power is said to be exercised when changes occur in the "target person's" behavior that can be attributed to the powerholder's influence and that serve the powerholder's interests or intentions [Ref. 68: p. 9].

2. Questionnaire Responses

a. Analysis

Executives as well as managers find leadership to be very important. No other task scored so many points. (Appendix B, Question 1a-c).

Table 6: Answers to Question 1, Leadership

Leadership is	Executives	Managers	(Next scored task (average))
- most important	38%	27%	(22% setting objectives
- most difficult	38%	36%	(19% hire and fire)
- most time-consuming	19%	18%	(22% to process information)

"Leadership" is the key word most often mentioned (Appendix F), together with "Personnel":

Table 7: Selected Key Words

Key words	Absolute scores Executives	Absolute scores Managers	Absolute scores Totals	Weighted Executives	Weighted Managers
- Leadership	11	6	17	11	8.7
- Personnel	10	7	17	10	10
- Control	9	3	12	9	4.4
- Strategic Planning	7	4	11	7	5.8
- Motivation	6	4	10	6	5.8
- Cummunication	4	3	7	4	4.4

The perceived importance of leadership is also stressed if we consider that "personnel," "motivation," and "communication" are related key words.

Most of the answers to the question "What goals do you feel are essential for upper-level management training?" (3a, Appendix D) included statements which could be summarized as "acquiring a superior leadership behavior with broad, integrative general knowledge." (56% of the executives and 63% of the managers answerd in this way.)

The answers to the question "What should such training include?" (3b, Appendix D) can be summarized as "Leadership and human relations, including motivation, psychology of work, group processes, communication and managing conflict." (63% of the executives and 55%of the managers answered in this way. It is the highest score.)

b. Selected Excerpts

Examples of tasks found to be most important (Question 1a):

"To control without reducing the initiative of the subordinates" (E11).

"To promote a cooperative leadership style on all hierarchical levels; to maintain personal contact with all hierarchical levels and to influence personal relations between hierarchical levels" (E18).

Examples of tasks found to be most difficult (Question 1b):

"To find solutions in touchy problems related to personnel" (E4).

"To keep personal relations with subordinates, despite a shortage in time. To balance the divergent interests of subordinates. To adjust differences in a participative way (most time-consuming)" (E11).

3. <u>Contemporary Views of Leadership</u>

a. The Leader Effectiveness School

The leader-effectiveness school focuses not so much on the job of managing as on the man in the job. It seeks to discover what set of personality traits of managerial styles lead a manager to effective performance. Early workers in this field looked for particular traits or constellations of traits that could be found in all successful leaders--with little success. In the early 1960's another group of writers focused their attention on managerial styles, criticizing the autocratic, task-oriented style and advocating the participative. people-oriented style. Since the late 1960's empirical social psychologists have been arguing for situational or contingency theories of leader-effectiveness.

As they see it, no one style of managing is always best; the effectiveness of a particular style of leadership--autocratic or participative--depends on a number of situational factors, including "forces in the managers, forces in the subordinates, and forces in the situation" [Ref. 121]. The questions (1) which style is appropriate for which situation? (2) Is a leader able to adapt his style to the situation? and (3) Can the situation be adapted to the style?, are still controversial.

But the findings suggest: (1) relations between the leader's personality and his style [Ref. 45: p. 200], (b) relations between the leader's behavior and the situation with regard to his subordinates and the task [Ref. 35: p. 134] and (c) that managers are able to shift their style to a certain (individual) extent and to select the style that is most effective in a given situation [Ref. 53: pp. 149-150]:

> "...in present training and development programs...managers are encouraged to adopt certain normative behavior styles. In our culture those styles are usually high relationship-low task or high task-high relationship styles...However, the minute an important issue or crisis develops, he tends to revert to his old basic style and becomes inconsistent... In summary, changing the style of managers is a difficult process, and one that takes considerable time."

A thorough review of the literature on leadership, with special attention to theories of leader effectiveness, is presented by Gibb [Ref. 41], and a catalog of approaches to human relations through a "grid framework" is included in Blake [Ref. 13: pp. 206-217].

b. The Leader-Power School

This school concerns itself with power and influence--with the manipulative prerogatives of the leader. To understand the work of the leader it is necessary to study the sources of power and the extent to which he is able to control his own job.

(1) Interpersonal Sources of Power. They are often categorized according to a five-part scheme [Ref. 20: pp. 28-30]:

- Reward power is based on the subordinate's belief that the leader has the ability to mediate rewards for him.
- Coercive power is based on the subordinate's belief that the leader has the ability to mediate punishment for him.
- Referent power is based on the subordinate's identification with the leader (identification: "a feeling of oneness" or "a desire for such an identity").
- Legitimate power stems from internalized values in the subordinate which dictate that the leader has the right to influence him and that he has the obligation to accept this influence.
- Expert power is based on the subordinate's belief that the leader has some special knowledge or expertness.

(2) Organizational Sources of Power. Kanter [Ref. 62: p. 65-75] suggests that the position, not the person, often determines whether a manager has power. He sees the organizational sources of power as consisting of three lines· (1) Lines of supply. The capacity to bring in the things that the own organizational domain needs. (2) Lines of information. To be "in the know" in both the formal and the informal sense. (3) Lines of support. To know that

one can assume innovative, risk-taking activities without having to go through the stifling multi-layered approval process.

Power has also to do with connections with other parts of an organization. Such power derives from two sources--job activities and political alliances [Ref. 62: p. 66]:

> "(1) Power is most easily accumulated when one has a job that is designed and located to <u>allow discretion</u> (non-routinized action permitting flexible, adaptive and creative contributions), <u>recognition</u> (visibility and notice), and <u>relevance</u> (being central to pressing organizational problems).
>
> (2) Power also comes when one has relatively close <u>contact with sponsors</u> (higher-level people who confer approval, prestige or backing), peer networks (circles of acquaintanceship that provide reputation and information), and subordinates (who can be developed to relieve managers of some of their burdens and to represent the manager's point of view)."

Kanter emphasizes that managers who are in a powerful situation can accomplish more. They are likely to be highly motivated and, in turn, to be able to motivate subordinates. They gain the respect and cooperation that attributed power brings. The powerless on the other hand act differently. Lacking the supplies, information, or support to make things happen, they may turn to the ultimate weapon of those who lack productive power--they may turn to oppressive power: holding others back and punishing. Kanter concludes that the true sign of power is accomplishment--not fear, terror or tyranny.

Understanding what it takes to have power and recognizing the classic behavior of the powerless can help managers make sense out of a number of organizational problems that are usually attributed to inadequate people: The ineffectiveness of first-line supervisors, the petty interest protection and conservatism of staff professionals and the crisis of leadership at the top. Kanter proposes to look at the positions such people occupy.

People at the top can be powerless for reasons that are not very different from those that affect staff and supervisors. Their sources of supply can diminish as environment changes; their need to insulate themselves from the routine operations can lead to a lack of information; and finally, they need supporters to be and feel powerful.

> "...when executives lose their own lines of supply, lines of information, and lines of support, they, too, suffer from a kind of powerlessness. The temptation for them then is to pull in every shred of power they can and to decrease the power available to other people to act. Innovation loses out in favor of control. Limits rather than targets are set. Financial goals are met by reducing 'overhead' (people) rather than by giving people the tools and discretion to increase their own productive capacity. Dictatorial statements come down from the top, spreading the mentality of powerlessness farther until the whole organization becomes sluggish and people concentrate on protecting what they have rather than on producing what they can" [Ref. 62: p. 72].

It may be interesting to compare these observations with Fiedler's [Ref. 36: p. 136] "Summary of Leadership Style, Behavior and Performance in Varying Situations" (Table 8).

Table 8: Leadership Style, Behavior and Performance in Varying Situations [Ref. 36: p. 136]

	Situational Control		
Leader Type	High Control	Moderate Control	Low Control
Relation-ship-motivated	Behavior: Somewhat autocratic, aloof and self-centered. Seemingly concerned with task. Performance: Poor	Behavior: considerate, open and participative. Performance: Good	Behavior: Anxious, tentative, overly-concerned with interpersonal relations. Performance: Poor
Task-motivated	Behavior: considerate and supportive. Performance: Good	Behavior: Tense, task-focused. Performance: Poor	Behavior: Directive, task-focused, serious. Performance: Relatively good

Of course, power or powerlessness in a position may not be all of the problem. Sometimes incapable people are at fault and need to be retrained or replaced. But where patterns emerge, organizational power failures could be the reason. Then managers might "make pockets of ineffectiveness in the organization more productive not by training or replacing individuals, but by structural solutions such as opening supply and support lines" [Ref. 62: p. 73].

c. The Leader-Behavior and the Work-Activity School

The leader-behavior school analyzes the actual content of the manager's job by studying the behavior of the incumbents, e.g. [Ref. 101] whereas the work-activity school analyzes inductively the work activities of managers, e.g. [Ref. 91]. The following section is based on the leader-behavior school.

4. <u>The Practice of Leadership</u>

The practice of leadership includes (1) asserting authority and (2) building commitment and motivation.

<u>To exercise authority</u>, leaders must learn: (a) how to arouse followers to accept orders and the leader's initiations, (b) how to gain credibility as a legitimate source of initiation, and (c) how to copy with confrontation in which orders are ignored or disputed.

a. Making Orders Accepted

Leaders manifest their distinct position by periodically--only rarely and briefly--initiating to all subordinates, getting them to be responsive simultaneously to the order. Sayles calls this "Set Events"[Ref. 102: p. 32]. Such simultaneity is essential to both reinforcing the position of leaders and accomplishing the goals of the group in case of an external challenge that cannot be dealt with by a one-on-one, sequential chain of commands or initiations.

But this group response must be preceded by a much higher frequency and intensity of one-on-one or "pair events" [Ref. 102: p. 32], which are necessary to bring the subordinates to a point where they will respond synchronously to the initiations of their leaders.

In <u>handling pair events</u>, leaders actively encourage the bringing of problems and requests. They are responsive to requests for aid and assistance. They can provide both organizational and technical help that aid the other person and provide appreciation and a sense of indebtedness in return.

Leaders also appear to have the energy and perseverance to keep circulating among the followers. Their presence enables the followers to talk freely--a source of satisfaction. By maintaining free access and proximity, leaders become the focal points for information, natural data centers to which anyone can turn in order to obtain the most current and comprehensive information. Providing satisfying responses builds up a reservoir of goodwill and prestige. "Highest status is assigned to those to whom most people initiate" [Ref. 102: p. 33]. Leaders also dispense adjudications that resolve conflicts and statements and relieve pent-up tension among subordinates. Followers want arbiters who will be both sagacious enough and respected enough to terminate upsetting disagreements.

Handling set events: The mark of leaders is the ability to redirect the actions and goals of followers. "Such a source of 'new' decisions has been found to be essential to the survival of every human group" [Ref. 102: p. 34]. The formal order or decision is often preceded by an intensity of interaction. "Leaders literally 'work up' the group to prepare them to be responsive." Then, if the leaders have done their job well, subordinates go into action, simultaneously and synchronously. Many studies or organizations have shown the enthusiasm and motivation that is derived from the sense of jointly responding to a common disturbance or enemy, or toward a common goal. The very physical, behavioral awareness of being part of a mutually complementary, coordinated, harmonious effort is itself enlivening. Thus, winning begets winning, not simply because of the self-confidence engendered, but because human beings are both aroused and satisfied by experiencing a mutually responsive group.

b. Legitimatizing the Leadership Role

Leaders must demonstrate superior ability, whether it is technical skill or organizational sophistication. In addition, bosses are expected to have credibility, to know the "rules of the game," the norms, expectations and values of the group to be led. Knowing the norms means being able to communicate. "Promotions from within increase the chance that new leaders will not violate expectations or prove themselves a threat to 'all we hold dear'" [Ref. 102: p. 37].

Nothing legitimatizes and substantiates the position of leaders more than their ability to handle external relations. Above all else, leaders control a boundary, an interface. They are the link with the outside world.

Respected leaders are those who can deal profitably with outsiders and bring back benefits and protection. Protection consists of preventing the outside world from making pressureful demands and pushing around the insiders, violating norms, and interfering with predictable and comfortable routines. Thus, "bosses who can buffer their employees and who can go against the chain of command, to win benefits and get oppressive rules changed or ignored, earn loyal fellowship--even when their other leadership characteristics are inadequate.

Executives will be caught between the conflicting demands and expectations of those above and those below. This involves a boundary role which must be played out behaviorally. Representation becomes advocacy. The organization consists of a number of semi-independent fiefdoms competing with each other for budget and prerequisites. The last thing subordinates expect is executives who simply sit as judges, seeing themselves as outsiders who support those requests from their group that will most easily be accepted by upper echelons.

A simple, yet critical prescription for legitimatizing one's position is persistence--not giving up, insisting that one's legitimate demands be met. Persistence means repetition, clarity of command, self-confident dominance--being able to keep asking, talking, explaining.

Subordinates do recognize that their organizations require active leadership, although they may be loath to admit this. Subordinates don't want mindless or needless orders from managers who relish demonstrating their authority.

c. Coping with Nonresponse

In seeking to legitimatize their position, leaders must be able to confront and persuade reluctant others. Leaders who aren't followed soon lose whatever status they had.

Whenever superiors and subordinates disagree and concurrence is necessary, there are different ways to attack the problem:

(1) Threats. They are often used and may be sometimes successful, if the situation is clear, the "right" on the side of the superior, and other means have been tried. The leader needs legitimate power to do so. But threats lead to frustrations and lead to aggressive rebuttals. Even if the employee heels to and conforms, over time his willing cooperation and responsiveness are likely to suffer.

(2) Rewards. Every such offer is implicitly a threat from the employee's point of view (no gift if no conform) [Ref. 102: p. 51]. Both threats and rewards emphasize the power of the boss. Further, it is difficult to devise rewards that will be perceived as equitable. Rewards tend to "wear out." And whatever the size of the previous one, the next may have to be larger to make any impact.

(3) Dominance. Charismatic leaders may talk reluctant others into accepting their proposals. This technique may be suited to outsiders, not subordinates, because it quickly loses its potency and depends for its efficacy on infrequent contact. Persuasion may be used to emphasize the skills of the subordinate; how important his contributions are to achieve the common goal. Also, in this constellation the subordinate is probably frustrated. He is being placed in a position where he is torn between his own source of

equity and the pressure of the boss. If he gives in, there will be resentment; if he doesn't the relationship has been injured. Even if he changes his mind, there is a feeling of the boss manipulating the weak subordinate. The sense of dependence has been increased.

(4) Provide Means to Gain Goal. This approach is based on Lewin's "Field Theory." A complete view of this theory is presented by Cartwright (Bibliography). More psychologically healthy, and more durable, is a superior-subordinate relationship in which managers provide the means or facilities for the subordinate's attainment of their own goal--not the goals themselves. Leaders, as Lewin argued, can aid in modifying restraining forces which have prevented employees from reaching desired goals. Sayles [Ref. 102: p. 52] summarizes the elements of persuasive behavior:

> "Whenever superiors and subordinates disagree and concurrence is necessary, and the matter does not lend itself to a simple directive, superiors should:
>
> 1. Seek to establish, through a mutual give-and-take, a common understanding of the nature of the problem and the surrounding constraints...
>
> 2. Seek to understand the subordinate's values, interests, anxieties and desires...a process which communicates to the subordinate that the boss is understanding...(...this doesn't mean agreeing...).
>
> 3. Seek to redefine the problem in such a way that it is possible for employees to have some opportunity to contribute to its solution. The contribution may be a minor adjustment of how something will be done... the important element is getting the employee's initiation."

This joint problem-solving decision is made as a result of a process in which both leader and led have useful roles to play. The solution becomes the result of the superior's ability to restructure the problem and to encourage a comparable restructuring of the employees' mind-set.

d. Building Commitment and Motivation

We have discussed how to assert authority by making orders accepted, by legitimatizing the leadership role and by coping with nonresponses. We turn now to a second important aspect: building commitment and motivation. A great deal of performance depends upon what subordinates do when supervisors are not present and the critical job dimensions are those involving taking initiative which go well beyond what can be ordered or specified. That is why commitment, morale, loyalty and motivation are of substantial consequence in organizational affairs.

A comprehensive discussion of "Motivation," "Job enrichment," and "Work design" is presented by Herzberg (1976) and Hackman et al (1977) (Bibliography). The role of unconscious motivation is discussed in Levinson [Ref. 73: pp. 75-86 and 343].

Sayles [Ref. 102: p. 69] states: "...subordinate's motivation and satisfaction, and the leaders own perceived charisma, are the end results of a great deal of superior-subordinate interaction. One cannot directly provide 'motivation' or 'satisfaction'." He analyzes the behavioral elements that together comprise the leadership style that results in "subordinate esprit" and concludes.

> "A great deal of research on job satisfaction, if summarized, suggests that employees seek general sources of fulfillment or satisfaction: predictable and equitable rewards in proportion to effort, security and acceptance. When these are adequate (compared to the 'cost' of working), there is loyalty and commitment.
>
> Lost in a maze of theories on supervision, most managers are unaware of the purely physical dimensions of managing. Some significant share of supervising consists...of making the other persons comfortable, providing a sense of acceptance and developing decent, reassuring social relations..." [Ref. 102: p. 70].

Sayles suggests that there are at least three components directly controlled by managers which influence motivation and commitment: (1) The potential payoff perceived by subordinates for improved performance. (2) The degree of acceptance and security perceived by subordinates and (3) The effective "management" of interaction patterns.

(1) Shaping Payoff Expectations. The assumption that satisfied employees will be more productive is reversed by the "expectancy" or "path goal" theory (Bibliography, E. Lawler, 1973). It argues that employees must perceive productivity and performance as necessary steps along their path to satisfy their own goals. For employees to be motivated, the following points all must appear credible (points which may be influenced by managers). Employees must believe:

a. They have the capacity to improve (based on past experience and self-confidence).

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b. This improved performance will not be excessively costly in terms of energy, friendships or other personal sacrifices, including future obligations and commitments.

c. This improved performance will result in demonstrably good "results," something others can measure, assess or perceive.

d. This result will be appraised as commendatory, as a positive contribution.

e. This result will be rewarded.

f. The reward will be perceived as equitable by the subordinate. (Equity is always relative, not an absolute--rewards are compared with what relevant others are receiving.)

Augsburger [Ref. 10: pp. 138-142] concludes in his dissertation that motivation through delegation brings about positive results if the subordinate can decide himself the work-process and the work-objective.

There is much work for the managers as facilitators of these linkages to motivation. A great deal of interaction with subordinates to explain, reassure and aid; and a great deal of outside facilitation with other employees and other departments, will be necessary to both encourage employees and translate their contribution into satisfying results.

(2) Acceptance and Security. Employees at all levels, including the vice-president, want a considerate, understanding and appreciative boss (Bibliography: Roethlisberger, 1977). Their own personal security is dependent on this since he holds power over them. And his positive appraisal is a prerequisite to gain a sense of accomplishment. Furthermore, given all the ambiguities of the modern organizational world (the opportunity to discriminate, sabotage, or undercut), subordinates need to know that their boss is a trustworthy person, fair and well-balanced. Most leaders know this and want to communicate this. However, there may be a discrepancy between the manager's feelings and what gets communicated.

There is no way of consistently doing things that the subordinates will agree with. In fact, managers who will never do anything people will dislike, are both naive and ineffective. Managers will have to decide and to do things that will be misperceived, disliked and be considered inequitable or unfair. Thus, not "fairness" but the assurance that the power difference will not be misused, must be communicated. Leaders communicate this trust by behavior more than words.

> "The requisite behavior is a balancing of dominance and responsiveness, of control and being controlled, of initiating and responding" [Ref. 102: p. 61].

The "Ohio State Leadership Studies," initiated 1945, attempted to identify various dimensions of leader behavior. They found that "Initiating Structure and Consideration" were separate and distinct dimensions [Ref. 53: p. 95]. Thus it was during these studies that the leader behavior was first plotted on two separate axes, rather than on a single continuum, recognizing the duality of the leader's role: He must assert authority and demonstrate concern for feelings. It is the proper balancing of the two that proves a sense of security and confidence in the supportiveness of the leader. Consideration: The leader finds time to listen to group members, is willing to make changes, is friendly and approachable. Initiating structure: The leader assigns group members to particular tasks, asks the group members to follow standard rules and regulations and lets group members know what is expected of them. Blake and Mouton have, beginning in the 1960's, popularized these concepts in their Managerial Grid [Ref. 13: pp. 10-26].

Carlson [Ref. 19] concluded that there are primarily two basic dimensions to all human intercourse: (1) Dominance-Submissiveness and (2) Affection-Hostility.

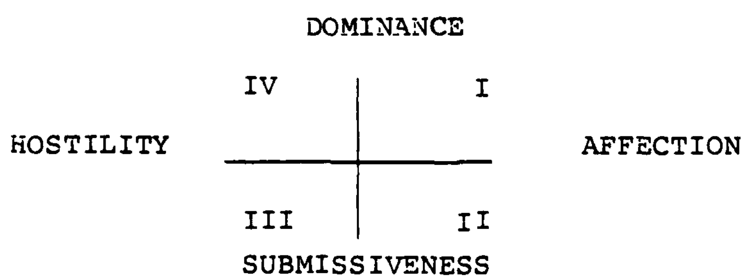

Figure 2: Carlson's Model of Social Interaction

Using this model, it would be reasonable to predict the following subordinate reactions, given the range of supervisory behavior as depicted in Table 9. Leaders are risking the wholesomeness and stability of the relationship when they move out of Quadrant I.

Table 9: Subordinate's response to leader's action [Ref. 102: p. 63]

Quadrant	Leader's Actions	Subordinate's reactions
I	1. Dominance (modest support, but no trace of hostility	Respect and trust
	2. Substantial supportiveness	Affection
II	3. Supportiveness and some dependence	Helpfulness
	4. Submissiveness	Arrogance
III	5. Distrust	Wariness, rejection
	6. Punishment	Wariness, rejection
IV	7. Aggressiveness; overt hostility	Fear and resistance
	8. Boastfulness; exploitation; usually great awareness of status	Inferiority, distrust

(3) <u>Using Interaction to Motivate</u>. Individuals have both distinctive and measurable needs for social interaction. Employees will assess the supportiveness and

encouragement of superiors by how they interact; by the actual physical dimensions of the give-and-take between them; the dimensions of whom the superiors talk with, when and the balance in the discussion between talking and listening.

To summarize, leaders can effect security-giving, satisfaction-giving interaction only by [Ref. 102: pp. 65-69]:

(1) Spending a majority of their time interacting with people in the organization.

(2) Giving roughly equal time to all--those that don't seem to want or need it, as well as those they find easiest to be with.

(3) Striking good balance between short and long contacts.

(4) Being flexible in length of speaking and silence periods, which allow them to synchronize their interaction pattern with those of others.

(5) Some rough sharing in who takes the initiative; encouraging the subordinates to initiate discussions as much as they do.

5. Considerations Beyond the Topic

Leadership pervades most of managerial activities and includes aspects of motivation, communication and negotiation. Leadership may be learned--in part. Emphasis is to be given on the process of leading, not only on the objectives to achieve. Leadership is not a technique. It must be "lived" by the leader; authority must be exercised and must be true, never cynic. Successful leaders have first of all McGregor's "Theory Y" in mind [Ref. 86]. Or to say it with Peter Drucker

"...leadership...needs not only to function. It needs not only to perform. It also has to have legitimacy. It has to be accepted by the community as 'right'...Authority without legitimacy is usurption...(Managers) hold office because they perform. And yet performance by itself has never been sufficient grounds for legitimacy.

What is needed to make a manager accepted as a legitimate authority is a principle of morality...(and) performance beyond the immediate mission, beyond technocracy: performance in making work productive and the worker achieving, and performance with respect to the quality of life...He must accept that he is a public man. He must accept the moral responsibility of organization, the responsibility of making individual strengths productive and achieving" [Ref. 30: pp. 809-811].

B. ASPECTS OF DECISION-MAKING

1. Introduction

"Probably the most crucial part of the executive's work--the part that justifies his great authority and his powerful access to information--is that performed in his decisional roles" [Ref. 91: p. 77].

a. Outline

Decisions made at upper-levels of management are not disconnected incidents. They are a series of interrelated and continuing activities. They are not a management function per se, rather they are an inseparable part of all other managerial functions.

This division presents a diagnostic approach to the study of decision-making; examining decisions in terms of their process, structure and the possibility to support the decision-maker. The different techniques used to make or to support decisions are not discussed.

The next section discusses models of decision-making: The rational view of decision-making; the satisficing[1] and process-oriented viewpoint; the organizational process view; decision-making as a political process; and the "individual differences" approach. In this section we are first of all asking what is happening? and observing rather than assuming a priori to understand how a decision should be made. This process-oriented approach helps classify the way, and the environment, in which, managers and executives act.

The third section analyzes the structure of decisions and the possibility to support the decision-maker. Organizational activities are characterized in terms of kinds and levels of decision-making. The possibilities and limits of supporting managers with decision support systems (DSS) are discussed.

The fourth section discusses the implications for executives.

The quality of decisions is dependent on the quality of the information on which the decisions are based. Gore [Ref. 47: p. 37] points out that the first stage in decision-making is one of determining a level of reaction (routine, innovative, crisis) before identifying what the problem in fact is. The decision-making is then the last step in a series of

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[1] A term used in management science [Ref. 67: p. 65], apparently representing a combination of the words "satisfying" and "sufficient."

interrelated activities: recognizing the relevant problem; specification of the objectives; defining the performance measurement and the constraints; enumeration of feasible alternatives; prediction of outcomes; selection of a particular alternative.

An introduction in the technics and theories of management-science and policy-analysis may be found in Cornell (1980), Johnson (1976), Krajewski (1981), Quade (1979) or Stockey (1978) (Bibliography).

b. Questionnaire Responses

The questionnaire responses related to decision-making include (Appendix B and F):

- Recognize Problems	12)	
- Strategic Planning	9)	25 Cumulative Points (Appendix B)
- Approve Decisions	4)	

This may be compared with the highest single scored (24) activity: Leadership. The key word "Decision" appears 9 times (Leadership 17 times).

Decision-making is perceived by executives, as well as by managers, to be important, difficult and time-consuming.

2. Models of Decision-Making

This section examines decisions in terms of their process, asking first of all: What is happening? In practical life there is no clear dividing line between the different viewpoints. Each highlights descriptive or prescriptive issues. Decision-makers may use elements of different viewpoints in reaching a decision.

a. Rational View of Decision-Making

This is the classic conception of decision-making in organizations, developed from the microeconomic assumption of a rational, completely informed, single decision-maker who is able to recognize and evaluate all alternatives and who is dissatisfied with any solution but the best.

The rational view is highly normative, based on theorems and focuses on the logic of optimal choice. It has played a major part in the development of OR (Operations Research) by management scientists. The decision-maker is assumed to select the most effective alternative, that is to maximize the amount of output for a given input.

Game theory and decision theory have exploited the rational framework. Game theorists analyze the logic of choice in competitive situations. Decision theory maximizes expected utility in situations where there is uncertainty of events and outcome.

"Many managers and behaviorally-oriented management scientists reject the rational paradigm as impracticable and overidealized. Nevertheless, it remains a dominant influence in economic analysis" [Ref. 67: p. 62]. The rational concept defines the logic of optimal choice; it remains theoretically true, even where it is descriptively unrealistic. It has provided axioms to be challenged and hypotheses to be opposed by counterexamples.

b. The Satisficing and Process-oriented View of Decision-Making

It focuses on how a decision-maker can most effectively use limited knowledge and skills. It is assumed that it is better to produce a feasible plan that is not optimal than an optimal plan that is not feasible. The satisficing view of decision-making is an attempt to move closer to reality and to understand the world as it actually is. Such a descriptive focus provides a basis for developing prescriptions that are behaviorally-grounded.

The main assumptions of the theory of satisficing are summarized by Simon [Ref. 108: p. 64]:

> "In the real world we usually do not have a choice between satisfactory and optimal solutions, for we only rarely have a method of finding the optimum...We *cannot, within practicable computational limits,* generate all the admissible alternatives and compare their relative merits. Nor can we recognize the best alternative, even if we are fortunate enough to generate it early, until we have seen all of them. We satisfice by looking for alternatives in such a way that we can generally find an acceptable one after only moderate search."

This point of view stresses the process of decision-making and not just its contents; it emphasizes the relatively limited analysis and search most managers will make and their reliance on heuristics.

Heuristics reflect "bounded rationality" [Ref. 67: p. 66]. They are a compromise between the demands of the problem and the capabilities and commitment of the decision-maker. So, the satisficing, process-oriented view considers decision-makers to be intendedly rational although cognitive limits lead to a bounded rationality. The goal is to get a good enough answer, not the best possible one. Buffa [Ref. 18: p. 86], for example, applies this concept in his chapter about facility layout:

> "There are constraints imposed by technology that limit the possible arrangements of processes and jobs, and there are constraints imposed by job satisfaction and social system needs...Our objective then is to consider jointly the economic and social system variables. We must find the best solution to process and job designs within the feasible joint solution space. Since optimization is an unclear process in job design, we seek solutions that are acceptable."

c. The Organizational Process View of Decision-Making.

It focuses on the formal and informal structure of the organization, its standard operating procedures and channels of communication. Cyert et al [Ref. 25] describe the organization in terms of coalitions, each of which has its own priorities, goals and focus of attention. Organizational decision-making necessarily involves bargaining among these coalitions and the factoring of large-scale problems into subproblems.

Each subunit views the organization mainly in terms of its own department; each is responsible for particular aspects of the overall activity: each develops its own standard programs which are executed in response to problems as they arise. Each has rights to certain information and will not intrude on the others' prerogatives. Dearborn et al [Ref. 26] point out that even senior executives tend to view the total market from their own functional perspective.

Each subunit of the organization relies on programs or procedures that in a sense constitute its memory and store of learning. If the standard programs fail, they will try to adapt some other compatible procedure; if that in turn fails, they will, generally reluctantly, accept the costs and strains of creating a new routine [Ref. 67: p. 69]. The specialization of effort and attention is generally more efficient for a given problem but impedes integrating, changing or evolving the subtasks of the organization. Lawrence et al [Ref. 71] describe the delicate and complex balance needed between subunit differentiation and corporate integration.

The organizational process viewpoint is an extension of the intendedly rational approach--it emphasizes procedures and consistency of behavior and defines the organization in terms of its structure and operations. However, unlike the rational conception, it recognizes the relevance of such political processes as bargaining, although it does not regard them as the driving force in decision-making.

d. Decision-making as a Political Process.

In this viewpoint decision-making is seen as a personalized bargaining process between organizational units. Those who hold this view argue that power and influence determine the outcome of a decision. They view the decision-making process, at a strategic or policy leve, as essentially pluralistic. This pluralistic conception of decision-making as a political process emphasizes the natural multiplicity of goals, values and interests in any organization:

"The leaders who sit on top of organizations are not a monolithic group. Rather each individual in this group is, in his own right, a player in a central, competitive game. The name of the game is politics: bargaining along regularized circuits among players positioned hierarchically within the government."

This viewpoint goes beyond the organizational process in that it...

"...sees no unitary actor but rather many actors as players--players who focus not on a single strategic issue but on many diverse intercompany (international) problems as well; players who act in terms of no consistent set of strategic objectives but rather according to various conceptions of company (national), divisional and personal goals; players who make decisions not by a simple, rational choice, but by the pulling and hauling that is politics" [Ref. 3: p. 144].

Decision-making in this conception is not a neat, predictable or controllable process. While power, advocacy and consensus-building can be misused or hinder efficiency and effectiveness, they are legitimate and necessary. Advocacy reflects commitment. Multiple goals require discussion and bargaining. The healthy organization will always have a vigorous political life:

"Policy-making is therefore a process of conflict and consensus-building. The advocate of a particular policy must build a consensus to support his policy. Where there are rival advocates or rival policies, there is competition for support, and all the techniques of alliance appear--persuasion, accommodation and bargaining" [Ref. 3: pp. 157-158].

When individuals or groups are committed to a particular goal, they can be expected to fight hard for their point of view. Out of this pulling and hauling comes progress for the organization. A study of managerial politics is presented by Ritti et al [Ref. 97].

A corollary of this political focus is the concept of incremental change, the "art of the possible," Lindblom's "The Science of Muddling Through" [Ref. 74] rejects both the rational ideal and Cyert's neorational (organizational process) views. He goes well beyond Simon's concept of satisficing and argues that the decision-maker should avoid comprehensive analysis and rely instead on the strategies of "disjointed marginal incrementalism." These strategies limit analysis to alternatives that differ only incrementally from existing policy. Objectives are not predefined: What is feasible may define what the goals should be. Utopian (rational) policies are ignored as hard to assess, impossible to implement and expensive to analyze.

The incremantalist approach is remedial--policy-making moves away from ills rather than toward predetermined objectives: 'problems are not solved but repeatedly attacked through marginal adjustments" [Ref. 67: p. 72]. No radical policy is likely to triumph, except in major crises situations, where the status quo is unsatisfactory and incremental adjustment ineffectual [Ref. 4]. In those situations, "policy-makers must (and do) go back to first principles, try to consciously define basic objectives and look for an optimal solution" [Ref. 67: p. 72].

e. Individual Differences View of Decision-Making

This model of decision-making views the decision-maker as a unique individual, and focuses on his personalized strategies and abilities. Personal "rationality" is subjective and behavior is very much determined by the manner in which an individual processes information. The model suggests that some people have very specialized "styles" of decision-making, effective in some contexts and less so in others.

(1) Cognitive Complexity Theory. It explains problem-solving in terms of the individual's cognitive structure: People with low levels of differentiation can deal only with limited categorizations of information. Similarly, those with low ability to integrate can be overwhelmed by too much information. Complexity theory argues that there is an optimal balance of information input for any individual. Too little or too simple an input leads to boredom and too much leads to panic. Churchman et al [Ref. 22] found that individuals will simply ignore information that is presented in a format incompatible with their own style. Too much information may be dysfunctional as too little. "The complexity theory has provided a strong conceptual base for research on information usage" [Ref. 67: p. 74].

(2) Cognitive Style Approach. It views problem-solving behavior as a personality variable. Different labels are used for the same general distinction between an analytic, systematic, methodological approach to problem-solving and an intuitive, divergent, more global strategy. "Systematic thinkers tend to approach a problem by structuring it in terms of some method which, if followed through, leads to a likely

solution" [Ref. 87: p. 81]. This represents the rational viewpoint: making causal relationship explicit and articulating formal criteria and sequences of analysis. This specialized mode of thought may be very different from a manager's intuitive or heuristic style: "Intuitive thinkers usually avoid committing themselves in this way: their strategy is more one of hypothesis-testing and trial-and-error. They are much more willing to jump from one method to another, to discard information and to be sensitive to cues that they may not be able to identify verbally" [Ref. 87: p. 81].

A consistent argument underlying the studies of cognitive style is that the intuitive strategy should be respected. Keen [Ref. 65: p. 11] describes several experiments in which intuitive subjects outperformed systematic ones and argues that:

> "Each mode of evaluation has advantages and risks. In tasks such as production management, the Systematic thinker can develop a method of procedure that utilizes all his experience and that economizes on effort. An Intuitive thinker in such a task often reinvents the wheel each time he deals with a particular problem. By contrast, the Intuitive is better able to approach ill-structured problems where the volume of data, the criteria for a solution or the nature of the problem itself, do not allow the use of any predetermined method."

Similar arguments are presented by Ewing [Ref. 34: pp. 69-70] who discusses multiple styles of analysis:

> "In contrast, there is another group of people who can also be successful analysts with more unsystematic ways, less rigorous, but often more creative. (They work by)... trying out one idea after another in a process of free association...often quick and brilliant on some occasions, indecisive and disorganized on others...(They) focus more

on details, digest and ponder individual facts and clues, without trying to fit them into some conceptual scheme... (and) they suspend judgment and avoid preconceptions."

The basic argument for the cognitive style approach is that: We take our own logic for granted and overlook the many and substantial differences intelligent and effective people demonstrate in cognitive activities. This approach suggests we look at how decision-makers are, not how they ought to be.

(3) Group Decision-making. This process may be considered as an extension of the cognitive style approach. Group approaches involving a number of people, differentiated in backgrounds and perspectives, may be useful to solve problems requiring creative solutions. The traditional and most widely used approach to group decision-making is the interacting approach to committee decision-making. It is defined as a group meeting in which all communication acts take place with minimal controls for formal structuring. In contrast to the interacting group method, two alternative processes for group decision-making are currently becoming vogue in practice: The nominal group and the delphi group. Van de Ven [Ref. 131] provides a practical guide in conducting the nominal group process and Turoff [Ref. 129] in conducting the delphi technique.

The nominal group is a structured group meeting in which individuals work in the presence of others but do not verbally interact for a period of time. Participants in the delphi process are physically dispersed. It is a method for soliciting and collating group judgments. Van de Ven [Ref. 132: pp. 63-91] found in experimental studies that nominal and delphi processes generate almost half again as many ideas as interacting groups, and that nominal groups generate slightly more ideas than delphi groups. Purely on the basis of time and cost required in a decision-making process, the delphi technique is superior to nominal and interacting groups. However, if participants have the time, and no large travel costs are entailed in bringing people together, nominal and interacting processes require less administrative cost and effort and the information can be collected in far less calendar time. Similar results have been found by Stephenson et al [Ref. 117: p. 26]: The nominal group, in comparison with the traditional group (interacting group), increased the quantity of ideas (+ 28%), the quality of ideas (+ 30%), the efficiency of the group process (+ 30%) and the equality of participation of the group members (+ 34%).

3. Dimensions and Support of Decision-making

a. Introduction

This section presents a two-dimensional framwork which characterizes organizational activities in terms of kinds and levels of decision-making. The possibilities and limits in supporting managers' decision-making are discussed and conclusions for the education of managers and the requirements for executives are drawn.

Decision Support Systems (DSS) represent a point of view on the role of computers in the management decision-making process. Decision support implies the use of computers to:

(1) Assist managers in their decision process.

(2) Support, rather than replace, managerial judgment.

(3) Improve the effectiveness of decision-making rather than its efficiency.

The relevance for managers is the creation of a supportive tool, under their own control, which does not attempt to automate the decision process, nor to predefine objectives, or to impose solutions. The recent technological changes have permitted the decentralization of the software and hardware, and hence, of applications. The Wall Street Journal [Ref. 123] expects to see "some very exciting developments for artificial intelligence" for the latter part of this decade.

The framework of organizational activities [Ref. 67: pp. 87-91] describes in one dimension the level of decision-making (strategic planning, management control, operational control) and in the other dimension the nature of activities (structured, semistructured, nonstructured tasks or decisions).

b. Level of Decision-Making

Anthony [Ref. 5: pp. 24-27] views managerial activities as falling into three categories. Each overlaps its neighbor. Together they form a continuum:

(1) Stragegic Planning. "The process of deciding on objectives of the organization, on changes in these objectives, on the resources used to attain these objectives and on the politics that are to govern acquisition, use and disposition of resources" [Ref. 5: p. 24]. Defining objectives implies an emphasis on scanning the organization's environment. The strategic planning process typically involves senior executives and often requires innovation and creativity. The complexity of the problems that arise, and the nonroutine manner in which they are handled, make it difficult to appraise the quality of the planning process and to define rules for it.

(2) Management Control. "The process by which managers assure that resources are obtained and used effectively and efficiently in the accomplishment of the organization's objectives" [Ref. 5: p. 27]. This activity involves considerable interpersonal interaction and takes place within the context of the policies and objectives developed in the strategic planning process. Its paramount aim is to assure effective and efficient performance.

(3) Operational Control. The process of assuring that specific tasks are effectively and efficiently carried out. Operational control is concerned with performing predefined activities. There is much less judgment required in the operational control area, because the tasks, goals and resources have already been defined.

(4) Information Requirements. The information requirements to make decisions in each of the three categories are different. In strategic planning, information is generally more qualitative than at the operational control end of the spectrum, where data tends to be numeric, specific and empirical. Keen [Ref. 67: p. 82] summarizes the information characteristics (Table 10) by area of decision: (Management control is situated in between.)

Table 10: Information Requirements by Area of Decision [Ref. 67: p. 82]

Task Variables	Strategic Planning	Operational Control
- Accuracy	Low (future, uncertainty)	High (current)
- Level of detail	Aggregate	Detailed (specific)
- Time horizon	Future	Present (and historical)
- Frequency of use	Infrequent	Frequent
- Source	External	Internal (generated in organization)
- Scope of information	Wide	Narrow (well-defined)
- Type of information	Qualitative	Quantitative
- Age of information	Older	Current

Any given decision in the operational control area may involve relatively little cost and risk, although the cumulative effect over a long period of time can be large. On the other hand, a single strategic planning decision may have immense long-term consequences.

c. Nature of Decisions

The second dimension of the framework, the nature of activities, comes from Simon [Ref. 107: pp. 5-6] and uses his distinction between programmed and nonprogrammed decisions:

> "Decisions are programmed to the extent that they are repetitive and routine; to the extent that a definite procedure has been worked out for handling them so that they don't have to be treated "de novo" each time they occur. Decisions are nonprogrammed to the extent that they are novel, unstructured and consequential. There is no cut-and-dried method of handling the problem because it hasn't arisen before, or because its precise nature and structure are elusive or complex, or because it is so important that it deserves a custom-tailored treatment...By nonprogrammed I mean a response where the System has no specific procedure to deal with situations like the one at hand, but must fall back on whatever general capacity it has for intelligent, adaptive, problem-oriented action."

Keen [Ref. 67: p. 86] uses the terms structured and unstructured instead of programmed and nonprogrammed: Structured decisions are those that do not involve a manager. These are situations where the decision is well enough understood to have been given to clerks or to have been automated through the computer. Typical examples are inventory reordering and airline reservations.

Semi-structured are decisions where managerial judgment alone will not be adequate, perhaps because of the size of the problem or the computational complexity and precision needed to solve it. On the other hand, the rationale model or data alone are also inadequate, because the solution involves some judgment and subjective analysis. Under these conditions the manager supported by a computer can provide a more effective decision than either along. The human controls the computer.

Unstructured decisions are those that are either not capable of being structured or that have not yet been examined in depth and so appear to the organization as unstructured.

d. Decision Analysis

(1) Framework. Keen [Ref. 67: pp. 87-91] combines Anthony's and Simon's dimensions and presents a framework with nine categories of decision:

Table 11: Framework for Decision Analysis [Ref. 67: pp. 87-91]

	MANAGEMENT ACTIVITY			
Type of Decision	Operational Control	Management Control	Strategic Planning	Support Needed
Structured	Inventory Reordering	Production Planning	Plant Location[1]	Clerical EDP or MS Models
Semi-Structured	Bond Trading	Setting market budgets for consumer products	Capital Acquisition Analysis	DSS
Un-structured	Selecting a cover for Time Magazine	Hiring managers	R & D	Human Intuition

EDP: Electronic Data Processing
MS: Management Science
DSS: Decision Support System
R & D: Research and Development

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[1]Schmenner [Ref. 105: pp. 126-132] considers plant location to be a semi-structured problem. With the key question: "Is this a location at which the company can remain competitive for a long time?" rather than: "Is it cheaper to do business here?"

The boundaries of these cells are constantly moving as the level of knowledge increases enough to allow a shift of some problems toward the more structured area and eventually to a lower level of the hierarchy.

The most use of computers so far has occurred for structured operational control tasks. For example, almost all computer applications in organizations today concern such activities as payroll, accounts receivable and financial accounting. The focus is on efficiency rather than on effectiveness. Management problems fall outside this structured category.

The distinction between structured and unstructured problems needs still further discussion. In analyzing the possibility of use of Decision Support Systems we are concerned with identifying the middle ground of semi-structured problems. For this purpose we find there are two key issues: The first is the distinction between perceived structure and "deep structure" [Ref. 21], and the second is Simon's definition of the three phases of problem-solving.

(2) Perceived versus "Deep" Structure. Some problems in organizations are perceived to be unstructured now, but their deep structure will eventually enable us to automate them completely later, if we become more knowledgeable. Other problems are perceived as being unstructured, yet they may lend themselves to the use of Decision Support Systems in that sub-problems can be structured. Other problems may be inherently

unstructured. The question of perceived structure is dependent, not only on our basic state of knowledge, but on the <u>context</u> in which the decision is being made. We may have a situation in which all of the variables are known, but where there is not enough time to do the evaluation. In such a case Keen [Ref. 67: p. 94] argues that the context makes this an unstructured problem. Wilensky [Ref. 135] has shown the impact of contextual forces, such as time pressure and crisis in organizational decision processes. He draws out that under pressure groups try to simplify the problem to a point where it becomes manageable. They try to avoid searching for new alternatives, narrow the number of people involved to a select few and make minimum use of expert opinion. For a thorough analysis of "Decision-making under crisis conditions," see W. W. Jung [Ref. 61].

(3) <u>The Three Phases of Problem-solving</u>. Intelligence, design and choice. Problems are not always structured or unstructured in their entirety, but only in terms of particular phases within the problem-solving process. Simon [Ref. 107: pp. 2-3] defines the three phases:

> "The first phase of the decision-making process--searching the environment for conditions calling for decision--I shall call intelligence activity (borrowing the military meaning of intelligence). The second phase--inventing, developing and analyzing possible courses of action--I shall call design activity. The third phase--selecting a course of action from those available--I shall call choise activity...The cycle of phases is, however, far more complex than the sequence suggests. Each phase in making a particular decision is itself a complex decision-making process."

By definition a fully structured problem is one in which all three phases--Intelligence, Design and Choice--are all structured. The unstructured problem is one where we are unable to define the conditions that allow us to recognize the problem. In the design phase, we are unable to specify how to create methodologies to solve the problem that has been defined. In the choice phase, we do not have clear criteria for choosing a best solution from among those we created. "If all three of these phases in the problem-solving process are unstructured in this way, we then label the entire problem unstructured...If some phase(s) of the problem-solving process have enough structure to permit us to effectively use computer support, we label such a problem semistructured" [Ref. 67: p. 95].

e. Decision Support Systems

For complex semistructured tasks the effectiveness of decision-making can be enhanced by supporting the decision-maker with a DSS. The situation in which a DSS can be useful can be characterized as involving at least some of the following points [Ref. 67: pp. 96-97]:

(1) The existence of a large data base, so large that the manager has difficulty accessing and making conceptual use of it.

(2) The necessity of manipulation or computation in the process of arriving at a solution.

(3) The existence of some time pressure, either for the final answer or for the process by which the decision is reached.

(4) The necessity of judgment, either to recognize or decide what constitutes the problem, or to create alternatives, or to choose a solution. The judgment may define the nature of the variables that are considered, or the values that are put on the known variables.

A DSS can provide a variety of levels of support: (1) access to facts or information retrieval; (2) the addition of filters and pattern recognition ability to this data retrieval, and thus giving conceptual meaning to data; (3) the addition of more generous computational facilities, permitting to ask for computations, comparisons and projections; (4) the final level of support provides useful models to the manager. This model must be designed to provide the managers with answers they can and will act on. It will often be based on heuristic rules and standard procedures for analysis. It may be very simple and crude rather than mathematically sophisticated.

f. Summary

Structured tasks are those that do not involve a manager. These are situations where the decision is well enough understood to have been entrusted to clerks or to have been automated. They are repetitive and routine, but not necessarily trivial. Semi-structured tasks are those in which rationale models alone are inadequate, because the solution involves some judgment and subjective analysis. This is a situation in which DSS can be useful. Unstructured tasks are those that are either not capable of being structured or have not yet been examined in depth and so appear to be unstructured. The decision-maker must rely on personal judgment and intuition. Important is the manager's perception of what is structured and unstructured. There is no clear dividing line and the degree of structure may change over time.

With movements up the hierarchical structure, uncertainty, risk tolerance and constraints play a much more evident role.

Decisions should be made at a level which has to be optimized toward the objective of the organization, which is willing and able to bear the consequences; which has the power to set and enforce goals; which is competent to make the decision. For complex, semi-structured tasks this competence may be enhanced by supporting the decision-maker by DSS. Such systems may help to improve the communication between line managers who have to suboptimize their operations in order to achieve overall optimization.

4. Implication for Executives

To be knowledgeable about the decision processes and the different viewpoints on decision-making, is essential for executives with respect to their leader role and the delegation of competences.

Less manifest is the relevance of Decision Support Systems for executives. It is obvious that they act in the area of strategic planning and face unstructured or semi-structured problems. In some cases a DSS may be useful to them. Keen [Ref. 66] argues in "Computer Systems for Top Managers: A Modest Proposal" that a DSS designed to aid senior managers may require a skilled intermediary (chauffer) who, among other activities, can quickly modify or extend the data structures or analytic routines. On the other hand, the "Government Executive" [Ref. 80] reports that generals of the U.S. Air Force Systems Command are themselves running a DSS, having a terminal in their office.

But this may <u>not</u> be the relevant problem for executives. It may be more important that they be aware of the change and trend in technology and adapt their organizations. Executives do have the ability to alter their organization's structure and procedures. They can influence the climate for DSS implementation. In the ideal climate, education of managers is important. A manager who wishes to exploit the immense potential of computer-based decision aids must build the necessary insight into the technician's world by listening and questioning, without in any way having to learn how to program. "A joint design effort is the best mechanism for such education" [Ref. 67: p. 236]. The future of the computer in many organizations depends on building this mutual understanding. "There is strong evidence that senior management is becoming very aware of this problem..." [Ref. 67: p. 239]. Keen strongly suggests that education has to be viewed as ongoing and as an integral part of one's career. Managers who think that they do not need to "know" anything about computer applications are doomed to be victims of their experts. "As business becomes more complex..., one of the main topics for managers will be how to manage expertise" [Ref. 67: p. 241]--how to be able to talk with experts. The best education for them is the building of a relationship with an effective DSS developer and the insistence on being committed and involved in the design and implementation process; on being "trained on the job."

The analysis of the key words used in the questionnaire responses (Appendix F) shows that the world computer (or MIS, or DSS) has only been used in three responses. It may be that this is a concern of executives: Technology-Transfer.

C. INNOVATION AND CHANGE

1. Introduction

> "Innovation and the related changes in organizations will increasingly become a challenge...of top management...and a touchstone of its competence" [Ref. 30: p. 786].

Our questionnaire responses (Appendix B) stress the importance of "innovation and change." The sum of the scores of "Recognize problems," "Strategic planning" and "Implement change" totals 25 points, compared with "Leadership" which totaled the maximum single score of 24.

a. Change versus Stability

The measure of innovation is its impact on the environment. Its criterion is a change in the economic or social environment [Ref. 30: p. 787]. It is important that most organizations remain capable of producing their contribution to economy and society tomorrow also. Since the environment and the values which are important to people are subject to change, innovation is an essential element for the survival of organizations. It may be in the form of adaption to a new situation or in the form of initiation and exploitation of opportunities.

We live in a time when 90% of all trained engineers are professionally active [Ref. 44: p. 3]. This helps explain the bewildering pace of technological innovation today. The knowledge-industry must be considered an important part of the economy. "The excitement of Computerization 10 years ago is the excitement of Automatix today"[Ref. 125]. But there is not only excitement. We have evolved from a society hopefully seeking ways to utilize new technology into one wary of negative technological side effects. There is always a danger that in the absence of well-defined and publicly supported goals, we will triumphantly achieve some unwanted end.

The contemporary pace and scale of change may continue to accelerate. Then the problem may become one of achieving reasonable stability and conservation of those things that seem good, rather than just the problem of searching for promising innovative programs. "In some areas of our lives it would appear that a most welcome change would be stability" [Ref. 95: p. 76].

b. Definitions and Thoughts on Creativity

(1) Definitions. We define creativity as the generation of an idea; innovation as modification of product, service, production process or technology; and change as alteration of organizational policy, structure or human attitudes and behavior in order to improve performance [Ref. 134: p. 475].

We describe technology as the set of knowledge regarding materials, processes, methods, techniques and capital goods by which products are made or services rendered. Technology is embodied in process-inputs (labor, material, capital goods, energy, information) and in the nature of the product (composition, shape, performance) [Ref. 84: pp. 430-431].

Most technological innovations affect organizational structure and human behavior, resulting in turn, in planned and unplanned organizational and social change. Innovation is creativity followed up by entrepreneurial management action to the point where it has an economic impact [Ref. 134: p. 475]. The creator and the innovator may be different persons.

(2) Thoughts on Creativity. These ideas follow Gortikov's [Ref. 48] article "Working with Creative People."

There is no typically creative person. But the characteristics of the creative person are usually more intense than in other people. Their behavior is more expressive, their moods and personalities visible with bolder accents.

Creativity in any business enterprise cannot long remain ethereal but must be both actionable and profitable. Creativity may take a very specific form such as a product, invention, design or graphic form. It may be conceptual in nature--ideas, philosophies, directions, plans or objectives. It may be qualitative--flair, uniqueness, or it may be exploitive--copying or applying or enhancing the notions of others. Creativity can be transient.

Creativity can emerge from anybody, not just from "creative types." In any organization there may be found a broad creativity resource which is not, or only marginally, utilized. To activate it is a challenge for executives.

c. Innovation: An Overview

We defined (1.b) creativity as the generation of an idea (invention, design, plans, etc.); innovation as modification of product, service, production process or technology; and change as alteration of organization policy, structure or human attitudes and behavior in order to improve performance. Most innovations are followed by change and the distinction is often not easy, nor important. We remember Drucker's statement: The measure of innovation is its impact on the environment.

Innovation may be a specific, overt, planned introduction of a single item of technology (knowledge regarding processes, techniques, methods, materials, etc.) or a single new product (which leads normally to a new process, or technique, etc.).

But innovation may also occur in the everyday world of business, government and industry, step by step, in little increments and on all hierarchical levels. This may be a response to internal change (e.g., planned innovation of major items) or to a change in the environment (e.g., market, competition). Innovation is often made possible by some improvement elsewhere.

Jolly [Ref. 55: pp. 74-75] points out the fact that innovation is either a noun or a verb, a new idea or the introduction of something new. He suggests that an innovation has three components: (1) the technical component, (2) the innovating component and (3) the capacity-building component.

The technical component of an innovation (noun) is the device, technique or procedure itself. We consider this as given and known. It may be an invention, a newly created product, technique or process or it may be an already existing one, but not yet known by the organization under consideration. Innovation simply refers to something that is new to a given industry, business or agency. Thus, an innovation adopted by an organization could conceivably be some thing or method that someone else had used for a long time. "An innovation can be any new component of a system, including personnel-related factors and machinery, as well as the management procedures for handling hardware and software"[Ref. 59: p. 75].

The innovating component (verb) refers to the sequence of events that commonly occur when an organization innovates. By identifying the stages in the process of knowledge utilization, it is possible to highlight the acts or actions necessary to cause a successful implementation of new knowledge. The delineation of stages is somewhat arbitrary. The most logical is to place the stages in a chronological sequence. Major stages are (1) concern and awareness of need, (2) diagnosis or problem classification, (3) a search for pertinent knowledge, (4) the consideration of alternative solutions, (5) the implementation, including the change strategy, and finally (6) the evaluation. Adjacent stages may overlap, whole sections may be omitted, some stages may be repeated and several reiterations of the cycle or part of it may be appropriate.

The capacity-building component is the organizational change and behavioral acceptance that makes it possible for the innovation to be used in a productive manner in the new environment. Executives can cause innovation to occur by directive. This approach is not spontaneous. It may be appropriate for major projects. Or an innovation may be perceived on lower levels as to be "directive" even although it occurred spontaneously on a higher level. But in any case, innovation through executive directive is probably not cost effective, because such an approach would demand a substantial amount of managerial time and attention. A more effective approach would start with the key question: "What actions can management take to develop a total organizational environment that will spontaneously and continuously seek out and introduce new ideas?" We will approach this question under the label of "Technology Transfer."

d. Outline

Section 2 concentrates on perspectives of time, uncertainty and complexity in the life cycles of products and the structures of organizations. This background information enables a comprehensive description of the innovating process in Section 3, and of the capacity-building component, the continuously transferring of technology in Section 4.

2. Perspectives of Time and Management Systems

Innovation and change implies consideration of the time dimension. The problem of harmonizing today and tomorrow exists in all areas, but especially with people and with the long-range impact of short-run economic decisions on the environment and on natural resources.

There are two reasons why the time dimension is of particular importance in executives' jobs, and of particular difficulty [Ref. 30: p. 44]: (1) It is the essence of economic and technological progress that the time span for the fruition and proving out of a decision is steadily lengthening.

(2) Management has to live always in both present and future. It must keep the organization performing in the present--or else there will be no enterprise capable of performing in the future. And it has to make the enterprise capable of performance and change in the future.

We may look at the time dimension with respect to people, organizations, products or processes. All of them have to be considered if innovation and change are to be implemented successfully.

Life cycles have effects on organizations. The degree of environmental uncertainty and the degree of complexity of the decision variables, have an influence on the appropriate management system.

a. Life Cycles of Products and Processes

(1) Dynamic Model of Innovation. Utterback [Ref. 130] developed a dynamic model of process and product/service innovations in firms and tested it in empirical data (see Fig. 3). The model relates the process and product/service innovations to three stages of development.

(a) He calls the first phase "performance maximation" for products and services and "uncoordinated" for processes. High product innovation rates increase the likelihood that product diversity will be extensive. As a result, the productive process is composed largely of unstandardized and manual operations. The innovations in this first stage are stimulated by needs in the market place. Process innovations also are stimulated by the need to increase output rates.

(b) Price competition becomes more intense in the second stage as the industry or product and service group begins to reach maturity. Productive system design emphasizes cost minimation as competition in the market place begins to emphasize price. The productive process becomes more capital intensive and more tightly integrated through production planning and control. <u>Process innovations</u> dominate; however, both process and product innovations are stimulated by technology.

(c) As the entire system reaches <u>maturity and saturation</u>, innovations tend to be largely cost-stimulated. The production process becomes even more capital intensive. The productive process becomes so highly integrated that it is difficult to make changes because any change at all creates significant interactions with other operations in the process. During this stage the effects of innovation on product cost normally follow a pattern: follow the <u>learning curve</u> [Ref. 18: p. 35].

(d) The concept of the learning (or experience) curve is that product costs decline systematically by some fixed percentage with the doubling of cumulative volume. The learning curve model formalizes the "economics of scale" concept.

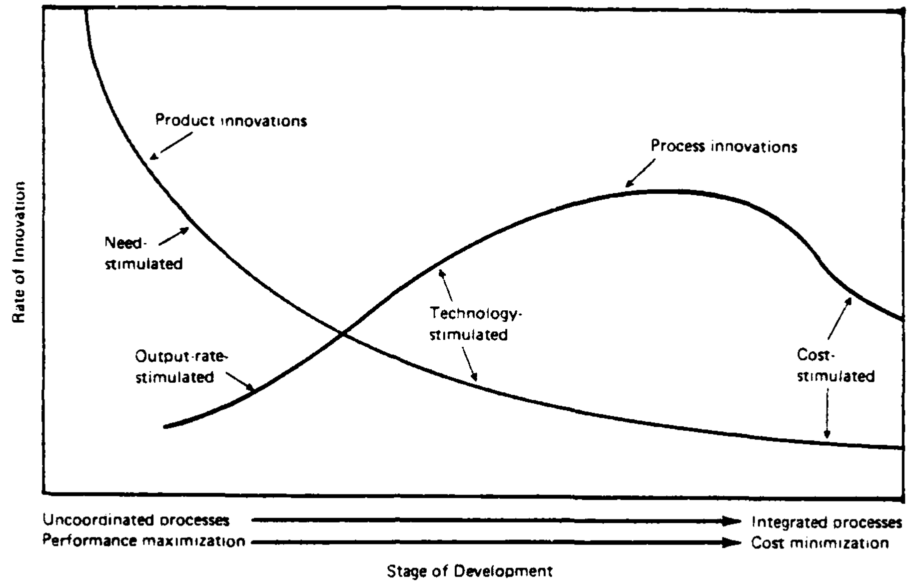

Fig. 3: Relationship of product/service and process innovations (Source: Utterback, 1975).

(2) Innovation Cycles. The dynamic model of process and product innovation and their organizational effects concentrate on a particular product or project. Abernathy [Ref. 1] studied product and process innovations and technological transfers over a 38-year period at the Ford Motor Company. New product applications occurred in clusters associated with new models, followed by a decline as the new designs became standardized. Process innovations peeked after the product innovations, presumably to integrate the process with existing operations and to reduce costs. The transfer of

process technology to or from associated industries increased as Ford undertook vertical integration.

One of the results of the study was the recognized need for balance between a cost-reducing strategy and new product innovations. This balance can be achieved by periodically inaugurating major product innovations, stressing cost reduction along the learning curve between model changes. An alternate mode of achieving balance is to decentralize within the corporate structure, to have separate organizations follow different strategies within the same general product line.

b. Organizational Life Cycle Effect

Keen [Ref. 67: pp. 227-242] describes the organizational life cycle effect in relation to EDP. In general, the history of efforts to introduce computer systems or analytic models (OR/MS) into organizations has followed a common pattern.

The first stage is one of missionary work where energetic individuals try to build a momentum. They take on projects with little centralized control or cost/benefit analysis, and their aim is simply to get something done, to build up a critical mass.

Second: Once a number of projects have been successfuly installed, there is a need for consolidation. The decentralized mode of operation needed to get things off the ground is unsatisfactory when one tries to bring the resulting chaos under some control. Improvisation, informality and temporary project groups have substantial side costs. They are tangential to the ongoing activities of the organization. They lack economics of scale and do not draw on specialized capabilities and procedures. The EDP manager, in the mid-1960's, was thus under great pressure to "run a tight shop." Forms were created to provide project control. Whereas users would formerly go directly to the programmer to ask for a program modification, they would now go through the EDP manager.

Third: The difficulty with the emphasis on control and efficient allocation of resources became apparent during the institutionalization stage. By then, users were accustomed to computers and there were well-established procedures for transfer pricing and charging out the costs of the computer resource. But control and efficiency were tending to stifle innovation. Users frequently complain that they can no longer get the EDP group to be responsive to non-scheduled problems.

Fourth: Some organizations have moved into a fourth stage that combines the first and the third stages, the stage of diffusion of innovation. Here a two-tiered structure emerges. The established operational systems are handled as a separate area, where control and formality of procedures are stressed. Innovation must be cost-justified and careful standards maintained for costs, time and procedures. The emphasis is on efficiency.

Innovation in new fields (e.g., DSS) is assigned to specialized groups. The emphasis here is on effectiveness. They operate with a research approach. Their job is to get something new done and to be very responsive to the user. They view themselves as a unit which is distinct from the standard EDP or MIS group. It is to be expected that once their innovation has been linked into the organization, the process will repeate itself with the next step being one of consolidation and so forth. Once it is institutionalized, the system can drop to the second of the two tiers, the operational procedural level.

Richards [Ref. 96: p. 14] has a similar approach to the problem:

> "As new industries develop, initial attention is devoted to developing the technology, the product process and marketing activities in a rather uncertain environment. Organizations tend to proliferate as was true in television and computer industries until complexity-uncertainty reduction becomes widespread. At that point, the need for a rationalized line and staff organization to deal with large-scale production and marketing operations, comes to the forefront. A project matrix system is appropriate at the initial uncertainty reduction phase of the product life cycle. There is no assurance, however, that an enterprise proficient in exploiting a project matrix management system will be successful in the mature stage of a product life cycle when a different system of management is appropriate...Bureaucracies are not known for their creativity; conversely, not many high technology firms have been able to transform themselves into efficient line-staff forms as their product markets matured."

This leads us to the next sub-section which analyzes the perspectives of management systems.

c. Perspectives of Management Systems

Richards [Ref. 96: pp. 3-14] proposes that there is no one management theory but rather there are four basic types of management system whose character in terms of planning, control, organizing, motivation and staffing differs in important respects. The best system to use in a particular case depends upon the external and internal situation. And very important: Different managerial approaches may be needed in different types of subsystems in the same organization.

Richards suggests that the factors influencing the nature of a management system be (1) environmental uncertainty, modified by human needs and efficiency needs, and (2) complexity. See also Hellriegel [Ref. 51].

(1) Environmental Uncertainty. In addition to variations in economic factors, the dynamic variations in the socio-political environment can require unique responses and changing structure in an organization. Technological uncertainty is a third class of environmental factors influencing the nature of internal organizational systems.

The effects of these uncertainties may be modified in the short run by needs for efficiency. Inventories, for example, can buffer variations in supply, production and demand. Or political and social threats can initially be dealt with through lobbying efforts and public relations. Yet long-lasting and important external influences force organizational differentiation. Thus, the management system needs to be balanced with the demand for adaptation to external change with the requirements for internal stability.

Operating in a relatively certain environment, high rationalization of operations is possible so that subdivided, repetitive and rationalized job design is possible. It is this kind of job, however, that is criticized as boring, monotonous and unchallenging. Hence some forms of modification have been introduced in job design. These include job rotation and enrichment, as well as an emphasis on participative leadership techniques designed to relate to workers as human beings.

(2) Complexity in Decision Factors. The degree of complexity, as evidenced by the number of factors bearing upon decisions, does have an impact upon the extent of differentiation of both structure and processes. The number of services offered, products produced, types of customers, location of plants, and unions dealt with, influence the degree of complexity with which managers must deal. As complexity increases, organizational differentiation and process adaptation also tend to increase.

(3) Resulting Management Systems. Both complexity and uncertainty can be represented on a two-dimensional continuum. That allows us to design theoretically an infinite variety of appropriate management systems. The four basic systems represented on Table 12 are described in extremis so as to differentiate among their managerial activities as each organization adapts to its unique situation.

Table 12: Characteristics of Alternative Management Systems as Influenced by Uncertainty and Complexity [Ref. 96: p. 10]

Degree of Complexity in Decision Factors		Degree of Uncertainty in Decision Factors: Low	High
Low		Simple Line Management Systems	Line and Staff Systems
	Planning:	Short-term; future is like past	Need to forecast time related variability for plans
	Control:	Specific, short-term feedback	Long intervale feedback on some factors
	Organizing:	Few staff; high rationalization of tasks possible but inconsistent with human needs.	Staff to research variability; organizational change frequent
	Motivating:	Human relations orientation needed to overcome boredom and lack of task challenge.	Consultative approach
	Staffing:	Workers with needs for certainty and acceptance of routine is helpful.	Those comfortable with some degree of uncertainty and change
		Bureaucratic Systems	Project of Project-Matrix Systems
	Planning:	Need to account for many interrelated factors; short-term	Uncertainty and ignorance requires research
	Control:	Partially summarized key measures	Overall rather than specific accomplishment judgments
	Organizing:	Staffs for routinization; stable complex structure	Each project requires unique combination of talents and organizational structure
	Motivating:	Human relations orientation as in simple structure	Authoritarianism inappropriate; team building while providing structure to those needing certainty.
High	Staffing:	Tolerance for many constraints, rules, procedures, stability, and complexity	Tolerance for ambituity, long term payoffs, and frequent change in assignments are helpful

3. The Innovating Process

a. Overview of Determinants

The effective use of knowledge to bring about needed improvements in conventional practice is determined by many variables, often functioning in combination. They may be sorted out as they apply to (1) the characteristics of the innovation or change itself, (2) the characteristics of the information transfer process, (3) the characteristics of the organization or situation in which the desired improvement would be expected to take root, and (4) the personal characteristics of those involved in adoption of the change [Ref. 95: p. 5].

Empirical studies of implementation fall into fairly distinct categories that reflect distinct viewpoints on what determinants most influence the likelihood of successful implementation. Ackoff [Ref. 2: pp. 259-263] examines a number of OR implementation efforts and concludes that there were three common patterns that lead to failures: (1) The personnel who were interested in the project and had enough influence within the organization to facilitate its progress often left or were transferred, so that there was a lack of continuity and, more critical, a lack of a power base. (2) The projects lacked top management support. (3) Staff personnel often obstructed the project in the interests of their own political position. The common thread in the unsuccessful situation was the fact that the OR researcher did not have the power needed for successful implementation. Ackoff defines a strategy for getting this power with one of the main points which indicates: "Make sure that you report only to someone in the organization who has the power and seniority to force cooperation from relevant personnel."

Other scientists, with different backgrounds, similarly look at failures and identify different causes for the lack of success. Argyris [Ref. 7: pp. 28-34] argues almost in the opposite direction. His experience suggests that most implementation failures are caused because the OR researchers' intervention is a threat to the members of the organization. Their impersonal, highly rational approach is an intrusion into the present equilibrium. They are backed by the power base of top management and come with an explicit mandate for change. They are often insensitive to interpersonal issues. Argyris argues that OR researchers must develop interpersonal competence and play down the threatening use of power.

Many recent researchers argue that there are no absolute general principles; that both Ackoff and Argyris may be correct, but that their argument applies only to specific types of situations. To the nature of the innovation and to the people in the organization. Keen [Ref. 67: p. 208] suggests that the main basis for an implementation strategy is the adoption of a clinical approach that enables one to examine the situation as a whole, in order to identify the key contextual forces and constraints. And he argues that outsiders who remain outsiders can rarely be effective clinicians. That outsiders have no sense of background features, the historical, political and personal issues that are rarely discussed but obvious to insiders.

There is another kind of implementation study, using the "factor" approach, which surveys large samples of implementation efforts and tries to define the general factors that seem to be associated with successful outcomes. The results of the factor approach made it clear thus far that there are no (or only very few) factors that "explain" implementation. At best we can conclude that the factors below are the only ones that have been plausibly shown in a range of studies and settings to have substantial impact on the likelihood of success: (1) Top management support, (2) a clear felt need by the user, (3) an immediate, visible problem to work on, (4) early commitment by the user and conscious staff involvement [Ref. 67: p. 196]. Some of these may be only "hygiene" factors. For example, without top mamangement support a project faces major difficulties, but having that support may be of little direct help.

The discussion so far concentrated on major innovation projects using "high technology" and influencing the working process of the organization. This may best demonstrate the complexity of the problem. And for those problems Keen concludes: "The most obvious point is that we just do not understand the dynamics of implementation" [Ref. 67: p. 196].

And there is a final point: Many authors have suggested that the weak link in implementation of complex projects is the lack of education and communication. Education of managers in analytic methods and scientists in general management. And Grayson [Ref. 50: p. 41] points out that "Managers and...scientists are operating in two separate cultures, each with its own goals, languages and methods. Effective cooperation--even communication--between the two is just about minimal." The gap between the researcher's language and that of the practitioner has been described by Joly [Ref. 60]. He demonstrates how it may result in mutual distrust and lack of communication.

b. Stages in the Innovating Process

Several behavioral scientists have outlined the stages of the innovating process within organizational settings. Although there are differences in terminology, the parallels are substantial: nearly all begin with a need, a concern, a problem, a discrepancy between ideals and practice, or some other pressure; all move to diagnosis, analysis or clarification; all recognize a need for obtaining pertinent knowledge and see a stage of creating and considering alternate courses of action; all describe an action or implementation phase; and all see a need for follow-through. Several such outlines are presented in "Putting Knowledge to Use" [Ref. 95: p. 31].

The most basic framework for discussing behavioral and organizational change is the "Lewin-Schein Model of Change," developed by Lewin, 1952, expanded by Schein, 1961, and discussed in Keen [Ref. 67: p. 199]. Each of the three stages of this process must be worked through for a change program to be effective: (1) Unfreezing: An alteration of the forces acting on the individual such as his stable equilibrium being disturbed sufficiently to motivate him and make him ready to change; this can be accomplished either by increasing the pressure to change or by reducing some of the threats or resistances to change. (2) Moving: the presentation of a direction of change and the actual process of learning new attitudes. (3) Refreezing: the integration of the changed attitudes into the rest of the personality and/or into ongoing significant emotional relationships. (An interesting parallel to this model is Schein's [Ref. 103] study related to brain-washing of POW's in Korea.)

The Kolb-Frohman [Ref. 69] study of the consulting process in organizational development extends the Lewin-Schein model. It is represented on Figure 4.

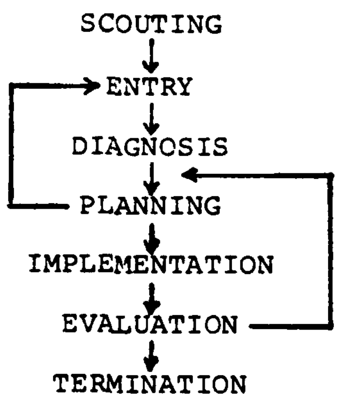

Fig. 4: The Kolb-Frohman Model of Change [Ref. 69]

First: Scouting involves matching the capabilities of the consultant with the needs of the client-organization.

Second: Entry involves ensuring legitimacy for action. Entry requires subtle skills and, in many instances, far more time and effort than any other aspect of the innovating process. (Keen [Ref. 67: p. 185] e.g., estimates that entry may take up as much as 70 per cent of the elapsed time for a DSS project.) It is at entry that the client's expectations are set and the entry stage provides the basis for evaluation.

Successful entry requires: (a) A felt need. The implementor must make sure that the problem to be worked on is visible and seen as relevant. He must make sure that the client has a motive and commitment for action; (b) Definition of goals in operational terms. The following questions must be answered: What are the criteria for success? What are the priorities and trade-offs? What key indicators can be used to measure progress and accomplishment? (c) A Contract for change brtween designer, implementor and user. This involves trust (personal, professional and political); mutual understanding; mutual respect for each other's style, involvement and needs; and realistic, mutual expectations. (d) Diagnosis and resolution of resistance to change. This involves: Including users in implementation; recognizing that resistance is a signal needing response, not a pathology to be eliminated by fiat or power. (e) Initial allocation of resources and responsibilities. This involves a meaningful user involvement and the development of a team.

Third: Diagnosis: In this phase the available resources are identified, and the possible alternatives analyzed, including costs, benefits, and major constraints on implementation. The focus may be on future growth, greater efficiency or more security and not just on an immediate pressing problem.

Fourth: Planning and adaptive engineeing. A set of precise guidelines must be formulated to give concrete shape to the market, technical, performance, environmental and personnel requirements of the proposed innovation. An important component of this phase is the search for additional information on existing technology that may be relevant to the proposed innovation. Some adaptive engineering will often be required [Ref. 59: p. 76].

Fifth: Implementation: The objective of the implementation is to ensure that the innovation is successfully utilized. The implementation is often divided into steps. Limited tests, pilot programs, prototypes are possible approaches. The effectiveness of planned change is related to degree of participation of all hierarchical levels in fact finding, diagnosis of needed change and the formulation and testing of program goals. Sources of resistance to change may be: (a) fear of loss of status, prestige or power; (b) threatened job security or devaluation of skills presently required; (c) challenged beliefs and values; (d) fear of loss of self-esteem or sense of competency; (e) the fact that people resist being forced to change (for more details see [Ref. 95: pp. 37-44].

Sixth: Evaluation: The key to successful evaluation is an explicit prior plan, developed during the entry stage. Innovation should be introduced in a way which provides for evaluation as a matter of course, and for the expectation that the first model will not be and need not be the last word. This recommendation of continuing search for and openness to improvements for carrying out any given functions or meeting any objectives is implicit in the whole literature of technological development and social change.

Seventh: Termination: Despite the open-ended nature of all innovations it is necessary to define the point when an innovation is (temporarily) terminated. When it is integrated in the current operations and when the accounts can be closed and funds provided to new projects.

4. Technology Transfer

a. Introduction

The last section described the innovating process and concentrated on major projects of advanced technology. It concluded with the recommendation of continuing research for improvements. As we stated before, the key question is "What actions can management take to develop a total organizational environment that will spontaneously and continuously seek out and introduce new ideas?" (III.C.1.c)

> "All over the world people struggle with problems and seek solutions. Often those who struggle are unaware that others face similar problems, and in some instances, are solving them...The gap between what we know and what we put to effective use bedevils many fields of human activity--science, teaching, business management and organizations which provide...services" [Ref. 43].

And Jolly [Ref. 59: p. 74] points out that less than one-half of all proposed innovations are successfully adopted within most organizations. He concludes that the role of the innovation process is important in maintaining a competitive stance, a healthy economy and is essential to the long-term survival of a nation.

Technology transfer is used by Creighton et al [Ref. 23: p. 2] as "a purposive conscious effort to move technical devices, materials, methods, and/or information from the point of discovery or development to new users." It is a planned and rational movement of technology and must be distinguished from the more general process of technological diffusion. In the case of diffusion there is no focused effort to cause the transfer function to take place. Only about 3 per cent per year of new technology moves to secondary users unless there is purposive effort [Ref. 58: p. 22]. Creighton and Jolly point out that (1) technology transfer is a new use of existing information and that it is not important whether the idea is new, only that it is new to the person adopting it; and that (2) technology transfer is a social process which involves the interaction of people. It goes beyond documentation and distribution.

The "Putting Knowledge to Use" [Ref. 95: pp. 47-63] Literature Distillation dedicates a whole section to the "Research-Practice Linkage." Three considerations are discussed: (1) the relation between researchers and practitioners; (2) the retrieval and dissemination of information, and (3) the linking roles of change agents and change agencies. The linkage is given an important place.

We found in the introduction to this section that innovation may be divided into three components: (1) The technical component; (2) the innovating component; and (3) the capacity-building component. The innovating component, the sequence of events in the process of innovation, was discussed in the last sub-section. Here now we concentrate on the capacity-building component, the organizational capacity to continuously seek and introduce, and successfully adopt innovations. The ideas follow closely Creighton and Jolly's "Linker Concept" [Ref. 23].

b. Capacity Building for Technology Transfer

The organizaational factors that are most important, in terms of providing a favorable environment for innovation, have been identified. Experience and research strongly suggest that a manager can modify the organizational environment such that the likelihood of spontaneous and continuous innovation will be the norm.

The organizational capacity to seek, introduce and successfuly adopt an innovation varies from organization to organization depending upon the nature of the product, the intensity of competition, the economic structure, etc. Jolly [Ref. 59] calls those macro factors. But he emphasizes that a set of micro factors may be more important for practical use. These factors have to be built into the predictive model of technology transfer [Ref. 23: p. 5], represented in Figure 5. Figure 6 represents the same model, stressing the importance of understanding the value of the linker in the technology transfer process. Figure 7 separates the factors according to formal versus informal ones.

Both the formal and informal linkage can be found in most organizations. Formal linkage tends to present the formal chain of command with a task. The value of the formal approach is unquestioned. On the other hand, if follow up of the information through informal channels does not occur, it will likely pass between interested parties, regardless of their position in the organization. Information is more likely to get attention in off-duty periods when imaginations are more active. Studies have demonstrated that half of all communication among scientists, engineers and technicians is informal. The most effective communications result when the manager can use information gained by informal means to supplement the communications channels of the formal organization [Ref. 24].

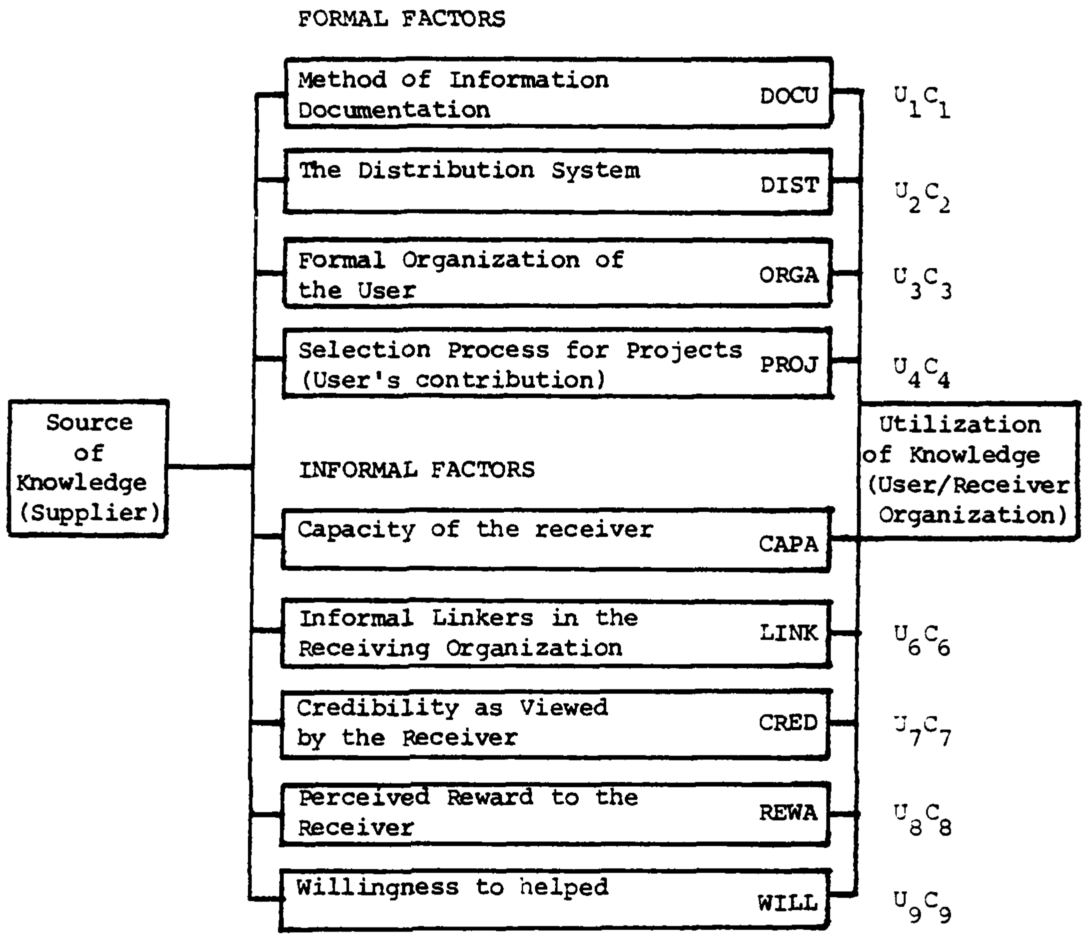

Figure 5: Predictive Model of Technology Transfer [Ref. 23: p. 5]

Linker index for an organization $Li = \sum U_i C_j$

Measure of factor utilization U_i = range $0 \rightarrow 1$

Factor contribution $\sum C_j = 1$

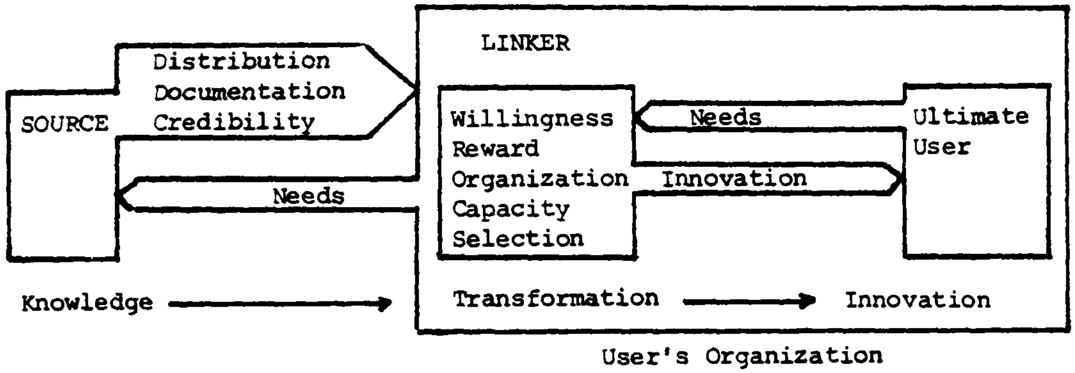

Figure 6: Linker Model of Technology Transfer Mechanism, stressing the importance of understanding the value of the Linker in the technology transfer process [Ref. 23: p. 8].

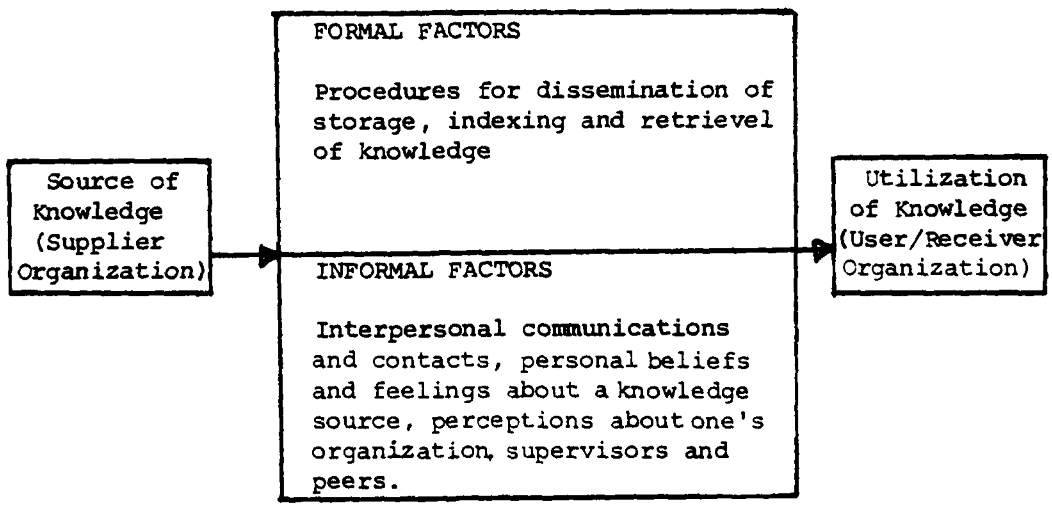

Figure 7: Knowledge flow enhancement factors divided according to formal vs. informal [Ref. 33: p. 71].

The following discussion will clarify each element of the model [Ref. 59: pp. 77-80]:

(1) Method of Information Documentation. This refers to the format, the language, the report complexity and the documentation system. The time that may be devoted to reading information which may be useful in terms of innovation, is limited. In order to enhance the effectiveness of the documentation it is desirable to adopt techniques based on good marketing principles. Scientific documentation has to be adopted to meet the needs of the user.

(2) Distribution System. The physical flow of technology is dependent upon the number of entries and the ease of access as well as the formal distribution plan. The distribution system has many forms: person-to-person, journals, direct mail, meetings, conferences and workshops. They may all be effective methods and have to be selected and adjusted to match the needs of the organization.

(3) Formal Organization of the User. This is the receiver's perception of his formal organization. The power structure, the nature of the business, the management style, the resources available, the attitude of management, the amount of bureaucratic tendency and the stability of the organization, have to be considered. Jolly [Ref. 59: p. 79] reports a research study in which 40 out of 109 scientists and engineers from a Naval Weapons Center perceived management as creating conflicting forces for change.

(4) Project Selection Process. This factor refers to the user's input to the selection of research and development projects. Potential user monitoring and consulting can be important in determining future utilization of the research output. There is an obvious benefit of increasing the potential utility of research through collaboration.

(5) Capacity of the User. This factor refers to the ability of the potential user to utilize innovative ideas. Skills, education and traits are to be considered. The potential user organization may resist the new idea because of inability to provide trained workers. The vision to perceive and logically benefit from an innovation may be related to the level of education of management. Further, there are socio-psychological attributes that tend to expand the capacity of an individual in terms of technology transfer. Venturesomeness, professional status, imaginativeness, educational status, dominance, sociability, and cosmopolitanism are significant [Ref. 79: p. 77]. Lippit et al [Ref. 76] report more response to innovative proposals from older, as well as younger, teachers, with the middle-range most tradition-minded. People demonstrating a capacity to be early adopters of new practices and ideas are important to the transfer effort. Persons demonstrating this capacity often show some or all of the following characteristics [Ref. 24]: mature outlook, awareness of importance of social status, well-educated, effective at communicating, somewhat venturesome, cosmopolitan, reasonable social mobility and imagination.

(6) Informal Linkers in the User Organization. A linker accomplishes innovations by bringing technology or ideas and potential users together. A linker's primary interest is toward change for others, whether or not personal benefit is gained from the change. Creighton and Jolly [Ref. 24] define the differences toward the related term as innovator, change agent, liaison agent and gatekeeper. Linkers are not necessarily superior technical persons, rather they are knowledge sources. The linkers effectively couple the user organization to the scientific and technological world at large. It is the linker's function to bring into his organization relevant information. The next sub-section will consider with more detail the linker personality and function.

(7) Credibility as Perceived by the User. This is an assessment of the reliability and accuracy of the information. Credibility is a function of both the source and the channel through which the information flows. The extent of use and the rate of adopting research output correlates with credibility of the available information. Credibility may be enhanced by publishing successful utilization of innovative ideas and by controls to prevent inappropriate or too early release of ideas.

(8) Perceived Reward to the Receiver. This is the perceived and actual recognition of innovative behavior in the social system of which the individual is a member. The first reward category is intrinsic to the work itself

(opportunity to use skills, to gain new technology, to deal with challenging problems, peer recognition and to have freedom to follow up one's own ideas). The second category deals with extrinsic reward (salary, administrative authority, travels, association with executives). The reward factor is very important. Intrinsic rewards apparently are stronger as motivator for most individuals than extrinsic rewards (exceptions: in-house publications, awards by professional societies and recognition by peers are effective extrinsic rewards [Ref. 24]. Managers must be adept in analyzing the perceptions of each individual about the available awards and the penalties for failures. Innovative ideas may be included as part of promotion criteria. Penalty for failure should be minimized, recognizing that some innovations will fail.

(9) Willingness to Be Helped. There must be an internal motivation to utilize a better method, process or concept. This is a very personal element, yet it is often a critical point in the transfer and utilization mechanism. We have discussed the resistance to change in the last sub-section. It is useful to recognize that although an idea may have been accepted intellectually, normally a long period of time passes before it is incorporated into the thinking of the person who has accepted it [Ref. 59: p. 80].

This model has been tested in organizations of the federal and private sectors [Ref. 58]. The median for each factor was determined for the combined sample population of eleven organizations. Then each factor of each organization was tested against this standard. Statistically significant differences were found. The research has to be continued, but the results so far support the hypothesis that it is possible to identify organizations that are high performers in terms of technology transfer and those which are low performers. One might postulate beyond this state that it conceivably could be true that certain actions could be taken to change the behavior of the individuals within the organization, so that the organization would be more efficient.

c. Characteristics of the Linker

The literature supports the assumption that the human factor is probably the most important element in technology transfer. That is the reason why the "linker element" was chosen for detailed study. It focuses on people most directly. Creighton et al [Ref. 23] developed a test instrument capable of identifying linkers (and stabilizers). Approximately 10 per cent of a professional population is thought to have a general linker orientation. Frequently linkers are overlooked in an organization, and their presence is not used to good advantage.

Characteristics which tend to show in people who are good at linking are: (a) a tendency to believe strongly in their own capabilities; (b) a natural curiosity--everything is of interest; (c) a tendency to belong to several organizations but not necessarily to any one for a long time; (d) a tendency to look upon alternatives as wise or unwise and not as having a degree of risk; (e) a wide circle of friends and acquaintances; (f) little or no identification with peer groups; (g) the subscription to many professional or operational journals; (h) frequent attendance at meetings related and unrelated to work responsibilities; (i) participation in community affairs.

A principal characteristic is the constant activity to gain credibility from those among whom a linker might interact. The primary reward to linkers may be the credibility they achieve--from seeing their suggestions put to use. The effective linker understands both the formal and informal influences on information flow. They understand and perceive which influences tend to hinder and which tend to promote acceptance of ideas [Ref. 24].

IV. EXECUTIVE DEVELOPMENT

Executive Development is one of the important functions of top management and a prerequisite for an executive continuity.

A. FUNDAMENTALS

1. Relevance of the Problem

Public administration strikes a balance between the necessary exercise of power and the search for accountability by public servants. Kriesi [Ref. 70] analyzes the decision structures and decision processes in Swiss politics. He points out that federal executives make up 14% of the political elite and that they also account for 22% of the persons included in the "inner circle" of power and influence. Thus, the selection of top executives for the federal administration is important and very much a matter of public interest. Politics plays its role, of course, besides personality and skills (e.g., election of the Swiss vice-chancellor in 1981).

Sometimes we are confronted with abuses in high places: personal misconduct, conflicts of interest, violation of procedural due process or gross inefficiency [Ref. 120]. Similar problems can be found anywhere. Dullea, for example [Ref. 32], points out that executive development is once again emerging as a high priority in U.S. federal administrative reform. He argues that a number of factors have led to a change in climate and to the Service Reform Act of 1978: A citizen concern over poor governmental service and a congressional concern over better management of the bureaucracy. The problem goes beyond the executive level, including also the middle- and lower-level management (MLM):

> "Because MLM's monopolize power in program implementation, they play a key role in any strategy to enhance accountability" [Ref. 88: p. 409].

And there is another aspect as to why management development is crucial to any organization's success:

> "One of the most important jobs of any executive of any branch of our business,...and right on up to the board level..., is to perpetuate the best possible quality of management..." [Ref. 133: p. 13].

This statement goes along with our survey and the selected quotations from the questionnaire responses: "...I would say that my most important function as manager is the timely selection and preparation of top-level executives. I also consider this task to be the most difficult and most time-consuming..." (E3, chairman of a (Swiss) multinational corporation with more than 100,000 employees).

In his article "Why Companies Lose Their Best People--And What To Do About It," Meyers [Ref. 90: pp. 42-45] points out that retaining executive talent will become a major corporate problem in the 1980's because of (1) the greater demand for the fewer 40-60 year old executives and (2) the increasing pressures that will restrict salaries, bonuses and other management prerogatives.

2. Objectives and Constraints

Management development starts out with the question "What kind of managers...will this (organization) need tomorrow in order to achieve its objectives and to perform in...a different economy, a different technology, a different society?" [Ref. 30: p. 425].

The development of managers focuses on the person. Its objective is to enable a man to develop his abilities and strengths and to find individual achievement. "The active participation, the encouragement, the guidance from both superior and (organization) are needed for manager development" [Ref. 30: p. 426].

The objective may be stated as "having a continuity of competent executives." A secondary objective may be that top management would have a tough choice to make among two or three well-qualified candidates when filling executive positions. The cost to the organization of having too few trained managers is obvious; less obvious, but equally severe, is the cost in terms of frustration and disillusionment of having too many well-trained executives.

Dubs [Ref. 31] points out that manager development should serve to promote the development and transformation of the organization as a whole. Thus, the training policy (in its fundamentals) must be a component of the organizational policy. Management education should not be autonomously structured. It should be viewed within the context of the integrated planning and management system of the company. Executive training is principally for the benefit of the organization, serving as a means of developing sound management concepts and techniques. In this way management training becomes a developing, innovation-seeking process, rather than a vehicle for teaching "tried-and-true" formulas. It is the task of the executives to establish the uniform frame of reference.

But finally it is necessary to point out that the worst thing an organization can do is to try to develop the "comers" and leave out the "others" [Ref. 30: p. 423]. Drucker concludes that ten years from now 80 per cent of the work will have to be done by those left out. If they do not develop themselves to the point where they understand, accept and put into action the vision of the few "comers," nothing will happen. Thus, management development and manager development is needed not only to develop future executives, but also because tomorrow's jobs and organizations will be different from today's.

3. <u>The Human Aspect</u>

> "These young people are coolly outspoken. They'll tell you how much they think they should be paid, how good or bad they think their bosses are, what's wrong with the work they do and so on" [Ref. 11: p. 24].

Life style changes. The young generation is less docile than it once was. Some are suspicious of the system. Some feel less loyalty to their employers and they center less exclusively on their jobs [Ref. 118: p. 498]. Drucker points out that the erosion of management authority is a threat to the functioning of management and of our institutions altogether. Cynicism may be the symptom of an authority vacuum, and the way to restore management's authority is to demand responsibility of each member of an organization [Ref. 30: p. 302].

But not only life styles change, people do as well. They are subject to life cycles, to the combined effect of the biological, family and career cycle (Figure 8).

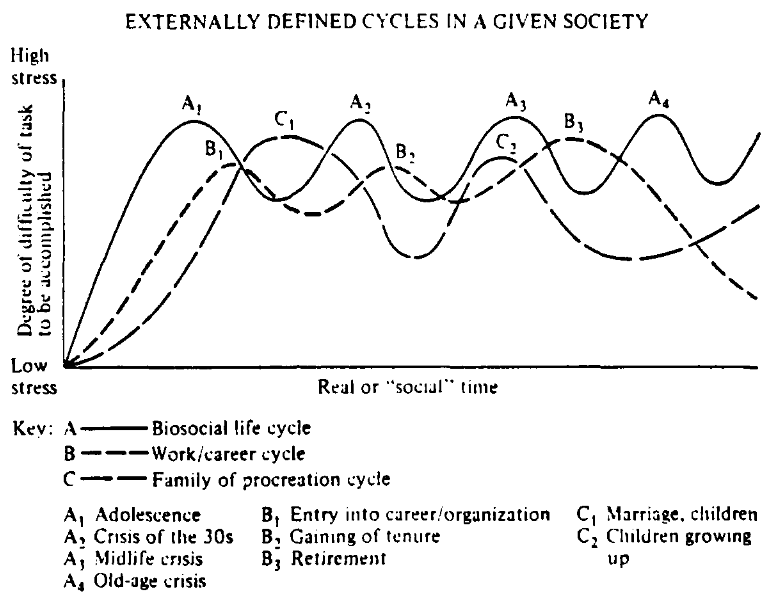

Figure 8: A model of Biology-Family-Career Cycle Interaction [Ref. 104: p. 24].

People mature. Their attitudes and behavior develop over time. Examples are Drucker and McNamara: In 1967 Drucker [Ref. 28: p 145] praised the then U.S. Secretary of Defense McNamara as being an effective executive who challenged the traditional criteria of relevance and gave new objectives to the bureaucracy. The same Drucker [Ref. 30: p. 808] points out that

McNamara personified both the strength and the limitations of the technocrat; that in the final analysis McNamara was a failure because "managing" to him was focusing on the "internal" and excluding the "external," the value, the people, the social dimension. The same McNamara was appointed to the presidencey of the International Bank of Reconstruction and Development (1968). When he retired in 1980, he had demonstrated a broad, integrative approach to world problems. Time and the new function, expectations and experiences changed his attitudes.

The dimension of time raises the question of managerial obsolescence in two senses: (1) obsolescence in which a man's skills are no longer required, and (2) attrition, in which he loses his capacity to perform even though his skills are still applicable. Watson [Ref. 133: p. 9] points out that the managerial-dropout problem need not occur; that obsolescence can be prevented; that planned actions can be taken to stop the trend toward mental decline. He emphasizes that while aging may involve slow physical deterioration, it does not necessarily result in a mental decline. The following findings from the field of gerontology support the idea that training should be available to people of all ages [Ref. 133: p. 10].

(1) Intelligence does not decline with age. Longitudinal studies have concluded that IQ scores for most people remain fairly constant.

(2) Retained information is relatively unaffected by advancing age.

(3) The ability to learn does not decline with age.

(4) But: With advancing age, thinking processes tend to become rigid. Problem-solving ability--finding solutions to new problems where past experience is of no help--is difficult for older subjects.

Given these conclusions, it is apparent that the maintenance and improvement of mental ability is possible. However, rigitidy of thought and an unchanging exposure to the same life experiences, where things are safe, can cause the mental processes to slow down.

Many professionals debate the relationship of an executive's age to performance. They have long noted the obvious differences between the more ebullient, energetic young executive and the more thoughtful, cautious senior. More insight stems from recent work on "adult development" and specifically on the "midlife crises" [Ref. 102: pp. 238-241]. For most men there is a constructive resolution of the crisis and its tensions. At this stage many executives become less driven, less egocentric and eager for personal aggrandizement. More at peace with themselves, more realistic about the world and its satisfactions, they can afford to be more broadly thoughtful about needs of others, both institutions and colleagues. Such seasoned managers can fulfill the top-management function of facilitating the development of others. They are more likely to be perceived as true leaders and mentors.

On the other hand, where the organization requires hard-driving, constantly alert executives who can handle scores of tough negotiations and exchanges each day, who never tire of persuasion and exhortation, it is more likely that relative youth will be important. Thus, some corporations with fast-changing technology require executive vice-presidents to retire at age 55 (letting the CEO stay on beyond this age). Swiss Army instructors retire at the age of 58 if they have attained the rank of colonel. They retire earlier if they do not become a colonel, and at 62 if they rise to the general ranks.

Swinyard [Ref. 119: pp. 12-14] reports that newly promoted executives with MBA degrees had a median age of 44 (40-50), whereas executives with other types of graduate education (master's degree) had a median age of 47 (42-53). He points out that the most obvious trend is a marked increase in graduate education among corporate executives, and a continuing rise in the importance attached to the master's degree in business administration.

4. A Systems Approach for Executive Continuity

Experiences suggest that an organization which implements more of the following requirements increases its likelihood of achieving successful results [Ref. 81: p. 9]. Major requirements are [Ref. 81: pp. 11-139]:

Top Management Actions: The most critical requirement of any executive continuity system is top-management interest and action over very long periods of time. Data of trends suggest that there is a significant trend for more personal involvement and commitment by top management. Our survey gives examples of this.

Reasons why executive action may be limited are: (a) in some instances more than a year may go by without the need to appoint a key executive, (b) lack of a competent staff, (c) lack of a concept of identification, development and selection of key executives as a process.

An Effective Staff Contribution: An effective Staff Contribution is second in importance. It is needed to insure that a sustained effort is made over a very long time. The basic responsibilities include (a) designing an overall program, (b) securing sound data, (c) stimulating the anticipatory action and planning on the part of line executives, (d) facilitating an organization-wide approach to the selection decisions pertaining to key executives, (e) implementing programs requiring a comprehensive approach such as accelerated development and potential executive inventory.

This staff contribution may be made by the established personnel group or by a special group reporting to the chief executive. For the Swiss DoD Instructors it could be the Personnel Division of the Military Administration or the Secretary of the National Defense Committee. Pitfalls to be avoided include that of being considered "kingmakers."

Anticipating Future Needs: This includes an analysis of the characteristics of current executives, of future job requirements and of the motivational requirements of top-level positions. The next section discusses this topic in more detail.

Objective Data: Organizations that are serious about executive continuity must invest in getting data about personnel needed to make decisions. "Good" data is reliable, pertinent, contains a minimum of bias, and permits differentiation. There are six basic sources of information: personal history, self-descriptions, performance appraisals, psychological evaluations, reference checks and accomplishment analysis. It may be best to use several of these methods without relying on any one method entirely. More about appraisal and selection is presented later in division IV.C

Accelerated Development: Mahler [Ref. 81: p. 69] analyzed data from six large companies which shows that future general managers spend 7 years as individual contributors, that they are 31 years old before becoming a supervisor and that they are 43 years old on becoming a general manager. He argues that too much time is lost in functional management and that there are definite factors which influence the growth of general managers: (a) Early opportunity to supervise, to take significant risk and to take full responsibility, (b) a variety of models of competent executives to emulate, (c) appropriate length of time in a given position, (d) experience with adversity--learning by undoing, (e) experience in more than one function, (f) constructive coaching by a superior.

A British [Ref. 115] and a U.S. [Ref. 82] study revealed independently the top-ranking characteristics contributing to the selection of executives:

-- Ability to work with a wide variety of people

-- Need to achieve results

-- Early overall responsibility for important tasks

-- Leadership experience early in the career

-- A width of experience in many functions prior to age 35.

Strauss [Ref. 118: pp. 501-503] presents similar findings and adds that rapidly-promoted managers are both challenged by and comfortable in situations filled with high risk and ambiguity and that they are comfortable using power.

Planning for accelerated development in special cases calls for serious attention being given to early work experience, early identification, and career planning.

Effective Coaching: This refers to the discussions between a supervisor and a subordinate which help the latter to develop and grow. Coaching has been generally recognized as a very important factor in the development of executives. To date the evidence reveals that getting executives to improve their coaching practices is extremely difficult [Ref. 81: p. 96]. We will consider coaching in more detail in the section dealing with the education of executives (IV.D).

Educational Programs: The following trends in executive programs promise that the contribution needed from educational programs can be achieved [Ref. 81: p. 109]: (a) Cooperation between educator and top management, (b) both general and specific programs, (c) periodic, career-long education, (d) developmental cost dealt with cooperatively, (e) experimentation and education combined, (f) managers taught by managers, (g) managers will have more of a say in designing their own educational experience. For more details see Section IV.D.

Organization-Wide Selection and Placement: Major factors required in an effective organization-wide selection and placement effort: (a) an adequate "depth" of management, (b) sound knowledge of candidates, (c) sound knowledge of data, (d) basic policies and procedures, (e) direct involvement of top management, (f) a skillful staff contribution.

Interaction with Other Programs: This requirement suggests that the executive continuity program works best when there is harmony with other processes and programs. (See also Dubs, 1981 [Ref. 31]).

5. Replacement and Career Planning

Career planning has to consider the following guideposts [Ref. 133: p. 4]:

(1) The methods and tools used are not as important as a sincere interest in the development of people.

(2) A person's development is 90 per cent the result of on-the-job experience.

(3) The three most effective executive development tools are: (a) Early defined responsibilities, (b) commensurate authority to manage, and (c) the necessary feedback of information by which one can decide for oneself how well he is performing.

It is desirable to have an orderly system that gives everyone an equal opportunity (dependent on ability) for training, experience and consideration for promotion. But an over-orderly or rigid rotation or promotional system can deprive the decision-makers from real choices.

Open and closed systems: How much freedom should individuals have to pick their own career path? Many organizations have closed systems in which managers are given little choice as to the kinds of jobs they do or the kind of developmental opportunities they receive. But it is becoming common for organizations to post job openings and to allow individuals who are interested to bid on them.

a. The Components of a Comprehensive System

The diagram in Figure 9 shows the major relationships of the components of a large corporation [Ref. 81: p. 142]:

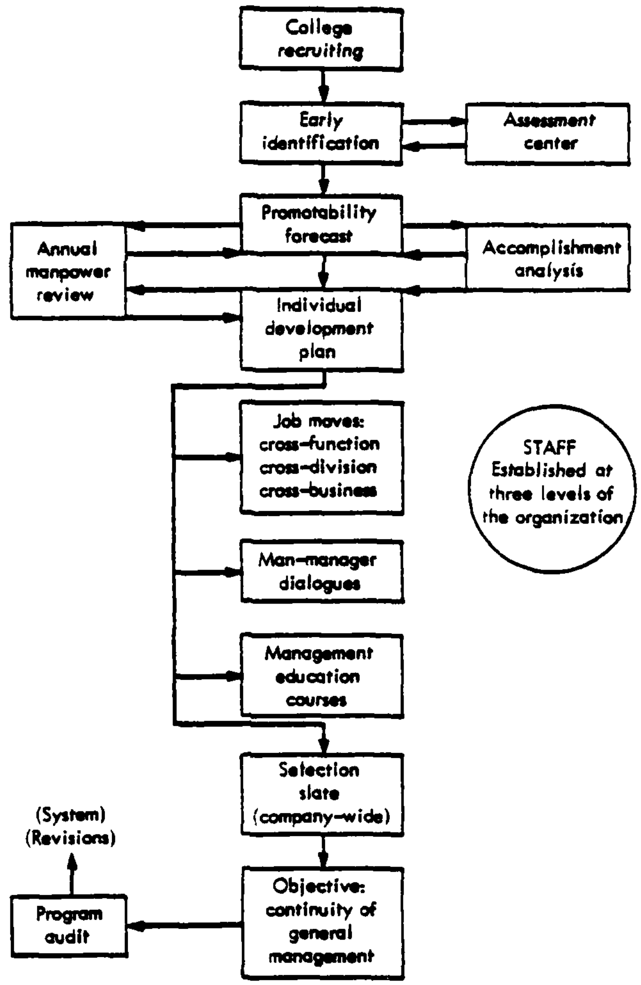

Figure 9: Diagram of an Executive Continuity System [Ref. 81: p. 142]

b. Policy for Selecting Individuals (Source: E1)

Selected senior personnel are placed within the purview of the "Executive Committee" in order to provide means by which performance may be continually evaluated, career development may be monitored and candidates may be prepared for future promotion to senior management or significant roles within the group of companies.

Guidelines for selection: (a) the nomination of an individual for "Executive Committee" purview is in recognition of a promotion, a significant increase in responsibility or a demonstrated improvement in performance. (b) There is a definable future for the employee in management's plans. (c) Recommendations that individuals be placed within the purview of the Executive Committee will be made in writing to the Executive Committee by the respective Executive Sponsor. These letters must clearly demonstrate the justification for selection to purview.

Approval of Personnel Actions: Approval of the chairman of the Executive Committee is required for (a) placing an individual within the purview of the Executive Committe, (b) status changes (salary, job responsibilities, involuntary termination).

c. Replacement Chart and Potential Evaluation Form (Source: E3)

The replacement chart indicates for every line and staff position: (a) the incumbent's name and age class, (b) the probable due date of a change, (c) the name and age class of the substitute candidate, (d) the name, age class and preparedness of two other candidates.

The Potential Evaluation Form is confidential. It has to be used for every employee with potential for a higher function and for every member of the upper four management levels. The evaluation is made by the direct superior and the next higher superior together with a member of the personnel department. The Potential Evaluation Section allows the giving of information relative to the "Promotional Potential" or to the "Development Potential" of a candidate, or to indicate that a candidate has achieved his optimal level on which he is performing well.

Three other sections have to be used for candidates with potential: A description of the objectives as seen by the candidate and by the organization; an analysis of deficiencies in knowledge and experience; a development program (new assignments, training, employment abroad).

Executives and generals in the Swiss DoD typically remain 4-8 years in a specific function. Thus, the "depth" of the replacement planning system should have at least a similar time horizon. It should include a substitute for emergency cases and enough candidates for future needs, allowing for some flexibility of choise. Some candidates may be considered for several functions.

Given these facts and the data in Table 16, we may conclude that the DoD's executive replacement planning system should include about

-- 100 names for executive replacements and candidates

-- 120 names for functions requiring general ranks

-- 35 names of instructors for executive functions.

These lists are not mutually exclusive.

The yearly replacement rate may be estimated at 5-10 executives; 8-16 generals; 3-6 instructors for executive functions. These promotions are to be proposed by the DoD and decided by the Federal Council.

B. DEMANDS ON EXECUTIVES

1. Trends in the Environment

A document (1979 edition) submitted by (M3) illustrates the thinking-ahead of a (Swiss) multinational corporation: It states with "some degree of certainty" that

-- the next 15 years will be marked by a period of severe discontinuity;

- there is likely to be increasing conflict between a growing emphasis on the "one world" concept on the one hand, and on the other, a simultaneous tendency to split up into economic, ethnic or linguistic groups and separate nations;

-- employees will have an ever-increasing say in the running of companies;

-- industry and commerce will be more closely incorporated into national and political structures, and much more influenced by them;

-- both politically and economically, the Third World will have an increasing influence on the activities of the industrialized countries.

It may be concluded, then, that if these predictions are correct, they will have the following effects on the composition and quality of the executives:

-- there will be greater demands on their flexibility and capacity to learn;

-- their ability to think in terms of alternatives and to make use of systems will become increasingly important;

-- even more than in the past, the corporation will have to be prepared to appoint the best man for the job, and to set others aside;

-- they therefore need a relatively large and clearly identifiable number of executives and potential executives who have received a thorough grounding in leadership and general management;

-- their executives must be willing and able to act on their own initiative and at the same time in the interest of the group as a whole;

-- their executives must be able to come to terms with greater employee participation without abdicating their responsibilities as managers;

-- they must be able to meet the challenge of increased pressure from political bodies and society as a whole;

-- they must get to know the Third World and take it into account in their planning and their activities.

Dubs [Ref. 31] discusses in more depth trends in the socio-political, technological and economic environment and deduces the consequences for management training.

2. Conceptual Framework

This framework (Figure 10) is composed of three main parts: (1) Knowledge, (2) skills and (3) personal characteristics [Ref. 133: pp. 19-24].

a. Knowledge

General knowledge entails the types of information executives might need to perform effectively in all the roles they occupy. It includes a high degree of cultural education

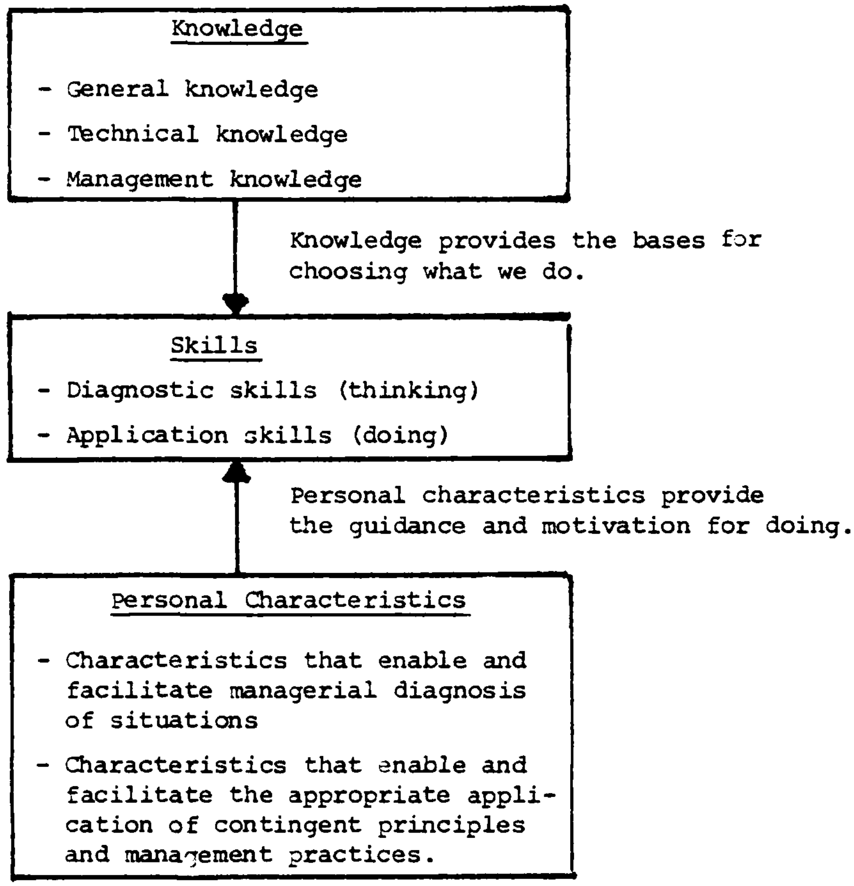

Figure 10: Conceptual Framework of Knowledge and Abilities

"with regard to the social position of an executive" (E4, Appendix D) and "to overcome feelings of helplessness, despair and irrational feats" (M5, Appendix D).

Technical knowledge is designated as a separate category to emphasize its importance. Technical knowledge includes adequate information about the organization's products and services. For those DoD executive jobs which are usually held by (former) instructors, technical knowledge may be called "military professionalism." It includes the ability to interpret changes and trends in the environment and the ability to initiate innovation, to adapt the Swiss Army to future needs.

Management knowledge includes an adequate nomenclature, an understanding of concepts and models and knowledge about contingent principles. In Chapters II and III we analyzed in some detail the work of executives with emphasis on those elements which may be new to instructors when they are, for the first time, given responsibilities in the civilian sector of the DoD. This comprehensive job analysis covers major parts of the area of management knowledge.

b. Personal Characteristics

Personal characteristics will be discussed in the next two sections: the "Analysis of the Responses to Question 2" and the "Literature Review."

c. Required Skills

The required skills then are a corollary of the required knowledge and the required personal characteristics.

d. The Level of Job as an Influence

The knowledge and skills required for management varies with the hierarchical level (Figure 11).

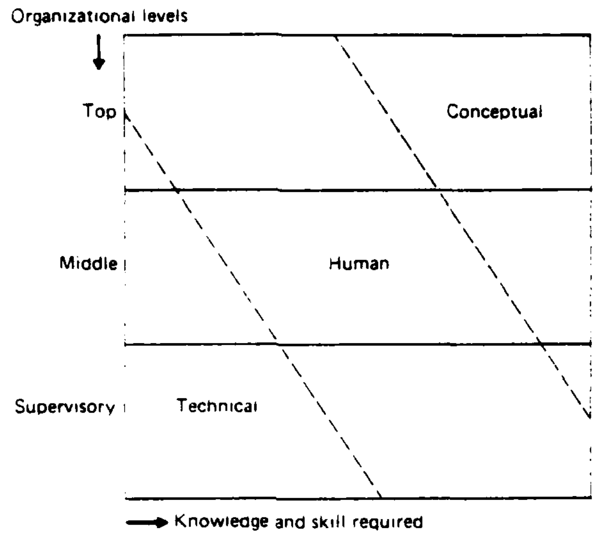

Figure 11: Job Level as an Influence [Ref. 124: p. 9]

3. Analysis of Questionnaire Responses

The Wall Street Journal [Ref. 125] presented a ranking of characteristics that make a good leader:

Column A: What the public seeks

Column B: What leaders think the public seeks

Column C: What leaders themselves seek

	A%	B%	C%
Honesty	50	36	48
Intelligence	26	12	57
Leadership ability	14	51	55
Integrity	12	23	51
Caring for people	11	42	34
Courage	5	14	25
Competence	4	52	28

The analysis of the questionnaire responses (Appendix C) reveals that in the selection of co-workers, personal qualities are rated before competence (Question 2b and c) and that the relative importance depends on the function: Personality is perceived to be more important in line and in higher positions. The characteristics presented on Table 13 scored the most points:

Table 13: Answers to Question 2a

Integrity, Honesty, Frankness	13
Ability to integrate, to work in a team	10
Loyalty	9
Professional competence	8
Willpower, willingness to decide	6
Creativity	6
Intelligence	6
Dependability	6

Executives stress "willingness to decide" more than managers do. "Non-instructor" executives rate "professional competence" higher than "instructor-executives." On the other hand, "loyalty" is perceived to be more important for "instructor-executives." We already discussed this fact in connection with Sloan's study [Ref. 113] (II.C.5.c).

Some selected excerpts from answers to question 2a: "In the selection of co-workers I consider most important":

-- Integrity, willingness to try, professional knowledge and ability, intelligence, emotional balance and freedom from neuroses and psychoses, and the ability to accept criticism positively (E1).

-- Good basic education, willingness to accept corporate objectives and policies, ability to function in a team, willingness to accept responsibilities, perseverance, ability to cope with stress (E7).

-- Initiative, independence, creativity, reliability, loyalty (E13).

-- Personality, leadership qualities, superior intelligence, ability to think abstractly, team spirit (E16).

Selected excerpts from answers to questions 2b (How highly do you rate professional competence?) and 2c (How highly do you rate personal or behavioral qualities?):

-- Professional competence is absolutely essential (in some cases it can be acquired after hiring). But I rate integrity before competence (E1).

-- Professional competence can be learned, is transitory and must be adjusted from time to time. Personal qualities are very important and difficult to change (E10).

-- Professional competence is important but not overriding, given the opportunity to develop such competence on the job. Personal qualities are of prime importance. We have enough technocrats. What we need are leaders (E15).

4. Literature Review

a. Early Attempts to Operationalize the Demands

Katz [Ref. 63] suggests that a more useful approach to the selection and development of executives is based not on what good executives are (traits and characteristics), but rather on what they do (kinds of skills they exhibit in carrying out their jobs effectively). As used here, a skill implies an ability which can be developed and is not necessarily inborn, and which is manifested in performance, not merely in potential. Successful management appears to rest on three basic skills, which Katz calls "technical, human, and conceptual." In practice, these skills are interrelated. Human skill, the ability to work with others, is essential to effective management at every level. Technical skill has greatest importance at lower levels, whereas conceptual skill becomes increasingly critical in executive positions. Conceptual skill involves the ability to see the organization as a whole. It includes recognizing how the various functions of the organization depend on one another, and how changes in any one part affect all the others. It includes the relationship of the organization with its environment, the industry, the community, the political, social and economic forces.

This three-level approach suggests that executives should not be chosen on the basis of their apparent possession of a number of behavior characteristics or traits, but on the basis of their possession of the requisite skills for the specific level of responsibility involved.

b. Dominance of Character

Drucker [Ref. 30: p. 402] stresses the importance of character:

> "One can learn certain skills in managing people...But when all is said and done, developing men still requires a basic quality in the manager which cannot be created by applying skills or by emphasizing the importance of the task. It requires integrity of character."

Similar conclusions may be drawn from statements of subordinates of outstanding executives [Ref. 81: p. 134]: "He can be trusted--He respects the dignity of the individual--No one ever wants to let him down--He is mature, he is stable."

Needs for affiliation, power and achievement have been examined with reference to managerial success [Ref. 85]. Primarily affiliation-oriented managers: Subordinates don't like working for them and superiors don't rate them as promotable. Predominantly achievement-oriented managers: Subordinates tend to see these managers as undesirable superiors. Executives may accept their performance as acceptable, but not judge them as promotable. The problem seems to be with their political skills, which make it difficult for them to move out of the technical ranks and up through middle management. Predominantly power-oriented managers seem to be more successful. They may be better liked by subordinates and more likely to be promoted by superiors. The reason is not firmly established. Mahler [Ref. 81: pp. 34-36] presents similar findings: The requisite motivational factors for executive success are: power, competitive behavior and independent posture.

c. Influence of Life Cycles

The life cycle of an organization may influence the requisite skills of executives [Ref. 81: p. 43]. Geller [Ref. 40] suggests that an entrepreneur is needed for an invest-grow strategy, that a "sophisticated" manager is most suitable in the earn-protect situation, and that a critical administrator is best for the harvest-divest strategy. Even the public sector is subject to life cycles: Changes in the environment lead to changes in the relative importance of tasks. Different types of executives may be appropriate in different stages.

d. Dimensions of Personality

Levinson [Ref. 72] suggests that no one person possesses all the attributes of an ideal leader, that real people have facets of personality and flaws. Some dimensions of personality are more important than others, and the organization and its environment must be considered in order to determine them. He proposes the use of twenty dimensions of personality to assess the behavior of executive candidates. He groups these dimensions in three categories: (1) thinking, (2) feelings and interrelationships, and (3) outward behavior characteristics. For every dimensions he gives a scale as an aid to judgment:

(1) Thinking. (a) Capacity to abstract, "able to synthesize, to organize and integrate creatively principles, values, concepts,...", (b) tolerance for ambiguity, "can work with unspecified goals and uncertainty...", (c) intelligence, has the capacity not only to abstract, but also to be practical, (d) judgment, knows when to act, "usually sees whole picture."

(2) Feelings and Interrelationships. (e) Authority "A natural in position, takes full charge, can give direction or control," (f) activity, "attacks problems strategically with well-defined targets...", (g) achievement, "very motivated to upward as recognition of competence...but not hungry for applause...", (h) sensitivity, able to perceive subtleties of feelings of others, (i) involvement, sees oneself as a participating member of an organization, "mixes with employees...has

finger on the pulse of the organization," (j) maturity, has good relationships with authority figures, (k) interdependence, accepts appropriate dependency needs of others as well as his own, (l) articulatness, "...presentable,... inspires audience confidence, senses audience moods. Respected by peers...", (m) stamina, has physical as well as mental energy, (n) adaptability, manages stress well, (o) sense of humor, doesn't take self too seriously, "...eases tensions naturally..."

(3) Outward Behavior Characteristics. (p) Vision, is clear about progression of his own life and career as well as where the organization should go, (q) perseverance, "Keeps looking for ways around obstacles, maintains optimism, out of confidence a solution will be found," (r) personal organization, has good sense of time, (s) integrity, has a well-established value system, which has been tested in various ways in the past, "beyond reproach, sometimes almost to the point of rigidity," (t) social responsibility, "recognizes responsibility and relishes it as opportunity. Displays active leadership."

Sayles [Ref. 102: pp. 211-241] approaches the aspects of personality which are likely to bear on executive success using the categories of (4) The level of cognitive development, (5) orientation toward time, (6) interactional abilities, and (7) problem-solving abilities. His approaches for assessing personality and problem-solving capabilities deal with objective data and on-the-job behavior.

(4) Cognitive Development. The candidate's conception of the organizational world may be used to assess the level of cognitive development. The scope reaches from "everything right or wrong; one best way; pure rationalism" to "organization, a complex system of dynamic and changing tensions--an open system."

(5) Time-orientation. Another way of looking at how personality shapes managerial behavior is to consider how the individual copes with past, present and future states. Sayles then describes the four categories: Thinking types, feeling types, intuitive types and sensation types, and he concludes: "Occasionally one observes top management teams which seem to work in great harmony because they are the perfect mixture of these types. Each executive fills a needed role and complements the other" [Ref. 102: p. 223].

(6) Interactional Abilities. Another way of looking at personality differences among leaders concentrates attention on the manner in which managers interact, handle their conversation. Specific skills are: Initiative, the ability to originate contacts; quickness, the ability to initiate a large number of contacts in a short period of time; Perseverance, the ability to keep going back to the same people; flexibility, the ability to adjust one's pattern of give-and-take to the pattern of others; dominance, the ability to keep talking; listening ability, the ability to remain silent; minimal stress, the ability to maintain one's

interactional capabilities even when others are unresponsive. One of the most disqualifying personality traits in managers is vulnerability to stress. Obviously there are differences in the interactional requirements of jobs.

(7) The <u>problem-solving abilities</u>. In organizations these involve more than analysis, the rigid, disciplined, logical thinking. They include also the problem (or opportunity) of identification, the data collection, decision-making (as an end result of a lengthy organizational process) and implementation.

Sayles points out [Ref. 102: p. 241] that executives can themselves use these categories in evaluating the promotion potential of their subordinates: "One doesn't need to call in a...psychologist to see the very obvious differences in how people handle their jobs and their human relationships. They are usually very obvious, very predictable and recurring; one must only learn how to look."

C. EVALUATION OF EXECUTIVES

1. <u>Basic Issues</u>

a. Early Potential Finding

Early potential finding seems futile to Drucker [Ref. 30: p. 423]: For him, "potential is elusive." By itself it is worthless. Performance counts. He states that the correlation between promise and performance is not high. "Five out of every ten 'high potential' young men turn out to be nothing but good talkers by the time they reach forty...

(and)...five out of every ten young men who do not look 'brilliant'...will have proven their capacity to perform by the time they are in the early forties."

Mahler, on the other hand, [Ref. 81: p. 82] stresses that many executive-developmental actions cannot be accomplished unless plans are undertaken early in the career of an executive. This leads to a requirement of an "early identification program." Mahler states that such a program does not necessarily guarantee results, but that the absence of such a program seriously threatens successful results. He recommends giving experiences early in the career, in order to evaluate whether a candidate thinks like a generalist, makes decisions like an entrepreneur and is able to lead quite diverse groups of people.

b. Traits versus Skills

Executives should not be chosen on the basis of their apparent possession of a number of behavior characteristics or traits, but on the basis of their possession of the requisite skills for the specific level of responsibility involved [Ref. 63: pp. 33-42].

The typical personality test used as a selection device was never very good, and it was often prejudicial and misleading. But this doesn't mean that we must reject all considerations of personality differences as predictors of managerial success. Obviously, personality plays a critical role in determining how a manager's job will be handled, since so much of the job involves discretionary dealings with people [Ref. 102: pp. 209-210 and p. 240].

There were difficulties in measuring the traits and relating them to effective executives. But the difficulties in isolating and measuring general management traits should not stop the search for personal characteristics that lead some people to succeed and others to fail in executive jobs [Ref. 91: p. 194].

These three conclusions demonstrate that character traits are important for success, but that the set of "useful" traits is still controversial: "Even where jobs are alike, people with vastly different personalities may perform equally well" [Ref. 118: p. 524]. Trait rating standards are often unclear and difficult to measure without bias.

c. Coaching versus Selecting

Performance appraisal serves two important, but conflicting, purposes in a management development program: (1) it provides a systematic, objective means for selecting those who should be promoted or receive salary increases, and (2) it is tool to help an executive train subordinates.

Different methods are available for every purpose. The method itself, however, may be less important than the commitment to make it work. Without such commitment almost any program is likely to fail [Ref. 118: p. 536].

Coaching requires an evaluation of past performance on present jobs. Results are measured relative to goals.

Other factors, besides past performance, must be taken into account in making promotion decisions, including the manager's success in special broadening assignments. In addition, personality traits, as disclosed by good selection tests, may be relevant.

Some organizations separate evaluation of present performance (coaching) from evaluation of executive potential. The evaluations occur at different times and partially through different people. Often the evaluation of potential is kept confidential and not even shown to the subordinate.

2. <u>Performance Appraisal</u>

The superior is normally in charge of the performance appraisal. Many organizations require each manager to conduct "evaluation interviews." They are not easy. Poorly handled, they may lead to hostility and misunderstanding. Many organizations spend considerable effort on training their managers to handle evaluation interviews. Sometimes the rating is done by a committee. "RCA tries to minimize subjectivity by having every RCA manager rated by a group of fellow workers, generally including his immediate superior, two or three higher level managers, two or three peers and one or two workers in lower positions [Ref. 81].

My perception of the procedures used relative to Swiss Army Instructors: The evaluation of the present performance consists of a three-phase procedure, consisting of: (1) a preliminary discussion by the superior and the

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subordinate on job content and performance, (2) completion and review with higher supervision of the performance evaluation form, (3) a job performance discussion by the higher supervisor and the direct superior with the subordinate, which covers the ratings on the form as well as a program for performance improvement and for future jobs (some years ahead).

The evaluation of potential for higher positions up to school-commander is discussed openly. The evaluation of executive potential is confidential and not formally discussed with candidates. The job openings are posted.

a. Performance Appraisal of Swiss Army Instructors

They are evaluated every second year on three different forms (5.28; 5.29; 5.31) depending on the nature of their job: (a) job as instructor in a military school, (b) student at the department for military science, and (c) temporarily employed in the administration of the DoD.

Nine to twelve characteristics are evaluated on a four-point rating scale. For every characteristic the superior selects one out of four descriptions which best fit with his perception of the subordinate. He rates relative to the job requirements, not in absolute terms, and he may add personal remarks to the selected descriptions. It is an attempt to provide information about how well important elements of the job are performed. Some characteristics refer to character traits. The system is subject to human evaluation errors like: Ambiguity (what is "good?" or "loyalty?"), insufficient evidence, differing perceptions, excessive leniency or strictness, the halo effect and recency [Ref. 118: pp. 522-523]. (For the "Loyalty Dilemmas" see Webber [Ref. 134: pp. 593-596].) Over time these errors may "average out."

Besides his job in military schools, an instructor has his function in the army, where his performance is evaluated at least once a year. Normally the superior evaluates the personality, the tactical abilities, the leadership abilities and the ability to teach the subordinates.

A long history of evaluations is available by the time an instructor is appointed to an executive function. These evaluations are useful for coaching purposes, giving a formal framework to the evaluation and to the career interviews. They seem not so useful in measuring potential for top management functions. An independent, more tailored system may be appropriate.

b. Alternative Appraisal Methods

It may be interesting to compare the performance appraisal for instructors with the system used in two large (Swiss) multinational corporations (reported by E3 and M3):

The objective is, above all: (a) to permit optimum utilization of employees by taking into account their performance and wishes on the one hand, and the expectations and available positions within the company on the other hand, (b) to encourage employees to improve their performance and their own development by acknowledging their achievements as well as identifying their strengths and weaknesses and (c) to obtain an objective basis for the establishment of new performance objectives, development possibilities, as well as for the purpose of determining salaries and for the assessment of promotion recommendations.

Performance is assessed by comparing anticipated achievements with the actual ones, taking into account external and personal factors which may have determined or influenced the actual achievements.

The subordinate, together with his superior, on the basis of the overall objectives, periodically establishes (a) the results to be achieved by him, (b) the ways of achieving them and (c) the criteria for assessing results. The superior, within the framework of his own objectives, decides with his staff the results they are to accomplish, the measures necessary for their achievement and the criteria for assessing results. From time-to-time he reviews the results of those reporting to him. On the basis of the criteria laid down, the results are compared with the targets and they jointly determine the measures necessary to improve performance and set further objectives...

This is one aspect of MBO (Management by Objectives) originally proposed by Peter Drucker in 1954. MBO gives subordinates an active role, increases their sense of control over the environment and reduces their dependence on the boss. The joint goalsetting facilitates internalized motivation. Because MBO places heavy stress on measurable standards, it may cause problems in dealing with intangible, unmeasurable aspects of the job--trivial items may assume undue importance because they can be counted[Ref. 118: pp. 530-535]. The MBO Management System is included in the "managemert guidelines for the (Swiss) federal service [Ref. 99: p. 38].

3. Other Evaluation Methods

While we have noted that performance appraisals have weaknesses in evaluating potential executives, there is still a need for coaching purposes. However, the critical decisions having to do with candidates for future executive jobs are too important to rely only on written performance appraisals [Ref. 81: p. 57].

Psychological appraisals may be useful for young people in their early career to identify potential, or when hiring experienced men from outside, as an additional precaution against making mistakes or in special cases. Rowe et al [Ref. 98] have presented an interesting study of successful executives' responses to situational stimuli. The authors claim that any individual's response to the questionnaire can be used to predict the potential success or failure of that individual in an executive role. However, they feel that the results of their study appear to be too broad and too general. Further research may help to provide a cost-efficient means for early potential identification.

Personality tests show discouragingly low predictive powers [Ref. 118: p. 385; Ref. 102: p. 211; Ref. 56: p. 115; Ref. 81: p. 57]. More valid results are produced by assessment centers [Ref. 118: p. 386]. The dimensions: Leadership; organizing and planning; decision-making; oral and written communications skills; initiative energy; analytical ability; resistance to stress; use of delegation; behavior flexibility; human relations competence; originality; controlling; self-direction; and overall potential may be assess. (See also Watson [Ref. 133: pp. 72-74].)

Assessment centers include situational tests in the assessment battery, they stimulate the type of work to which the candidate will be exposed and allow his performance to be observed under somewhat realistic conditions. The leaderless group discussion; management games; individual presentations; objective tests; projective tests and interviews are important elements of such a test battery [Ref. 56: pp. 115-134].

Mahler suggests [Ref. 81: pp. 57-61] not appraising experienced managers (insiders) by psychological tests, but instead to submit them to a thorough accomplishment analysis.

D. EDUCATION OF EXECUTIVES

1. Introduction

"What an executive does can be analyzed systematically. What an executive has to be able to do can be learned (though perhaps not always taught). But one quality

> cannot be learned, one qualification that an executive cannot acquire but must bring with him. It is not genius; it is character" [Ref. 30: p. 402].

Management can be learned. It is true that certain people, naturally or innately, possess greater aptitude or ability in certain skills. But research in psychology and physiology would also indicate, first, that those having strong aptitudes and abilities can improve their skills through practice and training, and secondly, that even those lacking the natural ability can improve their performance and effectiveness [Ref. 63: pp. 33-42]. Sayles [Ref. 102: p. 210] is convinced that some of the skills required for leadership are learnable, but that the potential for learning is contingent to the personality. We mentioned earlier that a width of experience in many functions prior to age 35, leadership experience early in the career and an early overall responsibility for important tasks are characteristics correlated with successful executives.

Thus, we may conclude, in accordance with Mintzberg [Ref. 91: p. 193], that the efficiency of managerial training and development programs is significantly influenced by the selection of the trainee, that the right training for the wrong people is clearly wasteful.

Some critical notes from U.S. Senator Gary Hart [Ref. 125] may close this introduction:

> "The military education and promotion system is another example of a serious non-budgetary weakness...It gives little attention to ideas about warfare. It emphasizes the study of management and lower-level leadership...

Promotion reinforces the effects of poor education...The armed services have in large part become bureaucracies... in which the officer specializes in one of several narrow functions, and the overall goals...are supposedly attained by linking the 'boxes' which define each individual's job. Unfortunately the narrow outlook this produces often causes those overall goals to be forgotten, while decisions are based on what the institutions find comfortable--which is to say, what they have done in the past."

2. Objectives and Contents

The objective for training and education is found by comparing the requirements for executive jobs with the knowledge, characteristics and skills of the candidate [Ref. 133: pp. 47-104].

A comprehensive analysis of the requirements is presented in the preceding chapters II and III. The objectives and the content of management training have been investigated by the survey:

a. Questionnaire Responses Relative to Objectives

Question 3a: "What goals do you feel are essential for management training?" (Appendix D). The answers are presented on Table 14.

Table 14: Answers to Question 3a

37%	To acquire a superior leadership behavior with broad, integrative general knowledge
16%	To recognize present and future relationships in the social, political, economic and technological environment
16%	To enhance the ability to recognize and to structure relevant problems and alternative courses of action
14%	To be knowledgeable of the latest technology changes. To acquire an updated professional competence
17%	Diverse, including "to acquire a high-level of cultural education."

Selected excerpts from answers:

-- Essential goal: Stretching and preparing the individual (E1).

-- ...appreciation for economic relationships and their impact on the organization; independent assessment of the most effective organizational forms... (E4).

-- ...fostering of creative behavior and innovative thinking; perception of relationships and ability to see situations in their entirety... (E13).

-- Cultivation of leaders who demonstrate their credibility by example in terms of personal integrity and competence, thereby earning the trust of their subordinates (E18).

b. Questionnaire Responses Relative to Contents

Question 3b: "What should management training include?" (Appendix D). Most answers to the question 4b refer to 3b. The answers are presented in Table 15.

Table 15: Answers to Question 3b

25%	Leadership and human relations, including motivation, psychology of work, group processes, communications, conflict management
25%	Management of organizations, including micro-economics, management models, structure and processes of organizations, strategic planning and control, finances, managing change and technology application
20%	Management tools and techniques, including policy analysis, decision-making techniques, planning techniques, management information systems, time management, statistics, accounting
14%	Environment, including an understanding of macro-economic, social, political, ecological and technological facts, relationships and trends
16%	Diverse, including law, civics and culture.

Selected excerpts from answers:

-- Cultivation of the ability to perceive relationships, not just on the corporate level, but especially on the social, political and economic level, as such relationships can have important bearing on the actions and duties of executives in all positions, both presently and in the future. An understanding of the long-range corporate goals and the promotion of a cooperative spirit are also essential parts of management training (E3).

-- Reality and relationships of power politics; status and outlooks in a sociological, technological and economic sense; organizational theory and leadership (including the planning of subordinates' training); potentials and limits of electronic data processing in organizations (E13).

-- Executive training is principally for the benefit of the organization, serving as a means of developing sound management concepts and techniques. In this way executive training becomes a developing, innovation-seeking process...(M5).

c. Basic Issues

The task of executive development is not to change the personality, but to enable the man to achieve and to perform through what he is and what he has. Executive development should concern itself with changes in behavior to make a man more effective. Executive development does not deal with who a man is--that is with his personality or his emotional dynamics [Ref. 30: pp. 424-425].

Watson [Ref. 133: p. 26] takes a different point of view. He argues that to be effective, executive training must include efforts that will cause trainee's attitudes to become consistent with and supportive of the concepts and contingent principles taught. That it must also include the development of personal characteristics and address itself to the emotional and attitudinal dimensions of learning, in addition to the cognitive ones, if it is to be successful in causing changed behavior. "Without emotional involvement, trainees are likely to develop intellectually satisfying answers that they fail to implement in practice" [Ref. 118: p. 540].

3. Development Methods

Experiences suggest that a person's development is 90 per cent the result of on-the-job experience; that developing people is a matter of creating an environment in which they can grow; and that the methods and tools used are not as important as a sincere interest in the development of people [Ref. 133: p. 4].

a. Analysis of Questionnaire Responses

The analysis (Appendix D , question 3c) discloses a significant preference for a comprehensive education: Formal education initially supplemented by on-the-job training (if possible with job rotation) and periodic formal seminars to maintain and update skills and knowledge.

Selected excerpts from answers to the question: "What forms of training do you consider effective?":

-- Any and all forms of training can be efficient. I prefer formal for most purposes and find case studies to be a useful vehicle (E1).

-- Given a large enough corporate scale, I feel it is probably helpful, though by no means sufficient, to send future executives to management schools. However, this necessary and important outside schooling must be supplemented by internal training under the close supervision of top management. I feel that management should take an active role in such training, and that trainees should participate in group projects where key issues are analyzed (E3).

-- Training should serve to promote the development and transformation of the organization as a whole. Thus, the training policy must be a component of the organizational policy. Management education should not be autonomously structured. It should be viewed within the context of the integrated planning and management system of the company. It is the task of company management to establish the uniform frame of reference (M5).

-- Depending on the individual and his position, or function, such training could be either formal or informal. More often, training is informally done on the job due to other demands on the individual's time. Staff meetings held on a regularly scheduled basis are ideal for providing group training (M1).

-- At present, workloads are so heavy, and the hiring ceiling so limiting (Swiss federal administration), that it is difficult to find time for manager training. On-the-job training is of prime importance, therefore (E10).

b. On-the-Job Development Methods

On-the-job methods are (a) regular managerial assignments, (b) special assignments, (c) job rotation, (d) on-the-job coaching and counseling, (e) periodic performance appraisal, (f) community responsibilities.

(1) Job rotation. It may include exchange programs. The U.S. government for example has a president's executive exchange program [Ref. 128: p. 65]. Executives are chosen from industry and given a job in government for a year. Management personnel are given jobs in private industry. Each learns about different problems of each sector. The biggest problem is the frustration in government jobs regarding decision-making. "Politics governs decisions rather than business experience. The bureaucracy can be unmanageable."

Similar suggestions are made by (M8) in his response to question 4b (Appendix E).

Planned or unplanned job rotation is expensive. It costs time and money. Advantages are: (a) the development of generalists, (b) rotation helps indoctrinate a common perspective, (c) provides challenges, (d) the outsider often brings new ideas, (e) makes it possible to compare one person against the other, and (f) rotation fosters organizational flexibility.

But there are also problems with rotation: (a) family problems, (b) concentration on short-range projects with quick pay-off, (c) non-rotated individuals may develop defensive reactions. This leads to poor communication. If bosses change too quickly, this may inhibit change.

Broedling [Ref. 15: p. 3] in his "Navy Civilian Executive Study" points out that "Rotational assignments for executives should be strongly encouraged," and that it "would be more beneficial if given to personnel early rather than late in their careers."

(2) On-the-Job Coaching. Coaching has been generally recognized as a most important factor in the development of executives. Wolf [Ref. 136: pp. 73-76] points out that the emphasis on the position of the executive becomes the leverage point for increasing the effectiveness of public agencies and that the executive coaching heightens the possibilities for executive success. He suggests a corps of senior

executives as coaches. Mahler [Ref. 81: p. 96] agrees on the importance, but stresses the fact that getting executives to improve their coaching practices is extremely difficult.

Livingstone [Ref. 77] has contributed insight into the dynamics of the coaching relationship between an executive and a subordinate. The way executives treat their subordinates is subtly influenced by what they expect of them. Evidence available from behavioral research reveals: (a) What an executive expects of his subordinates and the way he treats them largely determines their performance and career progress, (b) a unique characteristic of superior executives is their ability to create high-performance expectations that subordinates fulfill, (c) subordinates, more often than not, appear to do what they believe they are expected to do.

What seems to be critical in the communication of expectations is not what the executive says, so much as the way he behaves. It is impossible for him to mask his expectations, because the message usually is communicated unintentionally without conscious action on his part. He often communicates most when he believes he is communicating least. Livingstone suggests that executives are more effective in communicating low expectations to their subordinates than in communicating high expectations to them, even though most executives believe exactly the opposite.

Superior executives are consistently able to create high performance expectations that their subordinates fulfill. The rationale, says Livingstone, seems to be that superior executives have greater confidence than others in their own ability to develop the talents of their subordinates. The high expectations of superior managers are based primarily on what they think about themselves--about their own ability to select, train and motivate subordinates. What the executive believes about himself subtly influences what he believes about his subordinates, what he expects of them and how he treats them.

The above studies confirm that it is difficult to improve the coaching practice of executives. Mahler [Ref. 81: pp. 94-96, and 203-208] suggests a series of actions to be carried out.

The coaching executive should concentrate attention upon improving the informal, day-to-day coaching by (a) establishing goals, (b) delegating effectively (willing to take risks), (c) providing knowledge of how subordinates are doing (being specific in expressing opinions), (d) providing assistance when and as needed, (e) understanding (ambitions, motivations), (f) making contacts developmental (manifest interest), (g) providing an atmosphere of two-way confidence, (h) planning a sequence of developmental experiences (at least one per quarter), (i) making effective use of the annual performance interview, (j) using group coaching sessions (scheduled group meetings), (k) improving interviewing skills.

Top management should (a) provide the coaching executives with a benchmark of their current coaching practices and repeat this measurement periodically, (b) provide periodic short instructions, including the presentation and discussion of coaching survey results, (c) identify "good" and "bad" coaches.

And a final remark on coaching: "If the (subordinate) is nearly a carbon copy of the boss, there is little chance that he will introduce innovative ideas" [Ref. 118: p. 611].

(3) Community Responsibilities. The participation in various community organizations demonstrates that the executive is not solely dedicated to his organization, and that he is genuinely concerned with a general well-being. In this activity he must learn how to present his case most forcefully and convincingly before his audience. Here he can learn to "sell" his ideas in the open market and even to hostile audiences. It is here where he interacts most directly with his environment. It is here where he may add a new dimension to his leadership style and to his decision-making process [Ref. 46: pp. 1016-1017].

c. Off-the-Job Development Methods

Off-the-job development methods are (a) self-study, (b) in-house seminars, (c) selected courses and seminars sponsored by outside organizations that do the training.

The most commonly used training methods for off-the-job development are (a) lecture, (b) conference method, (c) case study method, (d) role-playing, (e) management games, (f) sensitivity training. For a detailed analysis of these methods see Watson [Ref. 133: pp. 155-223] and Argyris [Ref. 9: pp. 291-298], who describes some new findings on "Limitations of the case method."

The usefulness of these training methods for achieving training objectives is depicted in Figure 12, and the principles of instructional design are discussed in Gagne and Briggs (1979, Bibliography).

	Acquisition of Knowledge	Changing Attitudes	Problem Solving Skills	Interpersonal Skills	Participant acceptance	Knowledge retention	
a. Lecture	x	o	o	o	x	x	
b. Conference	x	x	o	o	x	x	
c. Case Study	x	x	x	o	x	x	x = Acceptable
d. Role Playing	o	x	x	x	x	x	o = Not Acceptable
e. Management Games	o	x	x	o	x	x	
f. Sensitivity Training	o	x	x	x	x	x	

Figure 12: Usefulness of Training Methods [Ref. 133: p. 215]

V. CONCLUSIONS CONCERNING SWISS ARMY INSTRUCTORS

The purpose of this thesis is to explore the problems involved in the transfer of senior instructors to civilian executive jobs in the Swiss Department of Defense, and to help analyze the means of enhancing this transfer.

Thus, we explored the requirements for executive jobs, including the public sector, focusing on those elements which may be new to senior instructors, and we explored methods and criteria for the appraisal and identification of executives, with special reference to instructors.

The objective of this chapter is to explore the need and possible means of enhancing the civilian executive capabilities of senior instructors.

A. BACKGROUND

Some knowledge of the Swiss Army and the role of instructors is necessary for an understanding of this chapter.

1. The Swiss Department of Defense (Figure 13, [Ref. 116])

The Federal Council is the highest body in the Swiss Executive Branch. It consists of seven members of equal standing, chosen by Parliament. The President changes yearly.

The seven Departments are each headed by a Council member. The chief officials directly subordinate to each Council member are chosen by the Federal Council.

The Council member that heads the Department of Defense (DoD) is called the EMD Chief (after Eidgenossisches Militar-Departement). He is aided in an advisory fashion by the Coordinating Staff (LS) and the National Defense Committee (KML) [Ref. 17].

The Coordinating Staff (LS) is headed by the EMD Chief. Permanent members are: The Chief of General Staff, the Chief of Education and Training, the Armament Procurement Chief and the Director of Military Administration.

The National Defense Committee (KML) is also headed by the EMD Chief. Permanent members are: The Chief of General Staff, the Chief of Education and Training, the Air Force and Air Defense Commander, the four Army Corps Commanders, the Armament Procurement Chief and the Director of Military Administration.

The Chief of General Staff (three-star general) directs the activities of the Group for General Staff Services (GGST) and is concerned with the operational and material preparedness of the armed forces. He heads various federal agencies.

The Chief of Education and Training (three-star general) directs the activities of the Group for Education and Training (GA) and is concerned with technical and tactical training at all levels. He heads various federal agencies, including the schools of the Army.

The Armament Procurement Chief (civilian post) directs the activities of the Group for Armament Procurement Services

(GRD) and is concerned with technological military research as well as the development and procurement of military materials from a scientific, technical, industrial, economic and financial standpoint. He directs the operations of the state-owned armament factories (weapons factory, heavy material workshops, aircraft factory and munitions factory).

The Directof of Military Administration (DMV) serves as a general secretary for the EMD Chief and is responsible for maintaining orderly operations at the department level. He processes matters that are to be presented by the DoD to the Federal Council or Parliament. These include military appropriation requests and the yearly budget.

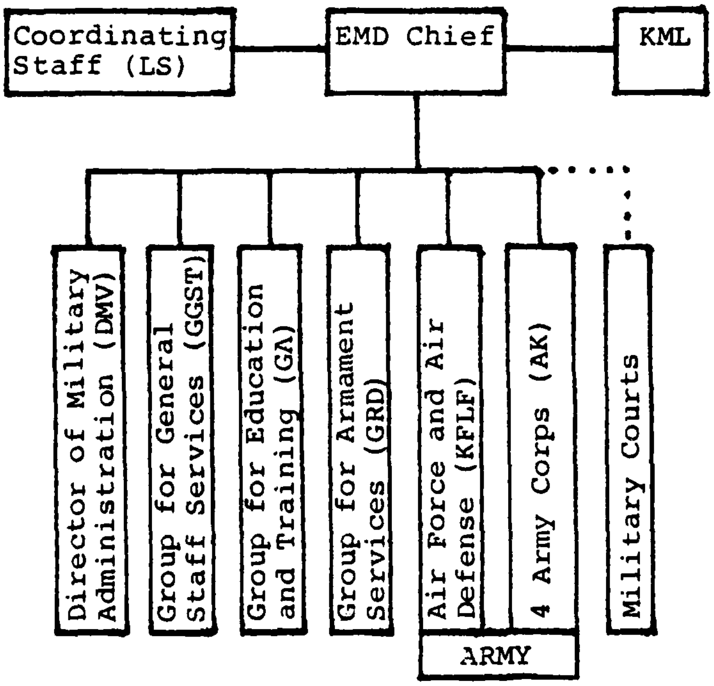

Figure 13: Structure of the Swiss Department of Defense

The executive jobs for which instructors are best qualified are those in the Group for General Staff Services and in the Group for Education and Training.

2. The Swiss Armed Forces

The Swiss Militia Army (Armed Forces) consists of about 625,000 men (about 10% of the population) who are incorporated into 3 field corps, an alpine corps and an air defence corps. The military service includes reservist refresher training of 3 weeks for 8 out of 12 years ("Elite," age 20-32); 2 weeks for 3 out of 10 years ("Landwehr," age 33-42); and 1 week for 2 out of 8 years ("Landsturm," age 43-50). Officers serve up to age 55; they also serve more frequently in a given age class and longer in a given year. The Army is led by commanders who are militia ("part-time") officers up to the rank of brigadier general. Officers above this rank are professionals.

A militia army can maintain an adequate level of performance only if civilian skills and professions are optimally matched with military functions.

The material of an Army unit is stored and maintained in warehouses of the Army Material Management Agency during the periods when the unit is not on duty.

A comprehensive analysis of the Swiss Security Policy is presented by Loetscher [Ref. 78] in his master's thesis, submitted to the faculty of the U.S. Army Command and General Staff College.

3. <u>The Schools of the Armed Forces</u>

The schools are run by DoD agencies. They must provide the Army with skilled personnel at all hierarchical levels. The time typically spent in schools is a function of rank, as shown below (in weeks) (Dok 51.10):

	additional	cumulative
Recruits	17	17
Corporal	21	38
Lieutenant	34	72
Captain	23	95
General Staff Officer	20	115
Major	5	120
Colonel	4	124

These school weeks are spread over the entire career. The recruit schools, the schools for corporals and those for lieutenants can be sequentially completed. The other schools may be attended only after varying degrees of service experience.

4. <u>The Instructors</u>

a. Introduction

The schools are directed by full-time instructors. A school commander ordinarily has the rank of a colonel. He is assisted by a staff of instructors.

The strength of the instructors corps was 1543 men in January, 1981 [Ref. 110]: 630 officers and 913 non-commissioned officers.

The commissioned instructors act as consultants for militia officers in recruit schools and teachers in schools for officers.

The noncommissioned instructors are technical consultants and teachers mainly in schools for recruits and corporals.

Instructors, like everyone else, have to carry out their military service obligations. Thus, they have a dual function: Their "full-time job" in the schools and their function once a year in Army units.

This thesis concentrates on senior instructors and their potential for DoD executive jobs. To simplify matters, we will refer to them as "instructors" rather than "senior instructors" or "officer instructors."

b. The Career of the Instructor

Instructors must balance professional success with their health and home life. They are human beings who have needs. Some find satisfaction through their work. A majority, hopefully, can grow and satisfy their needs for "maturation" and "mastery" [Ref. 73: pp. 206-261] such increasing the potential of the person, the profession and the organization.

Most instructors like their jobs as long as they work as "instructors." Not all like to work within the administration. It is sometimes difficult to find an adequate job for the 50-year-olds. It is sometimes difficult to match the personal needs with the needs of the organization. This may lead to role stress.

A typical career path of an instructor is presented in Figure 14: Variations in timing and sequence occur quite often. The instructor has to get through the "Army Schools" as well as the "Professional Schools."

An instructor is definitively hired after having acquired the rank of a captain and the function of a company commander. An adequate civilian education is a prerequisite. Survey data summarize the civilian education: Among the 625 commissioned instructors [Ref. 109]

-- 39% had a federal license as a "professional"

-- 41% had a bachelor's degree and

-- 20% had a master's degree or a Ph.D before they entered the corps of instructors.

The schools of the Army provide the skills and knowledge required for higher functions and ranks in the Army. The schools of the Department for Military Sciences at the Federal Institute of Technology provide the skills and knowledge required for instructors. Military School I (MSI) is completed in 5 months, MS II in 12 months, and MS III in 2 months [Ref. 16].

c. Management Training

This section analyzes the civilian management education that is provided to instructors or is available in the federal administration. The analysis is based on the material accessible and may not be exhaustive. The analysis considers only education or training in Switzerland.

Age	Rank	in the "Militia-Army" School	in the "Militia-Army" Experience	as "Professional Instructor" School	as "Professional Instructor" Experience
20	Enl.	RS			
21	Cpl.	Cpl.S + RS		Professional Education	
22	Lt.	Of.S + RS	Platoon-	in the Private Sector	
23			Leader	as a civilian	
24					
25					
26					
27	First Lt.	CSI + RS			
28				MS-I	Instr. in RS
29	Cap.		Cp. Cdr.		+ Cpl. S.
30					
31				MS-II	
32					
33	Cap. GS	GSS 1	GS of		Instr. in
34		2	in a Div.		Of. S.
35		3	Staff		
36		4			
37	Maj.		Bat. Cdr.		
38					Instr. in
39					CS I
40					
41	Maj. GS	GSS 5	Dep. Chief	Foreign S	Instr. in
42			of Staff of		CS II,
43	Lt. Col.		a Div.	MS-III	CS III
44		CS III			
45	Col.		Rgt. Cdr.		School Cdr:
46					RS
47					
48					Of. S
49	Col. GS		Chief of		
50			Staff of a		
51			Div.		CS DoD
52					
53			HQ of Ak		
54			or A		
55					
56					
57					
58					

GS = General Staff
S = School
RS = Recruit School
CS = Central School, I for Cap.)
II for Maj.) Candidates
III for Col.)
MS = Military School, Department of Military Sciences,
Federal Institute of Technology

Figure 14: Typical Career of an Instructor

(1) Federal Institutes of Technology. Military School II (MS II) fosters cultural interests and an understanding of public affairs. The curriculum includes management techniques and leadership. The topics include: Structures of organizations, delegation, communication, information, leadership style, leader behavior, management models and principles of some corporations and of the federal administration [Ref. 16 and Ref. 93].

MS II takes 12 months. Every instructor must attend this school in his early years as a captain (Army).

Military School III (MS III) prepares instructors late in their career as a major for the function of a commander of a military school. MS III takes approximately 2 months. It may be less, due to the heavy workload of instructors. The full curriculum includes political, cultural, economic and military topics [Ref. 16].

(2) Continuing Education. The catalog (1980-1981) of the Group for Education and Training [Ref. 112] includes three-day seminars for communication, for performance interviews and for transactional analysis.

Leadership seminars (2 days) were held by the Group for Education and Training in 1980 and 1981, introducing or recalling the management guidelines for federal service (RVF).

The catalog (1980-1981) of the Federal Personnel Agency [Ref. 94] includes short seminars (1-3 days) covering topics such as economics, civics, statistics, law, microcomputers; and extended seminars: Management technique and leadership (RVF, 20 days) and an introduction course for newly-appointed middle-managers (16 days), covering economics, finances, law, politics, national security and public administration.

(3) Training on the Job. Many instructors are assigned to administrative DoD functions before and/or after their function as school commander. These assignments may be in a staff, or as chief of a DoD section. All instructor-addressees (Appendix A) have experience in such functions. In January, 1981, 15% of the instructors were employed in the DoD administration. The turnover among those may be 25% [Ref. 110].

No data relevant to coaching was available.

(4) Conclusion. The available schools, courses and seminars cover a large variety of subjects. The quality is good (my personal judgment). The available time is a major constraint. Most subjects can only be introduced.

The constraint is due to the inability to get off the job to attend such seminars or schools. About 10 per cent of all instructors at any given time are enrolled in an educational program (V.A.4.d) at the Federal Institute of Technology or abroad in a military academy. (The emphasis there is on military science.) The remaining instructors, being on-the-job, are not easily free for more than a few educational days. Besides their job, they have to fulfill their "military obligation" in the Militia Army (3 to 6 weeks per year), and they have their vacation time (4 weeks). The scheduling of all activities is difficult, and the results are seldom satisfying.

The federal hiring ceiling also makes it difficult to improve the situation.

d. Some Statistical Data [Ref. 109; 110; 111; and 116]

Most instructors are employed as educators of militia officers in military schools. Some attend schools themselves and some are permanently or temporarily employed in the administration (DoD): A survey (1981) indicated that of the 630 commissioned instructors,

-- 421 (67%) were employed as "educators" (instructors)

-- 143 (23%) were employed otherwise (15% in the administration)

-- 66 (10%) attended "professional" schools (MS or foreign academy

Of the 143 instructors who were not employed as "instructors" (most of them working in the DoD administration), 40 per cent carried out an upper-management or executive function:

-- 31 Chiefs of a DoD section (managers)

-- 11 Chiefs of a DoD division (some are executives)

-- 19 Vice-Chiefs of staff or directors of a DoD agency (executives)

-- Some are vice-directors of a DoD agency

The existing DoD executive positions and the number of functions requiring general ranks are summarized in Table 16. The turnover is estimated at 20% per year.

Table 16: Overview of Executive Positions and Functions Requiring General Ranks

	DoD wide	Accessible for instr.	Held by former instr.
Executive Positions	51	25	21
Executive Positions requiring gen. ranks[1]	23	23	19
Full-time jobs[2] requiring gen. ranks	55	54	46
Part-time functions[3] requiring br. gen. ranks	18	18	6

[1] Gen. ranks: one, two, or three-star generals

[2] Commanding generals, chief of staff of corps, executives of DoD

[3] Commanders of brigades, chief of staff KFLF (Militia System)

B. NEED FOR IMPROVED EDUCATION

1. Characteristics versus Requirements

Most instructors applying for a DoD executive job are senior officers (colonels). Normally their experience in the Militia Army includes functions of (a) general staff officer and (b) commander of a battalion and later of a regiment.

In addition, the career of an instructor normally involves a short assignment (2-4 years) in a DoD agency or staff (administration) and includes the function of commander of an Army school. Many senior instructors have attended a foreign military academy.

Besides professionalism (technical skills), a senior instructor is experienced in leadership, in analysis and rational decision-making under uncertainty and stress; in coordinating several functions, including logistics (generalist); in the selection, appraisal and education of officers; and in some management techniques.

He is used to bearing responsibility and to working with men in a military setting.

The civilian education, acquired before applying for a career as an instructor, is different: 20% have a master's degree or Ph.D, 41% have a bachelor's degree, and 39% have a federal license as a "professional" (V.A.4.d).

The requirements for executive jobs and the trends involved have been discussed with emphasis on those elements which may be new to instructors (Chapters II, III, and IV.B).

2. Analysis of Questionnaire Responses

The addressees are qualified to compare the skills of instructors with the requirements of the executive job (see Appendix A).

Question 4a: "Do you believe that instructors generally are adequately prepared for the functions of an executive official?" (Appendix E). The answers are presented on Table 17.

Table 17: Answers to Question 4a

60%	No, there is too much of a difference between civilian and military problems and leadership.
25%	Yes, but it depends on the general level of education and the future job.
15%	Yes, if he is general staff officer.

Selected excerpts from answers:

-- Basically, yes, though this question can probably be answered only on an individual or case-by-case basis after judging the general level of training and not just the military career (E4).

-- No, their preparation is inadequate and is optimal only in certain cases. Improvements are urgently needed. Candidates for executive posts should be placed as young majors in demanding administrative positions. Candidates for high command positions should be able to prove their credentials chiefly by prior successful service in the management of an important administrative section or division (E13).

-- No, there is a lack of training in micro-economics. Military administration in particular should be managed in accordance with economic principles (M5).

C. OBJECTIVES OF IMPROVEMENT

1. Analysis of Questionnaire Responses

Question 4b: "In what areas do you believe additional training (for instructors) would be necessary or desirable?" (Appendix E). The answers are presented on Table 18.

Table 18: Answers to Question 4b

28%	Management education as described in answer to question 3b (see IV.D.2.b)
17%	Methods and regulations related to governmental and parliamental activities
14%	Differences between military and civilian leadership
14%	Specific education for the new function
24%	Diverse, including economics
30%	No additional education is required.

Selected excerpts from answers:

-- Business education patterned after the private sector (E7).

-- Additional technical training may be beneficial in certain cases. I am presuming that the instructor will have enough initiative to seek instruction or instruct himself in areas where deficiencies are felt (E15).

-- Training at the MS III (Department of Military Science), with emphasis on: (a) Administrative economics, management and organization of public administration, (b) administrative law processes and procedures, (c) accounting system in public administration, (d) labor science (rationalization and humanization of administrative operations) (M5).

2. Conclusions

(1) Potential executives among instructors need better preparation for executive positions in most cases.

(2) Based on the questionnaire responses (IV.D.2.a and b and V.C.1), we may define the objectives as follows:

-- To stretch and prepare the individual;

-- to enhance his ability to recognize present and future relationships in the social, political, economic, and technological environment and their bearing on the actions and duties of a DoD executive;

-- to adapt his leadership behavior to the civilian environment and his decision-making ability to the organization's and to the political point of view;

-- to enhance his ability to recognize and structure relevant problems, to foster innovative behavior, and to balance stability and change.

D. ALTERNATIVE APPROACHES

On the one hand there is a felt need for better preparation of future executives for DoD administrative jobs. On the other, there are the perpetual constraints of scarce resources, limited funds and personnel ceilings.

An improvement of executive education will always involve trade-offs, commitments and decisions.

1. Possibilities for Improvements

a. Improvement of On-the-Job Training

On-the-job training can be improved through coaching and systematic and coordinated career planning. The coaching has to be done on an executive level. Mahler gives suggestions for improving the coaching practices of executives [Ref. 81: pp. 94-96 and 203-208]. Career planning falls within the province of the group for "Education and Training," the group for "General Staff Services" and the group for "Armament Services" (exchange program, job rotation). "A record of successful management of an important administrative section or division should be a prerequisite for a high command or executive position" (E13, Appendix E).

This method requires the approval and commitment of top-level executives (DoD level).

b. Lengthening of Military School III (MS III)

Lengthen Military School III and include subjects in the curriculum which are useful to know at this career stage and which may be taught in an academic environment.

This method calls for the modification of a governmental decree [Ref. 16], for time and funds. A capacity for about 20 students per year is required.

The successful completion of MS III should become a prerequisite for the position of a school commander.

Selecting only a portion of instructors for a Military School IV may be considered as an alternative. The capacity could be reduced to about 5-10 per year.

c. Cooperative Education Programs

A trend is emerging toward a more cooperative approach to management education. Both costs and standards will force more cooperative development of executive education [Ref. 81: p. 107]. The DoD has more than 50 executives, the Federal Administration as a whole, more than 300. The cantons have similar problems. The turnover may require more than 50 public executives per year.

The U.S., for example, has a Federal Executive Institute [Ref. 100] that has received new significance since the 1978 "Civil Service Reform Act" [Ref. 42], which provides that the U.S. Federal Government must conduct executive development programs [Ref. 32]. A critical evaluation of the experiences with this Institute is presented by Murphy [Ref. 92].

Large corporations have their own training centers (e.g., Audi-Volkswagen); smaller ones may form a consortium (e.g., IKK, St. Gallen).

d. Field Studies

Field studies provide a means of developing sound management concepts (M5, 3ab): A committee of our parliament members once in a while investigates "a case," analyzing why things went wrong. It might be possible to prevent some of these "cases."

A "class" of future executives under the direction of competent consultants and the close supervision of top management might investigate complex projects before they attract public interest. This "in-depth analysis" of real world problems could provide learning experience and precious insights and feedbacks.

This method is touchy. It requires a policy decision on how "old" the cases have to be and what the competences of the investigators have to be.

e. Management Schools

IMEDE in Lausanne, for example, offers an MBA Degree Program (12 months), a program for executive development (4 months) and a seminar for senior executives (3 weeks).

The executive development program uses the case study method in an international environment covering subjects of management control, organizational behavior, quantitative analysis, financial management, production and operation management, and business policy.

2. Matching Objectives and Methods

The analysis of the questionnaire responses suggested several objectives for executive education:

(a) To stretch and prepare the individual: This may be achieved by assigning new responsibilities (including community responsibility) and by going through a tough educational program, if possible in the environment of a foreign culture. In addition, this may help to maintain and improve mental ability (IV.A.3).

To enhance the ability to recognize present and future relationships in the social, political, economic, and technological environment and its bearing on the actions and duties of a DoD executive.

(b) This includes a basic understanding of the theories and trends of these subjects, combined with analytic methods and insight into governmental and parliamental activities. Readings, courses and seminars are appropriate educational methods.

(c) To adapt the leader behavior to the civilian environment and the decision-making ability to the organization's and to the political point of view.

Leadership skill requires participative training. "It cannot be learned by reading about it...and it may be difficult to effect really significant behavioral change in the classroom" [Ref. 91: p. 190]. Past experience in the area of leadership training illustrates that the contents of leadership training courses are oriented toward leadership technology instead of being personality oriented [Ref. 14].

Decision-making under conditions of certainty, risk, or even uncertainty, may be taught in a classroom. The techniques of management science are helpful here. But executives face more than that: decision-making in ambigious situations. "Very little information is given to the manager faced with a strategic issue and almost none of that is structured" [Ref. 91: p. 191].

Leadership and decision-making may be introduced in classroom situations, games or simulations, but have to be learned mainly on-the-job with coaching support (including community responsibilities).

(d) To enhance the ability to recognize and structure relevant problems, to foster innovative behavior, and to balance stability and change.

This includes policy analysis combined with the theory of organizations, insight into human behavior, knowledge of technological trends and mastery of management tools.

The basic training may be best acquired in schools and courses and then updated in periodic seminars. But a change in behavior will be mainly achieved through positive on-the-job coaching, by rewarding and reinforcing risk-taking and innovation, and by placing a high value on creativity.

3. Proposed Methods for Improvement

Methods useful in achieving these objectives may be:

(a) An improvement of on-the-job training through systematic DoD-wide career planning and through improved coaching at the executive level. This method is useful for adapting leader behavior to the civilian environment and the decision-making process to the organizational and political point of view, and for fostering innovative behavior.

To demand a record of successful management of a DoD section as a prerequisite for a high command or executive position, would provide the incentive for this kind of training.

(b) An improvement of off-the-job training by lengthening Military School III (or by introducing a Military School IV), or through "federal-wide" participation in a cooperative executive program.

This method is useful in providing knowledge relevant to the environment and in analyzing relationships. It is also useful for introducing subjects which later must be coached on the job.

The successful completion of this kind of training should be a prerequisite for executive jobs.

(c) Introduction of field studies as a means of developing sound management concepts, by bringing the future executive into personal contact with complex organizational life. Investigation of real and complex problems, before they attract public interest, under the direction of competent consultants and close supervision of top management. Such investigations could be useful controls and excellent learning experiences at the same time.

(d) The continuing education of executives should be extended and developed into an innovation-seeking process under close supervision of top management or federal councils.

(e) The tradition of sending candidates abroad to military academies or management schools should be maintained. It is an excellent means of stretching and preparing the individual. In addition, it helps to maintain and improve mental ability as well as professional competence.

4. Implementation of Improvements

The objectives and methods for improvement represent a first proposal, based on a modest survey, a literature review and personal experiences.

The problems cannot be resolved quickly. They must be attacked repeatedly through marginal adjustments, continuing exploration, redefinition of means and ends and reappraisal of accomplishments.

E. RECOMMENDATIONS

(1) The need for an improved executive development program should be investigated in more depth by a study group at the DoD level.

(2) The coaching practices of DoD executives should be investigated.

(3) Given the need, the commitment toward and feasibility of a first improvement step should be defined.

APPENDIX A

Addressees

	Total	Private Sector (all)	Public Sector (CH)	USA	Switzerland (CH)	Non-Officers (CH)	Officers (CH)	Militia-Officers	Instructors (CH)	Instructors (CH)	Non-Instructors (all)
Executive	16	7	9	2	14	1	13	6	7	7	9
Upper Management	11	5	6	1	10	1	9	4	5	5	6
Total	27	12	15	3	24	2	22	10	12	12	15

Questionnaires Mailed:	33	(100%)
Answers Received:	27	(82%)
Excuses Received:	4	(12%)
No Response:	2	(6%)

Addressees

U.S. Executives

Code

E1	Vice-President of engineering and materials for the research and engineering operations of a large group (supervising 250 scientific and support personnel)
E2	President of a profit center of a large corporation (explosive ordnance research, engineering and manufacturing facility) (400 people)

U.S. Upper Management

M1	Marketing-Sales Manager in a profit center of a large corporation (engineering, manufacturing, sales)

Swiss Executives

Private Sectors:

Code	Attribute	
E3	Of.	Chairman of a multinational corporation with more than 100,000 employees (machines)
E4	Prof. Cap.	President of a large bank and Professor (1200 employees)
E5	Sdt.	Vice-President (profit center) of a large corporation (machines)
E6	Col.* [1]	Vice-President (personnel) of a multinational corporation (machines)
E7	Col. [2]	President of a brewery (120 employees)

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[1] Col.* - Colonel, member of General Staff

[2] Col. - Colonel

Public Sector (Non-Military)

Code	Attribute	
E10	Col.*	President of a federal agency
E11	Of.	President of a federal agency

(E10 and E11 are reporting to a member of the Federal Council.)

Military Sector (DoD) (Former Instructors)

E12	***	Three-star-general, reporting to the Secretary of Defense, former instructor
E13	**	Two-star-general, heading a large DoD office, former instructor
E14	**	Two-star-general, heading a large DoD office, former instructor
E15	*	President of a DoD agency, former instructor, Br. Gen.
E16	*	President of a large DoD agency, former instructor, Br. Gen.
E17	*	Former President of the (E16) DoD agency, now retired, Br. Gen.
E18	Col.	Vice-President of a large DoD agency, former instructor

Swiss Upper Management

Private Sector

M2	Four	Director in a large bank
M3	Col.*	Director in multinational corporation with more than 80,000 employees (chemical industry)
M4	Of.	Personnel Director in a corporation (machines)
M5	Lt.Col.*	Professor, Director of an institute of a university

Public Sector (Non-Military)

M6	Col.*	Vice-President of a federal agency

Military Sector (DoD)

Code	Attribute	
M7	Col.*	Director of a DoD section, instructor, former commander of a military school (planning)
M8	Col.*	Commander of a military school, former director of a DoD section (planning)
M9	Col.	Director of a DoD section, instructor, former commander of a military school (personnel)
M10	Col.*	Director of a DoD section, instructor, former commander of a military school (technology)
M11	Lt.Col.*	Project Manager in a DoD section, instructor

APPENDIX B

Analysis of Question 1a-c

Question 1:

Of the management functions which you generally carry out yourself, which one(s) do you consider:

a) the most important?

b) the most difficult?

c) the most time-consuming?

Cumulative

Absolute Figures

Decisional Roles:	Cumulative a+b+c	Executives a+b+c	Managers a+b+c	Private a+b+c	Public a+b+c	Non-Instructor Executives	Instructor Executives
Recognize problems	12	5	7	8	4	5	-
Strategic planning	9	5	3	4	5	2	3
Implement change	4	3	1	2	2	1	2
Setting objectives	7	5	2	3	4	3	2
Delegate responsibilities	1	1	-	-	1	1	-
Allocate missions, coordinate	11	8	3	3	8	2	6
Approve decisions	4	2	2	3	1	1	1
Allocate resources	4	1	3	-	4	-	1
Control	9	8	1	4	5	4	4
Correct actions	5	2	3	2	3	1	-
Negotiate resources	7	4	3	-	7	-	4
Interpersonal Roles:							
Represent the organization	1	1	-	-	1	1	-
Maintain lateral contacts	3	2	1	1	2	1	1
Leadership	24	15	9	10	14	8	7
Hire, fire, transfer, promote	12	12	-	6	6	7	5
Performance appraisal	5	5	-	2	3	2	3
Personnel development	9	9	-	3	6	3	6
Informational Roles:							
Process information	7	3	4	4	3	2	1
Inform subordinates	7	4	3	2	5	1	3
Inform outsiders	1	1	-	-	1	-	1
Serve outside as expert	1	1	-	-	1	1	-

Analysis of Questionnaire - Responses (Question 1a)
<u>Management functions considered to be most important</u>

<u>Decisional Roles</u>:

Recognize problems	E6 E7 M1
Strategic planning	E12 E13 E17 M1 M9
Implement change	E14 E17 M1
Setting objectives	E5 E6 E7 E12 E14 M11
Delegate responsibilities	E11
Allocate missions, coordinate	E5 E12 E13 E16 M2 M6
Approve decisions	E4 E12 M4 M5
Allocate resources	M8 M10
Control	E5 E11 E12 E13 M4
Correct actions	E11 M4
Negotiate resources	E17 M8 M10

<u>Interpersonal Roles</u>:

Represent the organization	
Maintain lateral contacts	M4
Leadership	E7 E10 E11 E14 E15 E18 M3 M6 M11
Hire, fire, transfer, promote	E1 E3 E15
Performance appraisal	
Personnel development	E3 E12 E17

<u>Informational Roles</u>:

Process information	E12 M5
Inform subordinates	E12
Inform outsiders	
Serve outside as expert	

Analysis of Questionnaire - Responses (Question 1b)
<u>Management functions considered to be most difficult</u>

Decisional Roles:	
Recognize problems	E5 E6 M4 M6 M9
Strategic planning	E5 E6
Implement change	E1
Setting objectives	M9
Delegate responsibilities	
Allocate missions, coordinate	E7 E14 E17 M8
Approve decisions	
Allocate resources	E16 M8
Control	E13 E17
Correct actions	M7 M10
Negotiate resources	E12 E16 M7
Interpersonal Roles:	
Represent the organization	
Maintain lateral contacts	
Leadership	E7 E10 E11 E14 E15 E17 M1 M2 M5 M10
Hire, fire, transfer, promote	E2 E3 E4 E11 E15
Performance appraisal	E2 E4 E18
Personnel development	E3 E12 E18
Informational Roles:	
Process information	
Inform subordinates	M2
Inform outsiders	
Serve outside as expert	

Analysis of Questionnaire - Responses (Question 1c)
<u>Management functions considered to be most time-consuming</u>

<u>Decisional Roles</u>:	
Recognize problems	E4 M3 M9 M10
Strategic planning	M2 M6
Implement change	
Setting objectives	
Delegate responsibilities	
Allocate missions, coordinate	E13
Approve decisions	
Allocate resources	
Control	E5 E7
Correct actions	E7
Negotiate resources	E12
<u>Interpersonal Roles</u>:	
Represent the organization	E11
Maintain lateral contacts	E11 E17
Leadership	E6 E7 E15 M1 M5
Hire, fire, transfer, promote	E3 E15 E16 E18
Performance appraisal	E16 E18
Personnel development	E3 E12 E18
<u>Informational Roles</u>:	
Process information	E1 E4 E5 M3 M7 M8
Inform subordinates	E2 E10 E14 E17 M1 M11
Inform outsiders	E2 E17
Serve outside as expert	E2 E11

Questionnaire - Responses (condensed answers)

Questions la-c

Question 1:

Of the management functions which you generally carry out yourself, which one(s) do you consider:

a) the most important?

b) the most difficult?

c) the most time-consuming?

Questionnaire - Responses (Questions la-c)

Executives:

E1 a. Hiring, firing, transferring or key personnel.

b. Accomplishing significant change.

c. Managing a large variety of paperwork.

E2 a. Guidance of the company to achieve its goal.

b. Evaluating subordinates and handling disciplinary problems.

c. Meetings with various groups.

E3 a.) b.) c.) The timely selection and preparation of top management.

E4 a. Decision-making.

b. Find solutions on touchy problems related to personnel.

c. The analysis of information required to make decisions.

E5 a. Setting goals.

b. To find the right entrepreneurial strategy, based on the environment and directed toward future prosperity.

c. Administrative functions, including control.

E6 a. To set and put through relevant goals.

b. To base the strategic planning on a realistic assessment of the future.

c. To harmonize diverging opinions.

E7 a. To perceive the problems, to set goals, to motivate subordinates.

b. To maintain creativity despite the daily routine, to keep personal relations with subordinates despite a shortage in time. To balance the diverging interests of the subdivisions.

c. To measure the performance against standards and goals. To adjust differences in a participative way.

E10 a. Leadership.

b. Continuous motivation of subordinates.

c. Internal information.

E11 a. Delegate competences and simultaneously maintain control to achieve the agency's goals and to follow the stated policy. To control without reducing the initiative of subordinates.

b. Hiring and transferring of personnel (personnel ceiling). Psychological problems of the personnel.

c. 30% Management of the agency.

20% Political functions (other departments, parliament, world organizations).
20% Represent the government in functional commissions.
10% Functional work.
10% Conference speaker, lecturer.
10% Miscellaneous.

E12 a. Foresight (planning), setting objectives. Personnel management (planning of successions, education). Decision-making (analyze the problems, evaluate alternatives). Information (selection and quality of information). Coordination and evaluation of the management processes.

b. Personnel management (constraints, unforeseen changes).

c. Problems related to personnel (quantity and quality), problems in obtaining scarce resources.

E13 a. To plan, coordinate and control.

b. Control.

c. Coordination.

E14 a. To set objectives and to implement them. Maintain a high level of motivation of the subordinates.

b. To realize an active cooperation of subordinates in complex projects (leadership and coordination).

c. Maintain a high level of information among the subordinates.

E15 a.), b.), c.) To plan, select and head the personnel. To inspire cooperation.

E16 a. To coordinate the subdivisions.

b. Optimal utilization of scarce resources (finance). To obtain credits from parliament.

c. Personnel problems.

E17 a. Decisions related to the future development of the agency, especially with regard to technological changes, the availability of funds, the required investments and the supply with key personnel.

b. Leadership: (motivation, coordination, to succeed with the policy and to achieve objectives, to control).

c. Information, meetings, contacts with the environment.

E18 a. To promote a cooperative leadership style on all hierarchical levels.
To maintain a personal contact with all hierarchical levels and to influence the personal relations between the hierarchical levels.

b. Leadership in the areas of performance appraisal, job description and personnel development.
To implement change: to adjust the organization to technological changes.

c. Problems related to personnel.

Upper-Level Managers:

M1 a. Delineating the issues, establishing priorities and gaining action on a timely basis.

b. Getting subordinates to do likewise.

c. Communicating (listening, getting people to clearly understand).

M2 a. Direction.

b. Leadership.

c. Planning.

M3 a. Leadership, motivation of subordinates.

b. Keep subordinates informed, enhance their initiative.

c. Analyze problems in order to be prepared for meetings and discussions.

M4 a. Implement the corporate policy, making key decisions; maintain external relations.

b. Interpret social and political change.
Maintain the subordinate's focus on the objectives.

c. -

M5 a. Willingness to decide, swiftness in acquiring and analyzing information.

b. To deal with small-minded and touchy superiors and subordinates. Motivation of subordinates who are unwilling to perform well.

c. To deal with small-minded and touchy superiors and subordinates.

M6 a. Leadership.

b. Consideration of political necessities.

c. Planning.

M7 a. Leadership, coordination.

b. Enforce deadlines.
To succeed in having the superiors make timely and unequivocal decisions.

c. Study of documents.

M8 a. Provide the prerequisites for the successful work of the subordinates.
Representation of interests of the subordinates.

b. To find in the middle of a large bureaucracy neat and clear prerequisites for the subordinates.

c. Current administrative tasks which cannot be delegated due to personnel shortage (personnel ceiling).

M9 a. Long-range planning.

b. Analyze the problems and find creative and adequate solutions.

c. Analog b.

M10 a. Provide the prerequisites (funds, personnel, material) to enable an optimal working process in the section.

b. Leadership.

c. To analyze development trends in the environment, evaluate new technologies.

M11 a. Setting objectives and implementing them. Maintain a high level of motivation to work.

b. To enforce work capacity in a timely manner from line managers.

c. To inform subordinates.

APPENDIX C

Analysis of Question 2a-c

Question 2:

In the selection of co-workers:

a. What qualities do you consider most important?

b. How highly go you rate professional competence?

c. How highly do you rate personal or behavioral qualities?

Analysis of Question 2a

	Total	Executives	Managers	Private	Public	Non-Instructor Executives	Instructor Executives
Self-confidence	1	-	1	1	-	1	-
Personality	4	3	1	1	3	1	2
Integrity, Honesty, Frankness	13	8	5	9	4	5	3
Open-minded	2	1	1	-	2	1	1
Ability to accept criticism	1	1	-	1	-	1	-
Loyalty	9	7	2	2	7	3	9
Dependability, Reliability	6	4	2	3	3	3	3
Emotional balance	2	1	1	2	-	1	-
Willpower, willing to decide	6	5	1	4	2	4	2
Perseverance	2	2	-	2	-	2	-
Leadership, ability to deal with people	4	3	1	1	3	1	2
Growth potential and willingness	3	2	1	2	1	2	1
Initiative	4	3	1	1	3	-	3
Stress resistant	2	2	-	1	1	2	-
Flexibility	3	2	1	1	2	1	1
Creativity	6	5	1	1	5	2	4
Ability to integrate, to teamwork	10	7	3	5	5	3	4
Willingness to accept responsibility	3	2	1	1	2	1	1
Independence	4	3	1	-	4	-	3
Objectivity	1	-	1	1	-	1	-
Intelligence	6	4	2	2	4	3	3
Ability to focus on vital points	5	4	1	1	4	2	3
Professional competence	8	5	3	5	3	6	2
Efficiency	3	2	1	-	3	-	3
Good basic education	2	2	-	1	1	1	1

Analysis of Question 2a

Self-confidence	M1
Personality	E5 E12 E16 M8
Integrity, Honesty, Frankness	E1 E2 E3 E4 E5 E15 E17 M1 M2 M3 M5 M11
Open-minded	E17 M6
Ability to accept criticism	E1
Loyalty	E6 E7 E10 E12 E13 E14 E17 M8 M11
Dependability, Reliability	E2 E5 E13 E14 M5 M11
Emotional balance	E1 M1
Willpower, willing to decide	E1 E3 E6 E15 E17 M3
Perseverance	E5 E7
Leadership, ability to deal with people	E11 E16 E17 M9
Growth potential and willingness	E15 M1 M5
Initiative	E13 E17 E18 M1
Stress resistant	E7 E10
Flexibility	E5 E12 M6
Creativity	E5 E10 E12 E13 E18 M10
Ability to integrate, to teamwork	E3 E5 E7 E13 E15 E16 E18 M2 M4 M10
Willingness to accept responsibility	E7 E15 M6
Independence	E12 E13 E15 M10
Objectivity	M3
Intelligence	E1 E10 E14 E16 M1 M11
Ability to focus on vital points	E3 E10 E12 E16 M7
Professional competence	E1 E2 E6 E11 E15 M1 M5 M8
Efficiency	E14 E15 M11
Good basic education	E7 E12

Analysis of Question 2b and c

	Total	Executives	Managers	Private	Public	Non-Instructor Executives	Instructor Executives
Equal importance	3	-	3	-	3	1	2
Personal qualities before competence	16	12	4	6	10	6	6
Competence before personal qualities	2	1	1	2	-	2	-
Continuum*	6	3	3	4	2	4	2

*Depends on function; personality is more important in line and more important in higher positions.

Analysis of Question 2b and c

Equal importance	M6 M7 M8
Personal qualities before competence	E1 E4 E5 E7 E10 E11 E12 E13 E14 E15 E16 E18 M2 M5 M9 M11
Competence before personal qualities	E2 M1
Continuum*	E3 E6 E17 M3 M4 M10

*Depends on function; personality is more important in line and more important in higher positions.

Questionnaire Responses (Condensed Answers)

Questions 2 a-c

Question 2:

In the selection of co-workers:

a. What qualities do you consider most important?

b. How highly do you rate professional competence?

c. How highly do you rate personal or behavioral qualities?

Questionnaire Responses (Questions 2 a-c)

Executives

E1

a. Integrity, willingness to try, professional knowledge and ability, ability to accept criticism positively and initiate needed change, intelligence, and emotional balance and freedom from neuroses and psychoses.

b. Absolutely essential; in some cases this can be acquired after hiring.

c. Rate integrity before competence.

E2

a. Ability, reliability and honesty.

b. Professional competence 90%.

c. Personal qualities 70%.

E3

a. Integrity, willingness to make decisions, the intellectual capacity to recognize and to weigh interrelationships and relevant factors. The ability to function in a team.

b,c. Depends on the hierarchical level. A continuum with greatest emphasis on character traits for top positions.

E4

a. Integrity

b. Is important, may be adjusted later.

c. Very important, especially for leaders.

E5

a. Character, perseverance, reliability, ability to cooperate, flexibility and creativity.

b. Professional competence is important. Its actual importance depends on the hierarchical level.

c. Top priority.

E6

a. Professional competence, ability to get things done, loyalty.

b,c. Personal and behavioral qualities are more important in higher management positions.

E7

a. Good basic education, willingness to accept corporate objectives and policy, ability to function in a team, willingness to accept responsibility, perseverance, ability to cope with stress.

b,c. Personal and behavioral qualities are more important. Professional competence can be adjusted, given a good level of intelligence. The higher the position, the more general the skills required. A successful superior has to be a specialist in human relations.

E10

a. Perceptiveness, creativity, loyalty, ability to grasp essentials and recognize potential, ability to cope with stress.

b. Professional competence can be learned, is transitory, and must be adjusted from time to time.

c. Is very important, difficult to change.

E11

a. Professional competence, leadership and personality.

b. It depends on the position. The higher the position, the more important leadership becomes.

c. Is the most important criterion. Professional competence and leadership can be learned, but not personality or character.

E12

a. Character: personality, loyalty, independence. Intellect: flexibility, ability to recognize essentials, good education and creativity.

b. Professional competence can be learned and so is not of prime importance.

c. Personal and behavioral qualities (including leadership behavior) are essential for management positions.

E13

a. Initiative, independence, creativity, reliability, loyalty.

b. Ranks second but is nonetheless important: specialized on lower levels, general knowledge on higher levels.

c. Ranks first. Most important is a cooperative spirit and a positive but critical attitude.

E14

a. Efficiency, Intelligence, reliability, frankness, loyalty.

b. Second priority. Professional competence can be learned if one is intelligent and willing.

c. First priority. See point a.

E15

a. Character: frankness, straightforwardness, ability to fit in, loyalty. Sense of personal and professional responsibility, including a good work attitude, independence, the ability to get things done, professional competence, willingness and ability to develop personal potential.

b. Is important but not overriding, given the opportunity to develop such competence on the job.

c. Are of prime importance. We have enough technocrats. What we need are leaders.

E16

a. Personality, leadership qualities, superior intelligence, ability to think abstractly, team spirit.

b. Professional competence should be higher than that of immediate subordinates.

c. Top priority.

E17

a. Frankness, uprightness, openmindedness, loyalty, willpower, initiative. Executives on all levels should also have a natural talent for leadership, charisma, and the ability to accomplish tasks.

b. Professional competence is essential. Its priority depends on the position. It is high for technical workers and less important for superiors, who must be at least competent enough to grasp interrelationships and recognize their implications with regard to decisions that must be made.

c. Top priority for executives on all levels.

E18

a. Initiative, creativity and the willingness to cooperate.

b. Depends on the job description. Does not have first priority; can be adjusted.

c. First priority.

Upper-Level Managers

M1

a. Proven expertise: skill, professionalism, ambition, maturity, self-motivation, aggressiveness, self-confidence, initiative, attitude, intelligence, integrity, growth potential.

b. Top priority.

c. Upper-level management gets things done through people. They must set an example to follow, therefore. Behavioral qualities must be rated almost as highly as professional competence.

M2

a. Integrity, ability to work in a team.

b. Ranks second.

c. Ranks first.

M3

a. Integrity, objectivity, determination.

b,c. Depending on the nature of the job, the first priority may be professional competence (staff services) or may relate to personal qualities (line service). Both are relevant.

M4

a. Ability to cooperate.

b. Depends on the function. Is more important for specialists.

c. Is of great importance.

M5

a. Integrity, reliability, professional competence, learning ability.

b. Fundamental reauirement on all levels.

c. Integrity ranks first.

M6

a. Open-mindedness, sense of responsibility, frankness.

b,c. Are of equal importance.

M7

a. Ability to analyze problems and recognize relationships.

b,c. Are of equal importance.

M8

a. Professional competence, strength of character, loyalty.

b. Very important. Every worker must know his own job, and each job requires different knowledge and ability.

c. A leader cannot behave as a technocrat. It is important to establish good human relations.

M9

a. The necessary qualities depend very much on the position. The ability to deal with people is essential.

b,c. Interpersonal leadership qualities are of prime importance in instructor-officers.

M10

a Independence, creativity, team spirit, ability to fit in.

b. Professional competence is essential in order to do the job. If younger applicants do not yet have this competence, I judge their development potential based on their education and natural abilities.

c. I rank this above professional competence, because character traits are difficult to modify. They are of prime importance in higher-level positions.

M11

a. Frankness, loyalty, intelligence, efficiency, reliability.

b. Is important. It can be acquired, given the willingness and intelligence.

c. Top priority.

APPENDIX D

Analysis of Question 3a-c

Question 3:

a. What goals do you feel are essential for management training?

b. What should such training include?

c. What forms of training (formal, on-the-job, etc.) do you consider efficient?

Analysis of Question 3a

	Total	Executives	Managers	Private	Public	Non-Instructor Executive	Instructor Executive
To be knowledgeable of the latest technology changes. To acquire an updated professional competence.	6	2	4	4	2	1	1
To recognize present and future relationships in the social, political, economic and technological environment.	7	6	1	5	2	4	2
To enhance the ability to recognize and to structure relevent problems and alternative courses of action.	7	4	3	2	5	2	2
To develop a cooperative management style, integrating economic, functional, human and social factors.	2	2	-	1	1	1	1
To acquire a superior leadership behavior with broad, integrative general knowledge.	16	9	7	6	10	4	5
To be able to analyze and evaluate the structure and processes of relevant organizations.	3	2	1	1	2	2	0
To acquire a high level of cultural education.	2	1	1	2	0	2	0

Analysis of Question 3a

"What goals do you feel are essential for management training?

To be knowledgeable of the latest technology changes. To acquire an updated professional competence.	E2 E14 M1 M2 M5 M6
To recognize present and future relationships in the social, political, economic and technological environment.	E3 E4 E5 E7 E13 E15 M5
To enhance the ability to recognize and to structure relevant problems and alternative courses of action.	E3 E6 E12 E13 M7 M8 M9
To develop a cooperative management style, integrating economic, functional, human and social factors.	E7 E17
To acquire a superior leadership behavior with broad, integrative general knowledge.	E1 E4 E10 E11 E12 E14 E15 E16 E18 M2 M3 M4 M5 M6 M10 M11
To be able to analyze and evaluate the structure and processes of relevant organizations.	E4 E11 M10
To acquire a high level of cultural education.	E4 M5

Analysis of Question 3b

	Total	Executives	Managers	Private	Public	Non-Instructor Executive	Instructor Executive
Leadership and human relations, including motivation, psychology of work, group processes, communication, conflict management.	16	10	6	4	12	4	6
Personnel management, including the planning, education and appraisal of the new generation of managers.	3	3	0	0	3	0	3
Management of organizations, including micro-economics, management models, structure and processes of organizations, strategic planning and control, finances, managing change and technology application.	16	10	6	9	7	5	5
Management tools and techniques, including policy analysis, decision-making techniques, planning techniques, management information systems, time management, statistics, accounting.	13	8	5	4	9	4	4
Environment, including an understanding of economic, social, political, ecological and technological facts, relationships and trends.	9	6	3	5	4	3	3
General knowledge, including:							
- law, civics and government	4	3	1	2	2	2	1
- general science	1	1	0	0	1	0	1
- cultural education	2	1	1	2	0	2	0

Analysis of Question 3b

"What should management training include?"

(*See Analysis of Question 4b)

Leadership and human relations, including motivation, psychology of work, group processes, communication, conflict management.	E1 E4 E10 E11 E12 E13* E15 E16 E17* E18* M1 M4 M6 M8 M9 M10
Personnel management, including the planning, education and appraisal of the new generation of managers.	E13 E16 E18*
Management of organizations, including micro-economics, management models, structure and processes of organizations, strategic planning and control, finances, managing change and technology application.	E1 E3 E4 E5 E7* E13* E14* E16 E17* E18* M1 M2 M3 M5 M10 M11
Management tools and techniques, including policy analysis, decision-making techniques, planning techniques, management information systems, time management, statistics, accounting.	E6 E7* E10 E11 E12 E13* E14* E16 M1 M2 M7* M8* M11*
Environment, including an understanding of economic, social, political, ecological and technological facts, relationships and trends.	E2 E3 E4 E13* E14* E17* M1 M5 M11*
General knowledge, including:	
- law, civics and government	E1 E11 E14* M1
- general science	E18*
- cultural education	E4 M5

Analysis of Question 3c

"What forms of training do you consider efficient?"

A.	Formal, including case studies	E1 E2 M2 M7
B.	On-the-job training	E4 E10 M1 M6
C.	Job rotation	E13
D.	Combination of A and (B or C)	E3 E5 E6 E7 E11 E12 E14 E15 E16 E17 E18 M3 M4 M5 M8 M9 M10 M11

There is a significant preference for a comprehensive education: formal education initially supplemented by on-the-job training (if possible with job rotation) and periodic formal seminars to maintain and update skills and knowledge.

Questionnaire Responses (Condensed Answers)

Question 3 a-c

Question 3:

a. What goals do you feel are essential for management training?

b. What should such training include?

c. What forms of training (formal, on-the-job, etc.) to you consider efficient?

Questionnaire Responses (Questions 3 a-c)

Executives

E1

a. Essential goal: stretching and preparing the individual.

b. Training should include:

Human relations (group processes, communication, organizational effectiveness, psychology of work, etc.).

Organization and management (strategic planning, control systems, types of organization, finances and investment).

Specialized subjects tailored to fill individual needs such as contract law, R/D management, etc.

c. Any and all forms of training can be efficient. I prefer formal for most purposes and find case studies to be a useful vehicle.

E2

a. That all upper level management be knowledgeable of all the latest technology changes that occur in the industry.

b. Attending seminars for specialty subjects.

c. Specialty seminars conducted by American Management Associates and like groups. Small companies have to conduct their own in-house training for most management-type personnel.

E3

a,b. Cultivation of the ability to perceive relationships, not just on the corporate level, but especially on the social, political and economic level, as such relationships can have important bearing on the actions and duties of executives in all positions, both presently and in the future. An understanding of the long-range corporate goals and the promotion of a cooperative spirit are essential parts of management training.

c. Given a large enough corporate scale, I feel it is probably helpful, though by no means sufficient, to send future executives to management schools. However, this necessary and important outside schooling must be supplemented by internal training under the close supervision of top management. I feel that management should take an active role in such training, and that trainees should participate in group projects where key issues are analyzed.

E4

a. Sound, deliberate management practice; appreciation for economic relationships and their impact on the organization (environmental influences); independent assessment of the most effective organizational forms; high degree of cultural education with regard to the social position of management personnel.

b. Leadership fundamentals, macro- and micro-economics, organizational science, cultural training.

c. On-the-job training is of prime importance for advanced technical training, while formal training is supplemental in character.

E5

a. Provide a general understanding of the interrelationships in the economic, ecological, social and technological environment of an organization.

b. The micro-economics of the organization (personnel, financing, marketing), technological training, and macro-economics (growth, market cycles, etc.).

c. Alternatively: education, training, and advanced training. Education should be formal, training should be on-the-job.

E6

a,b. Promotion of the ability to recognize and deal with relevant problems and prospects, and the utilization of the tools of management.

c. Fundamentals can be taught formally; their application is learned on the job.

E7

a. Cooperative leadership style, ability to deal with future problems, willingness to make decisions.

b. Goal-setting, planning, control, conflict management, problem analysis, decision-making techniques, creativity.

c. Internal training: Group projects, case studies, seminars, job rotation. External training: Group seminars for general organizational and environmental instruction.

E10

a. Develop management skills.

b. Leadership training in the broadest sense.

c. At present, workloads are so heavy, and the hiring ceiling so limiting, that it is difficult to find time for manager training. On-the-job training is of prime importance, therefore.

E11

a. Executives of the public sector must be knowledgeable about the administration and working methods of Parliament. They must possess leadership qualities and be well versed in organizational science.

In my opinion the Federal Government is doing far too little in the way of preparing managers for these complex tasks and instilling a uniform leadership concept.

b. Leadership, delegation of authority, decision-making technique, communication, group dynamics, self-organization (working technique); ability to recognize problems and their implications.

c. A combination. Formal education stressing themes and skills, combined with on-the-job training. I would recommend brief, periodic refresher courses to provide a means of familiarizing managers with the latest management discoveries and insights. Again, the Federal Government is not doing enough in this regard. There is already good groundwork for such courses, but available capacities are much too small.

E12

a. Strengthening of leadership qualities (patterns of behavior), promotion of leadership on an interpersonal scale, mastery of leadership technique (decision-making, leadership functions, methods of control, etc.). Ability is more important than abstract knowledge.

b. Leadership, both under normal circumstances and in conditions of crisis.

c. Management training should involve a minimum of theory (fundamentals, motivation) and a maximum of practical application, both on the job and in practical management schools (employing model cases).

E13

a. Situation analysis, fostering of creative behavior and innovative thinking; perception of relationships and ability to see situations in their entirety; cultivation of sound personal work habits, including the ability to set aside time for reflection and forethought.

b. Reality and relationships of power politics; status and outlooks in a sociological, technological and economic sense; organizational theory and leadership (including the planning of worker training); potentials and limits of electronic data processing in the organization.

c. Long-term on-the-job training and job rotation are of prime importance. Formal training is useful to a limited degree.

E14

a. Practical aspects of command, supervision and correction (in both the military and civilian sectors); goal-oriented technical training, to the extent that technical skills are needed in the management job.

b. Economics, financial management, organizational theory, statistics, law, information processing, business administration, and perhaps psychology.

c. Formal basic education, followed by further training on-the-job; training should be on a continual basis and may include job rotation, which unfortunately is little practiced in the Federal Government.

E15

a. Leadership, management technique, environmental awareness.

b. Psychology, discourse, management technique.

c. Formal education must be supplemented by training on the job. The Swiss system, in which technical training is given in the civilian sector and management training in the military sector (including general staff training), appears to be efficient.

E16

a. Cultivation of broad, practical skills and leadership.

b. Leadership, dealing with subordinates, working technique, organizational theory.

c. Combination of theory and practice.

E17

a. Lay groundwork for successful performance of management tasks in both economic and personal terms. Balance cost-benefit approach with equal appreciation for interpersonal and social factors.

b. Recognition of comprehensive interrelationships; management fundamentals and qualities; policy, objectives and their implementation; value of the human factor and social aspects in the context of modern management.

c. Formal basic education, including active group studies, followed by on-the-job training.

E18

a. Cultivation of leaders who demonstrate their credibility by example in terms of personal integrity and competence, thereby earning the trust of their subordinates.

b. Management principles and behavior; micro-economics and business administration; management models in general, personnel management in particular; general science.

c. Formal education in areas not yet mastered, followed by training on the job.

Upper-Level Managers

M1

a. To provide growth in the individual, thus assuring greater competence in the performance of his job to the benefit of the company.

b. Exposure to new technological changes as they affect his area of interest. Time-saving techniques. Re-education on the basics of his function to re-emphasize and renew his knowledge; to change any poor habits that may have unconsciously developed. Analysis of problem and evaluation of alternatives. Techniques in building people (creating motivation). Team development techniques. Communication and control techniques. Time management techniques. Update on new laws affecting the company's operation or hiring and employment practices. Development of a basic working knowledge of other departments and functions within the company. Clarification of his management role and responsibilities.

c. Depending on the individual and his position or function, such training could be either formal or informal. More often, training is informally done on the job due to other demands on the individual's time. Staff meetings held on a regular scheduled basis are ideal for providing group training.

M2

a. Promotion of leadership, personality development; technical training.

b. Decision-making techniques, organizational theory, etc.

c. Outside courses involving work on case studies and including both group and individual projects.

M3

a. Preparation of future managers.

b. The most important new discoveries in the management field.

c. A combination of on-the-job training and seminars, with company managers serving as instructors.

M4

a,b. Interpersonal communication, management techniques.

c. Formal instruction with case studies taken from the company in question, alternating with informal training on the job.

M5

a,b. For top-level management, management training is principally for the benefit of the organization, serving as a means of developing sound management concepts and techniques. In this way management training becomes a developing, innovation-seeking process, rather than a vehicle for teaching "tried-and-true" formulas.

Lower-level management is more in need of an application-oriented training to deal with everyday problems. This training should keep pace with management experience and insight so that it will remain relevant in the long term.

Professional training is important in view of rapid changes. It should be both general and specialized and must keep pace with technical developments.

Promotion of general economic and social awareness to provide the necessary insight into politico-economic relationships for making differentiated judgments of processes in our society.

Personality training (including a cultural education) aims at overcoming feelings of helplessness, despair and irrational fears while teaching better ways to occupy one's free time. These courses should be voluntary and conducted outside working hours.

c. Training should serve to promote the development and transformation of the organization as a whole. Thus, the training policy (in its fundamentals) must be a component of the organizational policy.

Management education should not be autonomously structured. It should be viewed within the context of the integrated planning and management system of the company. It is the task of company management to establish the uniform frame of reference.

Training measures must be geared toward the company policy on the one hand, and on the other must be carefully coordinated in terms of the sequence of the material presented and the selection of the coworkers to be trained.

M6

a,b. Leadership and management processes.

c. Formal education is important only as an accompaniment to on-the-job training.

M7

a. Problem analysis and control techniques.

b. Goal-setting, delegation of authority, working technique.

c. Case examples.

M8

a. Managers must be able to utilize personnel to the best effect, motivate them, set clear goals and make clear long-term plans.

b. Goal-setting, development of conversational and lecturing skills, planning techniques, management techniques.

c. Combination of formal and on-the-job training. Comprehensive basic education, clearly defined specialist training.

M9

a. Correct utilization of materials and personnel according to the situation.

b. Leadership, specialized areas as needed.

c. Any form of training can be efficient, depending on the situation.

M10

a. Leadership, management principles and management concepts of selected companies and organizations.

b. Adult psychology, management models.

c. Basic education followed by on-the-job training with periodic refresher courses to update knowledge, exchange experiences and convey new discoveries.

M11

a. Develop ability to command, control and correct (applies to both military and civilian sectors); pertinent specialized training.

b. Economics, financial management, statistics, organizational procedures, organizational theory, information processing, psychology, technology application.

c. Formal basic education followed by on-the-job training, continual advanced training.

APPENDIX E

Analysis of Question 4 a-b

Question 4:

a. Do you believe that senior instructors generally are adequately prepared for the function of an executive official?

b. In what areas to you believe additional training would be necessary or desirable?

Analysis of Question 4a

	Executive (Instructors)	Managers (Instructors)	Total	Non-Instructors	Instructors	
Yes, if he is a general staff officer	2	1	3	0	3	E12 E15 M9
Yes, but it depends on the general level of education and the future job.	1	2	5	2	3	E4 E18 M3 M8 M10
No, there is too much difference between civilian and military problems and leadership.	4	2	12	6	6	E5 E6 E7 E10 E13 E14 E16 E17 M5 M6 M7 M11

Analysis of Question 4b

	Total	Non-Instructor	Instructor
Introduce governmental directives for management and leadership.	2	0	2
Differences between military and civilian leadership, sympathetic understanding.	4	2	2
Public personnel management, including appraisal, development, promotion, grievances.	1	0	1
Methods and regulations related to governmental and parliamental activities.	5	2	3
Micro-economics of the public sector, feel for effective, efficient use of funds.	2	2	0
Administrative and financial law, public accounting and budgeting systems.	2	2	0
Management education and training as described in answer to question 3b.	8	1	7
Specific education for the new function.	4	3	1
No education is required.	1	0	1

Analysis of Question 4b

Introduce governmental directives for management and leadership.	E12 M9
Differences between military and civilian leadership, sympathetic understanding.	E5 E16 M6 M9
Public personnel management, including appraisal, development, promotion, grievances.	E12
Methods and regulations related to governmental and parliamental activities.	E10 E16 E18 M5 M11
Micro-economics of the public sector, feel for effective, efficient use of funds.	M3 M5
Administrative and financial law, public accounting and budgeting systems.	E10 M5
Management education and training as described in answer to question 3b.	E7 E13 E14 E17 E18 M7 M8 M11 (see * on question 3b)
Specific education for the new function.	E4 E6 E14 E15
No education is required.	M10

Questionnaire Responses (Condensed Answers)

Question 4 a,b

(Addressed only to Swiss respondents who know instructors and the requirements for executive jobs in the DoD)

Question 4:

a. Do you believe that senior instructors generally are adequately prepared for the function of an executive official?

b. In what areas do you believe additional training would be necessary or desirable?

Questionnaire Responses (Questions 4 a,b)

Executives

E1 --

E2 --

E3 --

E4

a. Basically yes, though this question can probably be answered only on an individual or case-by-case basis after judging the general level of training and not just the military career.

b. I feel that additional technical training may be necessary.

E5

a. No (not necessarily).

b. Leadership, decision-making, economy, empathy. The instructor should gain a greater appreciation for the "human factor," as the industry does.

E6

a. Perhaps too much emphasis on formal authority.

b. Pertinent technical training.

E7

a. No. Service with the troops and office work with the DoD are too different, especially in a militia army.

b. Business education patterned after the private sector.

E8 --

E9 --

E10

a. No.

b. Principles of administration, fundamentals of administrative law, financial law, planning techniques.

E11 --

E12

a,b. Instructors are selected primarily as educators. Their temporary administrative service is instructive with regard to future executive tasks. In this first stage of administrative service the instructor must find his own way to a large degree. More intensive training in terms of executive administrative duties is needed in the following areas:

-- knowledge of management guidelines for federal service;

-- familiarity with management requirements (technique, style)

-- personnel management (job descriptions, promotion system).

E13

a. Their preparation is inadequate and is optimal only in certain cases. Improvements are urgently needed. Candidates for executive posts should be placed as young majors in demanding administrative positions. Candidates for high command positions should be able to prove their credentials chiefly by prior successful service in the management of an important administrative section or division.

b. On-the-job training (see a) supplemented by management training as described under question 3.

E14

a. No.

b. Cf. reply to question 3b. The emphasis will vary according to the nature of the future service.

E15

a. Yes, provided the instructor has completed his general staff officer training and has had some administrative experience during the course of his career (on-the-job training).

b. Additional technical instruction may be beneficial in certain cases. I am presuming that the instructor will have enough initiative to seek instruction or instruct himself in areas where deficiencies are felt.

E16

a. The profession of instructor provides little or no preparation for the function of a chief official in the federal government.

b. Managing of civilian personnel, coordinating the tasks of several administrative branches, familiarity with the operation of the federal government.

E17

a. With the current rule that requires instructors having the rank of major or lieutenant colonel to serve three to four years in administration, preparation for the assumption of management functions up to and including section chief is adequately ensured. However, this does not apply to all those instructors who are slated to assume executive functions at the rank of a general (one-, two- or three-star).

b. Training in modern management (for 6 to 12 months). The goals are like those cited in my response to question 3.

E18

a. It depends on the function: In the Group for Education and Training, an adequate degree of preparation may be assumed. In the Group for General Staff Services and Group for Armament Procurement Services, preparation is generally inadequate (exception: prolonged service abroad).

b. Same as answer to question 3b, also: knowledge of obligations, responsibilities and operation of the federal government .

Upper-Level Managers

M1 --

M2 --

M3

a. Yes, but it depends a great deal on the individual.

b. A return on investment seems desirable.

M4 --

M5

a. No. There is a lack of training in micro-economics. Military administration in particular should be managed in accordance with micro-economic principles.

b. Training at Military Academy III (Department of Military Sciences, Federal Polytechnic Institute), with emphasis on:

-- administrative economics: management and organization of public administration;

-- administrative law (processes and procedures);

-- accounting systems in public administration;

-- labor science (rationalization and humanization of administrative operations).

M6

a. No.

b. Fundamental differences between military and administrative management.

M7

a. No.

b. General management training.

M8

a. Fundamental training at Military Academies I, II and III is good but sometimes poorly coordinated. There is seldom enough time available to prepare instructors for work as executive officials.

b. Management course (e.g., Wolfsberg Ermatingen); service in private industry for a limited period.

M9

a. Generally, yes.

b. Administrative management as well as leadership (difference between military and civilian administration).

M10

a. Only rudimentary preparation at Academy III.

b. No additional training is needed: The instructor can learn about administration most simply by practical application. As an instructor, one is taught to assess the situation and make a decision before acting. This rule also applies in administration.

M11

a. No.

b. Basic education as described in my answer to question 3b. A knowledge of administration and its functioning is also necessary.

APPENDIX F

<u>Analysis of Key Words</u>

<u>Questions 1, 3 and 4</u>

Key Words used in answering Questions 1, 3 and 4

(Based on the original answers, not on the published condensed ones. Each key word is only counted once per respondent.)

	Total	Executives	Managers	Private	Public	Non-Instructor Executive	Instructor Executive
Analysis	5	2	3	2	3	1	1
Appraisal of performance	3	3	0	2	1	2	1
Change, innovation, technology application	7	3	4	4	3	2	1
Communication	7	4	3	4	3	3	1
Computer, MIS	3	2	1	0	3	0	2
Control	12	9	3	4	8	4	5
Cooperation, participative	3	3	0	1	2	1	2
Coordination	7	6	1	1	6	1	5
Correct	3	2	1	1	2	1	1
Cost-Benefit, ROI	2	1	1	1	1	0	1
Creativity	2	2	0	1	1	1	1
Culture	2	1	1	2	0	1	0
Decision	9	6	3	6	3	4	2
Delegation	6	3	3	1	5	2	1
Economics (Macro)	7	5	2	4	3	3	2
Economics (Micro)	6	5	1	4	2	3	2
Environment	5	5	0	3	2	4	1
Financial	8	5	3	3	5	3	2

Future, Long-term foresight	5	4	1	4	1	3	1
Goal, objective	11	7	4	5	6	4	3
Group process	2	2	0	1	1	2	0
Hiring, promotion	6	5	1	3	3	3	2
Information	6	3	3	2	4	1	2
Law	5	3	2	3	2	2	1
Leadership	17	11	6	5	12	5	6
Management techniques	9	4	5	3	6	2	2
Motivation	10	6	4	5	5	3	3
Personnel	17	10	7	6	5	4	3
Planning strategy	11	7	4	6	5	4	3
Political	6	3	3	3	3	2	1
Psychology	5	4	1	1	4	2	2
Relevant problem	4	3	1	3	1	3	0
Social	7	4	3	4	3	2	2
Statistics	2	1	1	0	2	0	2
Structure of organizations	9	6	3	4	5	2	4
Technology	7	4	3	3	4	2	2
Timely	4	1	3	2	2	0	1
Training, education, development	8	6	2	2	6	2	4

Key Words used in answering Questions 1, 3 and 4

(Based on the original answers, not on the published condensed ones. Each key word is only counted once per respondent.)

Analysis	E4 E13 M1 M7 M10
Appraisal of performance	E2 E3 E18
Change, innovation, technology application	E1 E2 E14 M1 M5 M10 M11
Communication	E1 E7 E11 E18 M1 M4 M8
Computer, MIS	E13 E14 M11
Control	E1 E5 E7 E11 E12 E13 E14 E15 E17 M1 M7 M11
Cooperation, participative	E7 E15 E18
Coordination	E5 E12 E13 E14 E16 E17 M7
Correct	E7 E14 M11
Cost-Benefit, ROI	E17 M3
Creativity	E7 E13
Culture	E4 M5
Decision	E4 E5 E7 E11 E12 E16 M1 M2 M5
Delegation	E5 E11 E15 M7 M8 M11
Economics (Macro)	E3 E4 E5 E13 E14 M5 M11
Economics (Micro)	E3 E4 E5 E17 E18 M5
Environment	E4 E5 E7 E11 E15
Financial, investment	E1 E5 E10 E16 E17 M5 M10 M11
Future, long-term, foresight	E5 E6 E7 E17 M3
Goal, objective	E2 E5 E6 E7 E12 E14 E17 M4 M7 M8 M11
Group process	E1 E11
Hiring, promotion	E1 E3 E11 E12 E15 M4

Information	E10 E12 E14 M3 M5 M11
Law	E1 E10 E14 M1 M5
Leadership	E4 E5 E7 E10 E11 E12 E13 E15 E16 E17 E18 M2 M5 M6 M7 M9 M10
Management techniques	E6 E10 E12 E15 M2 M4 M7 M8 M10
Motivation	E3 E7 E10 E12 E15 E17 M1 M3 M5 M8
Personnel	E4 E5 E7 E10 E12 E14 E15 E16 E18 M2 M3 M5 M6 M7 M8 M10
Planning strategy	E1 E3 E5 E7 E12 E13 E15 M2 M5 M6 M8
Political	E3 E11 E13 M4 M5 M6
Psychology	E1 E11 E14 E15 M10
Relevant problem	E6 E7 E11 M1
Social	E3 E5 E13 E17 M4 M5 M9
Statistics	E14 M11
Structure of organizations	E4 E5 E13 E14 E16 E18 M2 M5 M11
Technology	E2 E5 E13 E17 M1 M10 M11
Timely	E17 M1 M5 M7
Training, education, development	E3 E11 E12 E13 E17 E18 M4 M9

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