A STUDY OF TRENDS
IN THE CONTINUING DEVELOPMENT OF
MANAGEMENT PRINCIPLES IN THE 1970S

THESIS

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Master's THESIS,

Presented to the Faculty of the School of Engineering

of the Air Force Institute of Technology

Air University

In Partial Fulfillment of the

Requirements for the Degree of

Master of Science

147 p'

by

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Graduate Systems Management

September 1978

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Preface

There are differences in the way outstanding individuals perform in any field - art, music, sports, and business - yet in any field there are some basic guides or theories which give some direction to a novice and to which the expert returns when his or her performance begins to deteriorate. These theories, or guides, can be translated into principles or general rules of action and used to teach others how to act in a particular situation. Such a body of ideas and concepts from which appropriate principles can be derived exist in most areas of human knowledge, including management.

The need for a clear concept of management and for a framework of related theory and principles was recognized many years ago by such early practical scholars of management as Henri Fayol (1916), Chester Barnard (1938), and Alvin Brown (1947). Little has been done, however, to combine the individual efforts of the many authors who have written general management texts over the past thirty years. Thus the need for a framework of theory and principles on which the practitioner, educator, or student can build a clear concept of management is a timely one. The purpose of this thesis is to build such a framework of principles.

A special word of thanks is extended to Dr. Raymond H. Klug who acted as advisor for this study. Throughout the research effort Dr. Klug provided invaluable guidance and support

ii

Table of Contents

Abstract

The fact that most authors of management texts have chosen to approach the subject on an individual basis has led to the need for a review and compilation of management principles. One compilation of principles was accomplished in 1970. A representative sample of general management texts published since the earlier compilation was accomplished in 1970 is reviewed and a summary list of current management principles is compiled. The current list of principles is compared to the list compiled in 1970. Newly stated principles are identified and subclassified into categories to identify trends in the development of management knowledge during the 1970s. In addition, in an effort to identify more recent management trends as well as to verify trends identified through the analysis of newly stated principles, the latest editions of a number of popular texts are compared to the earlier editions used in the 1970 study. Identified trends are then analyzed and discussed. In general it was found that, in the 1970s, there has been increased attention to the concepts of systems management, contingency management, and some of the more recent behavioral concepts such as job enrichment, expectancy theory, and behavior modification.

A STUDY OF TRENDS IN THE CONTINUING

DEVELOPMENT OF MANAGEMENT PRINCIPLES IN THE 1970s

I   Introduction

Throughout history, men have organized their society to
achieve objectives that one individual alone could not achieve.
As soon as men began to form families, gather in nomadic tribes,
develop agricultural villages, and create communities, cities,
nations, and empires, the need for leadership and some ele-
mentary way of managing and organizing their common affairs
was recognized.

Our understanding of the practice of management has im-
proved considerably since the formation of the first forms of
primitive society. However, it was not until the beginning
of this century that practitioners, educators, and students
began to understand that management is a specific kind of work
performed at several different levels in the various institu-
tions of society, that the manager occupies a special role
and performs a distinct function in society, and that it is
possible to develop a unified discipline of management.

Today, although far from unified, management is commonly
accepted as a discipline. As a discipline, management repre-
sents a field of study in which a certain body of knowledge
has evolved. The fact that most major universities now have

1

departments of management, and increasing numbers of educational institutions have colleges of administration or some similarly significant organization for direct study in the field of management, is indicative of the acceptance of management as a discipline. As a discipline, management represents a field of study in which a certain body of knowledge has evolved.

Management is a dynamic discipline. It continues to change in response to the development of new ideas and frames of reference, the strong urge to improve, and the current demands placed on managers by economic, social, technological, and political forces.

In management, as in all arts and sciences, the effectiveness and efficiency of its practitioners depend upon the state of the underlying body of knowledge. It is no exaggeration to say that the most important index of the state of maturity of an art or science is the state of its systematic theory. Therefore, since theory is "the general or abstract principle of a body of fact, a science, or an art" (Ref 157), the principles of management must project and represent the current knowledge of the management discipline. This study is an attempt to develop a set of management principles representing current management knowledge.

Definitions

Within the management literature, the term "principle" does not always imply test and validation or confirmation via

research. In some instances, there is widespread agreement as to the validity of a principle. In other cases, a proposition may be labeled a "principle" by the person who devised it long before there is any opportunity for development of support for the concept. The term has been used very loosely in the literature of management, and does not always carry the implication of scientific law or substantiated theory.

The definition used in this study is the one developed by Myers in his 1970 thesis. In his thesis, Myers built a very complete definition model which he used along with a systematic thought process to develop clear and concise definitions of a number of management terms. The input to the modeling process consisted of nine definitions by management authors as well as two dictionary definitions of the term "principle." The definition developed by Myers is:

> A principle is a fundamental truth that identifies a cause-and-effect relationship and provides guidance to thought or action. (Ref 147:104)

A key word in the definition is "guidance." Management principles are a means by which fundamental mistakes can be avoided in the efforts of a manager. Management principles are not designed to be irrevocable laws but rather to serve as rules of thumb to be applied in reference to a particular situation.

Background

A number of so-called modern concepts and practices of management are not all that modern. Pre-Biblical and Biblical writings about management used surprisingly modern sounding

language--such as the advice given to Moses on how to organize and delegate in order to relieve his own burden, or the saying of the Chinese philosopher Lao-Tzu:

> A leader is best
> When people barely know that he exists.
> When his work is done, his aim fulfilled,
> They will all say, "We did this ourselves."
> (Ref 152:3)

As early as 4000 B.C. the Egyptians recognized the need for planning, organizing, and controlling. Many instances are found in Egyptian literature of management thought. Some examples are:

> The leader ought to have in mind the days that are yet to come. (The need for planning.) (Ref 141:65)

> Great is a great one whose counselors are great. The value of staff advice to a manager.) (Ref 14 :55-60)

The pyramids stand as mute testimony of the managerial and organizational abilities of the Egyptians.

In China, 500 B.C., Sun Tzu wrote The Art of War, the oldest military treatise in the world. Because Tzu dealt with the fundamentals of planning, organizing, and directing, his treatise is still a valuable guide to modern managers.

Of planning, Sun Tzu said:

> Now the general who wins a battle makes many calculations in his temple ere the battle is fought. The general who loses a battle makes few calculations before hand. It is by attention to this point that I can see who is likely to win or lose. (Ref 149:23)

Of organization, Sun Tzu warned:

> When the general is weak and without authority; when his orders are not clear and distinct; where

there are not fixed duties assigned to officers
and men; the result is utter disorganization.
(Ref 149:75)

Sun Tzu said of directing:

If the words of command are not clear and distinct,
if orders are not thoroughly understood, the general
is to blame. But if his orders are clear, and the
soldiers nevertheless disobey, then it is the fault
of their officers. (Ref 149:75)

In 400 B.C. Socrates spoke of the universality of manage-
ment.

I say that over whatever a man may preside, he will
if he knows what he needs, and is able to provide it,
be a good president, whether he have the direction
for a chorus, a family, a city, or an army.
(Ref. 154:186)

Many other examples of management thought can be found

throughout history. (The reader may find The History of

Management Thought by Claude George to be of interest. Ref

144). For purposes of this study, attention is directed to

the specific development of principles in the relatively recent

past and essentially within the twentieth century.

F. W. Taylor and Scientific Management. One of the major

viewpoints underlying present thinking, that of scientific

management, was developed by Frederick W. Taylor early in

this century. Taylor was concerned primarily with factory

management with emphasis mostly on the management of production

workers. The fundamental principles that he saw underlying

the scientific approach to management may be summarized as

follows (Ref 75:36):

1. Replacing rules of thumb with scientific method
   (organized knowledge).

2. Obtaining harmony in group action, rather than discord.

3. Achieving cooperation of human beings, rather than chaotic individualism.

4. Working for maximum output, rather than restricted output.

5. Developing all workers to the fullest extent possible for maximum prosperity of both company and worker.

Fayol *and* *the* *Theory* *of* *Management.* Henri Fayol was the first to issue a complete statement on a theory of general management. The major work by Fayol was originally published in French in 1916; however, it was not readily available in English until 1949.

A very significant contribution made by Fayol was the introduction and discussion of management principles and elements. Fayol stated that to be effective, management should be founded upon and observe the following 14 principles (Ref 142:19-20).

1. Division of work (specialization belongs to the natural order).

2. Authority and responsibility (responsibility is a corollary with authority).

3. Discipline (discipline is what leaders make it).

4. Unity of command (men cannot bear dual command).

5. Unity of direction (one head and one plan for a group of activities having the same objectives).

6. Subordination of individual interest to the general interest.

7. Remuneration (fair, rewarding of effort, reasonable).

8. Centralization (centralization belongs to the natural order).

9. Scalar chain (line of authority, gang-plank principle).

10. Order (a place for everyone and everyone in his place).

11. Equity (results from combination of kindliness and justice).

12. Stability of tenure of personnel (prosperous firms are stable).

13. Initiative (great source of strength for business).

14. Esprit de Corps (union is strength).

Fayol developed this list of principles from practical experience and used these principles as broad guidelines for effective management. Fayol stressed that managers should be flexible in the application of these principles and that allowances should be made for different and changing circumstances.

The real contribution made by Fayol was not the 14 principles themselves, for many of these were the product of the early industrial system, but rather his formal recognition, statement, and synthesis of these principles.

In presenting his "elements of management," Fayol was among the first to outline what today are called the functions of management. Planning, organizing, commanding, coordinating, and controlling were identified and presented as fundamental and universal functions or elements of management.

Other Authors. In the late 1920s and early 1930s, after management became more widely accepted as a discipline, other authors began writing textbooks in the field of management. Since that time, many texts dealing with "Principles of Management" have been published. Most notable among these are the works of Mooney and Reiley, Ralph Davis, George Terry, and Koontz and O'Donnell.

In 1931, Mooney and Reiley published a book entitled
Onward Industry in which they set forth four principles which
have much in common with Fayol (Ref 146):

1. The coordinative principle.

2. The Scalar Principle.

3. The functional principle.

4. The staff phase of the functional principle.

In 1951, Ralph Davis published a book which emphasized defi-
nitions and classifications and explicitly stated numerous
principles of management. In 1953, George Terry published the
first text entitled Principles of Management which was soon
followed by the Koontz and O'Donnell text of the same title.

Problem

Unfortunately, the authors of basic management texts,
rather than building on the body of knowledge already in
existence and developing a complete set of principles, have
approached the subject on an individual basis and the trend
continues in many publications today. Consequently, unlike
other disciplines (such as the physical sciences), the manage-
ment discipline lacks a complete and concise set of principles.

An initial study was conducted by Mascarella and Browne
under the direction of Dr. R. H. Klug at the Air Force Insti-
tute of Technology in 1970. A review of the literature resulted
in analysis and compilation of 112 management principles repre-
senting management knowledge to that date (Ref 145). This
thesis is a sequel to expand and update the 1970 research effort.

Ross and Murdick, in an article entitled "What Are the Principles of 'Principles of Management'?" published in the January 1977 issue of The Academy of Management Review, also identified this problem and attempted to solve it by reviewing 23 texts and listing management topics, the percentage of books mentioning each topic, and the percent of total pages devoted to each topic (Ref 150). Although no principles were listed, the Ross and Murdick article did identify the timely need for a list of current principles to serve as guidance for a growing number of managers. This leads to the purpose and objectives of this study.

Objectives

The objectives of this research effort were:

1. To compile a list of principles found in literature published since 1970.

2. To compare this list to the list compiled in the 1970 study to identify and analyze trends.

3. To update the previous study thus developing a complete, current list of management principles.

Research Questions

This study is further guided by a search for answers to the following questions:

1. What, if any, new principles have evolved in the field of management since 1970?

2. What, if any, trends are indicated by these new principles in the continuing evolution of the management discipline?

This concludes the introduction and background and purposes of this study. The methodology of the research effort is presented in Chapter II.

II Research Methodology

The research methodology for this study was designed to fulfill the research objectives as stated in Chapter I and was performed in three stages: (1) data collection, (2) data treatment, and (3) presentation and reporting of findings. This chapter identifies the scope and limitations of this research effort and discusses each stage of the research methodology.

Scope

This study was not an attempt to test or refute any principles put forth by the authors in the texts that were reviewed. Rather, it was an attempt to compile and classify management principles as presented by the individual authors and to determine whether or not any trends are developing in the continuing evolution of management knowledge.

Since one purpose of this study was to update a previous study conducted in 1970, only texts published since 1970 were reviewed.

Limitations

The extent of the research was limited by the number of textbooks available for review. This in turn was limited by the availability of travel funds as well as by time. The time constraint was one academic quarter, ten weeks.

Data Collection

The research for this thesis consisted mainly of an extensive literature search conducted primarily in seven libraries located in Southern Ohio. The libraries were:

    AFIT Library
    Wright State University Library
    University of Dayton Library
    University of Cincinnati Library
    Ohio State University Library
    National Management Association Library
    Personal Library of Dr. Raymond H. Klug

The first step of the collection process consisted of reviewing indices of periodical journals and research reports in an effort to determine whether any other studies have been done in this area, to obtain background material, and to locate possible additional sources of information. Some of the indices reviewed were:

    AFIT Resident Student Thesis Index
    Government Reports Annual Index
    Air University Abstracts of Research Reports
    Dissertation Abstracts International Retrospective Index
    Dissertation Abstracts International Index
    Reader's Guide to Periodic Literature
    Business Periodicals Index
    Social Sciences Index
    Wall Street Journal Index
    Applied Science and Technology Index
    Air University Library Index to Military Periodicals

During this phase of the research, particular emphasis was placed on information from the American Management Association, the American Institute of Management, The Academy of Management, the National Management Association, and the Society for the Advancement of Management. In addition, a

11

computer search was accomplished through the very extensive files of the Defense Documentation Center, Cameron Station, Alexandria, Virginia. Also, a visit was made to the offices of the National Management Association.

The first step of the research resulted in the discovery of only a few minor articles on the subject of management principles; most of which provided little information suitable for use in this thesis.

During the second step of the research, the number of general management texts published since 1970 was estimated. This was done by writing to 39 publishers to obtain the latest catalogs of management publications. (The list of publishers along with a sample letter can be seen in Appendix E.) The catalogs listed 18 general management texts published in 1978 and 17 texts published in 1977. Using these figures and multiplying by the eight years from 1971 to 1978, an estimate of 140 texts was obtained. (This estimate was considered sufficiently accurate for purposes of this study.)

The card catalogs of the seven libraries listed above were then searched. The search resulted in the compilation of 133 texts published since 1970; however, only 116 were available for review during this study (see bibliography for lists).

Each of the 116 texts was reviewed and a list of all principles found was compiled. Each principle was then subjected to the definition established for use in this thesis.

Those principles that did not fit the established definition were deleted. The remaining list of principles then served as the data base for the remaining portions of this study.

Data Treatment

During the data treatment phase of the research effort the principles found were classified according to the management functions of planning, organizing, directing, and controlling. This current list of principles was then compared to the list developed during the 1970 study to determine what new principles have developed. The newly stated principles were then analyzed and classified into several categories. These categories were then used to identify trends in the development and publication of newly stated principles. In addition, to gain support for the trends identified through the newly stated principles, the latest editions of several texts were compared to the earlier editions used in the 1970 study.

Presentation and Reporting of Findings

Organization and presentation of this study is as follows. Chapter III presents a list of current principles along with a brief discussion of each principle classified under the planning and the organizing functions. Similarly, Chapter IV presents and discusses current principles of the directing and the controlling functions as well as the miscellaneous category of other management principles. Chapter V presents and

analyzes the results of the comparison of the current list of principles with the list developed in the 1970 study. The newly stated principles are then grouped into categories and trends are identified. The results of the comparison of the latest edition of a text to the edition used during the 1970 study are also presented in Chapter V. A summary of the research and key conclusions reached are presented in Chapter VI.

III Development and Analysis of Planning
and Organizing Principles

The management discipline continues to change in response
to the development of new ideas and frames of reference, the
strong urge to improve, and the current demands placed on
managers by economic, social, technological, and political
forces.

As in any discipline, one measure of current knowledge
of the management discipline is its principles. As defined
in Chapter I, a principle is a fundamental truth that identi-
fies a cause-and-effect relationship and provides guidance to
thought or action. Principles identify what results to expect
when principles are applied and are a means by which a manager
can avoid fundamental mistakes in his efforts. Principles
derive from experience and accomplishments and represent the
distillation of basic truths in a particular area as known
and understood at that time. Principles reflect and represent
current knowledge on a subject. As management knowledge changes,
so will management principles.

The purpose of this chapter is to develop a current list
of management principles. This was accomplished, as described
in Chapter II, by reviewing 116 textbooks on the subject of
general management published since 1970.

Although some authors state principles as cause and effect
relationships or as propositions with dependent and independent

variables, other authors present principles as little more than stated concepts. No attempt has been made to reword or restate principles as stated by the individual authors. Even though the principles may not always be established as complete causal propositions, the reader should interpret them as such. Principles can be read in the sense that if this or that is done, the result will be more effective attainment of objectives.

Given any single concept, there are many ways in which it can be stated. Management principles are no exception. Many of the principles presented in this chapter were stated by several authors in different ways and under as many different titles. In these cases, one statement and author were selected to serve as the primary source for use in this thesis. However, the other sources are included as references in the summary listing of principles in Appendix A. The number of secondary references listed for each principle can also serve as an indication of the "popularity" or general awareness and acceptance of that principle.

The functional classifications of the work of the manager - planning, organizing, directing, and controlling - were utilized as a logical framework within which to classify management principles. It is recognized that there are other classifications of management functions which differ slightly from those above. However, the classification used here has the advantages of being comprehensive, of being divisible into

enough parts to permit logical analysis, and of being operational in the sense that with reasonable accuracy it portrays functions as usually projected in the current literature.

Due to the limitations of time and space, and since the purpose of this thesis is to develop and analyze a list of principles and not to analyze the principles themselves, only a few brief words of introduction or explanation will be given for each principle listed. For those interested, further details are readily available in the references. The first group of principles presented pertain to the planning function of management. The planning principles are followed by principles pertaining to the organizing function. Chapter IV presents principles of the directing and controlling functions as well as the miscellaneous category of other principles.

Planning Principles

Planning, a universal management function, involves selection from among alternative courses of action for the organization as a whole and for each subordinate unit. Not only is planning a basic function for all managers at all levels in the organization, but the three other functions of the manager depend on it. That is, a manager organizes, directs, and controls to assure attainment of goals according to plans.

Planning principles can be grouped around those dealing with (1) the purpose and nature of planning, (2) the structure of plans, (3) the process of planning, and (4) decision making within the planning phase.

17

The Purpose and Nature of Planning. The purpose and nature of planning may be summarized by the principles discussed below.

Although all the functions of management intermesh in practice as a system of action, planning is unique in that it establishes the objectives necessary for all group effort. Plans must be made to accomplish the objectives before the manager knows what kind of organizational relationships and personal qualifications are needed, along which course subordinates are to be directed, and what kind of control is to be applied. All other managerial functions must be planned if they are to be effective. George Terry sums up these ideas in his principle of planning which states that "To accomplish a goal most effectively, adequate planning, or mental effort, should take place before the doing, or physical effort." (Ref 128 :218) Koontz and O'Donnell state this principle more concisely and call it the Principle of Primacy of Planning.

1. The Principle of Primacy of Planning: Planning logically precedes the execution of all other managerial functions. (Ref 75:265)

Also, within the first management function of planning one of the first steps should be the establishment of organizational objectives.

2. Principle of Objectives: Prerequisite to the starting of any organization or to carrying on any activity is a clear and complete statement of the objectives in view. Only after this can the organization be built and molded to foster the attainment of those objectives with the least amount of effort and cost. (Ref 112: 205)

18

The purpose of planning is clearly stated by Koontz and O'Donnell in the Principle of Contribution to Purpose and Objectives.

3. The Principle of Contribution to Purpose and Objectives: The purpose of every plan and all derivative plans is to facilitate the accomplishment of enterprise purpose and objectives. (Ref 75:265)

This principle derives from the nature of organizations, which exist for the accomplishment of group purpose through deliberate cooperation.

A narrower definition of the purpose of planning is provided by Henry Sisk. Sisk states that the purpose of planning is...

> to provide information concerning a proposed course of action so that the relative probability of success or failure can be estimated. Planning does not eliminate the element of risk, but planning does provide a more accurate basis for estimating relative success of failure in more precise terms. As knowledge of the factors that influence the success or failure of a proposed plan is acquired, the greater the probability that the final decision will be the correct one. (Ref 120:72)

Schrode and Voich express this idea in their Principle of Risk Reduction.

4. The Principle of Risk Reduction: An organization that develops and utilizes relevant and reliable information relating to future demand and resource availability in the time and format required for planning... generally will be able to reduce the level of risk involved in achieving future goals and plans, and thereby will likely improve the performance of managerial planning. (Ref 116:420)

A plan can contribute to the attainment of objectives, but at too high or unnecessarily high costs. This concept of efficiency implies the normal ratio of input to output, but

19

goes beyond the usual understanding of inputs and outputs in terms of dollars, man-hours, or units of production to include such values as individual and group satisfactions. This concept is expressed as the Principle of Efficiency of Plans.

> 5. <u>Principle of Efficiency of Plans</u>: The efficiency of a plan is measured by the amount it contributes to purpose and objectives as offset by the costs and other unsought consequences required to formulate and operate it. (Ref 75:265)

<u>The Structure of Plans</u>. Principles related to the structure of plans are discussed in this section.

"Premises are assumptions providing a background against which estimated events affecting the planning will take place." (Ref 128 :219) Use of premises helps to reduce the uncertainty inherent in the future, to have an identifiable foundation upon which to form a structure upon which planning can be based, and to give the planning reality and facilitate acceptance. Since planning deals with the future, a manager in order to manage, assumes that certain entities will act in certain ways, that certain forces will be present to known degrees, or that specific conditions will be absent during the future period under consideration.

By using premises a manager is able to plan; and further, by their use, boundaries are established within which the planning efforts are to be performed. Premises tend to confine planning within areas considered appropriate and feasible by the planner.

20

6. <u>Principle of Planning Premises</u>: The more individuals charged with the planning understand and agree to utilize consistent planning premises, the more coordinated enterprise planning will be. (Ref 75:265)

Emphasis should be placed on the importance of the use of facts in the establishing of premises and the formulating of the plan.

7. <u>Principle of Facts and Planning</u>: To design an effective plan, it is necessary to obtain all the available pertinent facts, face the facts, and in the plan include the action that the facts dictate. (Ref 128:221)

Part of the importance of planning premises is to assure proper timing in fitting plans together. Since the planning process is a complex of many major and derivative plans and since plans are necessarily related to one another, it is important that plans fit together, not only in terms of content and action, but also in terms of timing.

8. <u>Principle of Timing</u>: The more plans are structured to provide an appropriately timed, intermeshed network of derivative and supporting programs, the more effectively and efficiently they will contribute to the attainment of enterprise objectives. (Ref 75:265)

It is the key function of strategies and policies to give a unified direction to plans. In other words, they influence where an organization is trying to go. Strategies and policies furnish the framework for plans by channeling operations decisions and often performing these decisions. Koontz and O'Donnell express this concept as the Principle of Strategy and Policy Framework.

9. <u>Principle of Strategy and Policy Framework</u>: The more strategies and policies are clearly understood, the more consistent and effective will be the framework of enterprise plans. (Ref 75:265)

The Process of Planning. Principles related to the process of planning are presented in this section.

The length of time covered by a plan should be sufficiently long to cover the involved managerial commitments. Another way to express this is to speak of "recovery costs." How long will it take to get back the investment in equipment, sales promotions, and training of personnel required by the plan? This question is best answered by planning, which should include a sufficient time period to provide a complete answer. A manager should be interested in using a period sufficient to justify the monetary expenditure involved.

10. The Commitment Principle: Logical planning covers a period of time in the future necessary to foresee, through a series of actions, the fulfillment of commitments involved in a decision. (Ref 75:266)

The Commitment Principle should be considered in the light of flexibility of planning. If plans can be changed to meet future requirements which either were not or could not be foreseen, the planning period can be shorter than otherwise would be the case. Because of future uncertainties and possible error in even the most expert forecast, the ideal of planning is to be flexible - the ability to change direction when forced to do so by unexpected events, without undue cost.

11. Principle of Flexibility: The more that flexibility can be built into plans, the less the danger of losses incurred through unexpected events, but the cost of flexibility should be weighed against its advantages. (Ref 75:266)

Unlike the Flexibility Principle, which applies to the adaptability built into plans themselves, the Principle of

22

Navigational Change applies to flexibility in the planning process. Built-in flexibility does not automatically revise plans; the manager, like the navigator, must continually check the course and redraw plans to meet a desired goal.

    12.   <u>Principle of Navigational Change</u>: The more planning decisions commit for the future, the more important it is that the manager periodically check on events and expectations and redraw plans as necessary to maintain a course toward a desired goal. (Ref 75:266)

Louis Allen states five additional principles related to the planning process. These are the Principles of Planning Stability, Present Choices, Positive Action, Resistance to Change, and Tangibility. The first deals indirectly with flexibility in planning.

    13.   <u>Principle of Planning Stability</u>: The stability of a plan tends to vary inversely with its extension (over time). (Ref 5:74)

In other words, the further a plan is projected into the future, the greater the uncertainty that it will be accomplished in the way that was originally intended. Changing conditions possible over the longer period of time may require the modification of objectives, schedules, and budgets. The second principle stated by Allen is:

    14.   <u>Principle of Present Choices</u>: Current decisions tend to limit future action. (Ref 5:75)

For example, product plans a company makes now determine the markets it can enter next year. The quality and type of people a manager selects today largely determine the type of organization the manager will have to work with in the future.

According to Allen, "Sticking doggedly to a predetermined objective which offers the probability of greater long-term rewards pays off, although it requires greater tenacity and discipline." Allen refers to this concept as the Principle of Positive Action.

15. **Principle of Positive Action:** The probability of a future event occurring tends to increase as effort is applied systematically towards its realization. (Ref 5:76)

People resist change. However, if the change is gradual and only slightly different from the current situation, the resistance will be minimal. Allen refers to this as the Principle of Resistance to Change.

16. **Principle of Resistance to Change:** The greater the departure of planned changes from accepted ways, the greater the potential resistance by the people involved. (Ref 5:77)

The fifth principle stated by Allen deals with tangibility of goals.

17. **Principle of Tangibility:** The more tangible an objective, the more direct and specific the effort to achieve it tends to be. (Ref 5:79)

In making use of this principle, the important requirement is to convert objectives, whenever possible, into statements related to tangible and material things, rather than intangible ideas. For example, the goal of "increased productivity" is less meaningful to the worker than the goal of "ten additional units of output per day."

Similarly, goals should be reasonable. If an objective is within reach without unreasonable effort or sacrifice, its very establishment tends to stimulate attempts to succeed.

18. <u>Principle of Reasonable Goals</u>: The establishment of reasonable goals provides incentive to accomplish those goals. (Ref 42:37)

Managers should make clear the goals of the organization and its divisions as well as the specific jobs. Each member should know what is expected so that a basis is established for judging performance.

Other principles related to organizational goals are the Principle of Confidence in Objectives and the Principle of Participation.

19. <u>Principle of Confidence in Objectives</u>: The more respect and confidence accorded the objectives of an enterprise, the more they are accepted and, thus, the greater the likelihood of accomplishment. (Ref 42:36)

This principle is violated when objectives are set up which conflict with the desires of society, or when the objectives have not been successfully communicated to the people concerned. People do not work well toward goals that they do not believe in.

20. <u>Principle of Participation</u>: Participation in goal establishment by the members of an enterprise makes for greater understanding and acceptance of these goals, as well as a greater correctness in their determination. (Ref 42:36)

In other words, tapping of the human resources that exist within an organization can often lead to a better conception and statement of objectives. Also, participation often contributes to employee acceptance of the legitimacy of the goals.

Four additional principles referring to the planning process are stated by George Terry. Terry believes that "Sincere efforts must be made, especially in planning, not to injure

25

any outsider's rights, treat the person unjustly, or injure one's person or property. Corruption wherever discovered should be exposed." (Ref 128:226)

The concept of ethics in planning is expressed in the Principle of Ethics.

    21. <u>Principle of Ethics</u>: Proper ethics in management require a manager to be honest with self and with society and to deal honorably with others just as one would like to be dealt with. (Ref 128:226)

Terry also believes that planners should apply the concept of idea fluency. Idea fluency means an ability to amass a quantity of ideas about a given problem. The value of this is that the more ideas available, the greater the chance for identifying a usable one. Idea evaluation, however, tends to stop the creating of new ideas; therefore, rather than evaluating them immediately, it is better to wait until there is a quantity of ideas on which to work. The above concept is expressed in the Principle of Creativity.

    22. <u>Principle of Creativity</u>: Strive for a quantity of ideas within a given time and abstain from evaluating them during the idea-getting step of the creativity process. (Ref 128:230)

The last two principles stated by Terry deal with work simplifications. "Work simplification is applying common sense for finding the most economical use of human efforts, materials, machines, time, and space so that easier and better ways of doing work can be employed." (Ref 128:247)

    23. <u>Principle of Work Simplification</u>: Waste in performing work can be eliminated by diligent application of work simplification, which stresses making every component of the work productive by the application of common sense aided primarily by participation with know-how and by employees. (Ref 128:248)

26

The final planning principle stated by Terry, the Principle of Overlap, is related to work simplification.

24. Principle of Overlap: The minimum overall time required to perform a group of successive tasks on one product is obtained by performing the tasks arranged with a maximum overlapping. (Ref 128:249)

Kenneth Killen elaborates on the Principle of Work Simplification by stating ten Principles of Motion Economy and five Principles for Reducing Worker Fatigue. These should be considered when designing jobs or setting up the work place.

Principles of Motion Economy (Ref 70:303)

25. Motions of the two hands should be simultaneous and symmetrical.

26. Tools and materials should be located close to and directly in front of the operator so as to be within easy reach of the hands. Transport distances should be as short as possible and movements should be as few as possible.

27. There should be a definite and fixed place for all tools and materials.

28. Gravity feed bins and containers should be used to deliver materials close to the point of use.

29. Tools and materials should be prepositioned wherever possible.

30. "Drop deliveries" should be used wherever possible.

31. The hands should be relieved of all work that can be done more advantageously by the feet. Power-operated tools and equipment should be used wherever economical. A vise, jig, or fixture should be used to hold the work wherever possible, thus releasing the hands for productive work.

32. Materials and tools should be located to permit the best sequence of motions. Rhythm is essential to a smooth, easy work pattern.

33. Smooth, continuous motions of the hands are preferable to zigzag motions or straight-line motions involving sudden and sharp changes in direction.

34. The height of the workplace and the chair should preferably be arranged to permit alternate sitting and standing at work. Adequate lighting should be provided, and the worker should be made as comfortable as possible.

In addition to these Principles of Motion Economy, there are five Principles of Reducing Fatigue.

Principles for Reducing Fatigue (Ref 70:305)

35. Use curved motions in place of sharp, jerky motions.

36. Have machines do the lifting.

37. Use the body correctly by using the right part of the body and by taking advantage of body momentum.

38. Provide good working conditions, such as proper lighting, proper temperature, and good ventilation. Eliminate factors such as excessive noise and floors that are hard to stand on like concrete or steel.

39. Allow rest periods for both physical and mental jobs. The harder a job is physically, the more time should be allowed for rest. It is a good idea for the rest period to be taken away from the work area. This is especially true in the case of mental work. Also, on hard physical jobs, many short rest periods are better than a few long rest periods.

Decision Making. Decision making - the selection of a course of action from among alternatives - is at the core of planning. A plan cannot be said to exist unless a decision - a commitment of resources, direction, or reputation - has been made. The following principles provide a sound basis for management decisions.

Too often, time and effort are wasted because a manager does not think through what problems exist. The manager may not identify the real problem because of failure to take the time to determine the basic factors that must be changed to arrive at a satisfactory solution. This leads to the Principle of Definition.

28

40. <u>Principle of Definition</u>: A logical decision can be made only if the real problem is first defined. (Ref 5:146)

A manager expert in decision making can support his conclusions with facts or reasonable inferences drawn from facts. When the facts underlying a problem are assembled and understood, the decision will often be so obvious as to seem to become self-evident. This is called the Principle of Adequate Evidence.

41. <u>Principle of Adequate Evidence</u>: A logical decision must be valid in terms of the evidence on which it is based. (Ref 5:147)

From a different perspective, the same object will appear to be different to different people. A budget deficit means different things to the accountant, the salesman, and the engineer. The relative importance of the same facts may differ from year to year. To establish the validity of facts, managers should try to use the varying viewpoints involved and determine the significance of the time period during which the event happened. This is called the Principle of Identify.

42. <u>Principle of Identity</u>: Facts may seem to differ, depending on the point of view and the point in time from which they are observed. (Ref 5:147)

Complete problem definition requires specifying quantitatively as many facts of the problem as possible. Once all the pertinent variables have been identified, the level, degree, impact, or effect of these variables must be spelled out unambiguously. The use of quantitative measures rather than or in addition to qualitative designators should be employed whenever possible. This presents a need for a principle relating to measurement.

43. Principle of Measurement: Measurement and quantification lead to accurate decisions. Use of precise measures in quantitative terms to define and describe all decision problems stemming from the physical processes that comprise organization work... generally will result in more accurate decisions and more effective problem solving. (Ref 116:239)

Due to time, cost, and other limitations inherent in problem solving, it is usually impossible to evaluate an extremely large number of solutions. In most cases, a lessor number of the apparently feasible solutions can be tested and evaluated. This practical necessity has led to the idea of optimization, that is, finding an optimal solution to the problem. This idea highlights the need for a principle relating to optimization.

44. Principle of Optimization: Comparison of alternatives with objectives leads to optimal decisions. Selection of the best of a limited number of possible solutions consistent with explicitly stated objectives and based on formulation and testing of hypotheses or mathematical models... generally will result in optimal decisions and more effective problem solving. (Ref 116:245)

Employing rationality in decision making can be a difficult and demanding task for the inexperienced decision maker. It involves impartial, mechanistic determination of problem characteristics, assumptions and hypotheses, and unbiased testing of hypotheses, coupled with impersonal choice of solutions. This leads to the Principle of Rationality.

45. Principle of Rationality: Reason and objectivity lead to rational decisions. The use of reason and objectivity rather than emotion and subjectivity to make managerial decisions when employing the scientific method in problem solving and decision making... generally will result in rational decisions and will likely lead to more effective problem solving. (Ref 116:253)

30

The Principle of Rationality considered together with the Principles of Measurement and Optimization, form the essence of the scientific method of decision making. These principles are derived from the basic assumptions relating to work, goals, and man originating in the management science philosophy of management and are summarized by the Principle of Management by Techniques.

46. Principle of Management by Techniques: Measurement, optimization, and rationality lead to effective decision making. The application of precise, quantitative measures to the examination of alternative solutions to managerial decision problems and the use of objectivity and reason... generally will result in rational decisions which are optimal in respect to the stated objectives and will likely lead to effective decision making and problem solving. (Ref 116:263)

The final planning/decision making principle is the Principle of Decision by Exception.

47. Principle of Decision by Exception: A manager should make decisions on all matters that come to his or her attention except those for which the person does not have sufficient authority. Matters for which the manager does not have sufficient authority are decided upon by committee or higher management. (Ref 116: 195)

The next section presents principles of the organizing function of management.

Organizing Principles

Since the beginning of the human race, some persons have directed efforts of others in a team effort toward various specific goals. The total work to be done, as described by the plans, required the efforts of more than one person. Many hands and minds were brought together and coordinated so that

31

not only the collective actions were effective, but also that the contribution of each individual was valuable and hopefully satisfying and in keeping with the knowledge and skill of the respective individual.

In order to make it possible for people within groups to work effectively toward accomplishing goals, a structure of roles must be designed and maintained. This is the purpose of the managerial function of organizing.

Organizing principles can be grouped around those dealing with (1) the purpose of organizing, (2) authority relationships, (3) line and staff relationships, (4) the structure of organization, (5) the process of organizing, and (6) staffing.

The Purpose of Organizing. Principles dealing with the purpose of organizing are the Principles of Unity of Objectives, Efficiency, and Span-of-Management.

48. Principle of Unity of Objectives: The objectives of each department and other units within the organizational structure should be integrated with and contribute to the achievement of the objectives for the organization as a whole. (Ref 23:83)

The application of the Principle of Unity of Objectives implies the existence of formulated and understood enterprise objectives. If the objective is to make a profit over a period of time, then the organizational pattern that helps to accomplish this, conforms to the Principle of Unity of Objectives. However, whatever the goals, organization structure and action must be measured against the criterion of effectiveness in meeting them. This leads to the Principle of Efficiency.

49. Principle of Efficiency: The organization should be so planned that the objective can be attained with the lowest possible cost, which may mean either money costs or human costs or both. (Ref 29:112)

The number of people one manager can supervise depends on several factors. Among these are the ability of the supervisor, the ability of the employees, type of work, physical location, and employee motivation.

50. Span-of-Management Principle: There is a limit in each managerial position to the number of persons an individual can effectively manage, but the exact number will vary in accordance with the effect of underlying variables and contingencies and their impact on the time requirements of effective managing. (Ref 75:443)

The Principle of Span-of-Management projects one of the primary purposes for organizing. If there were no such limitation, one could have an unorganized enterprise having only one manager.

George Terry suggests that one reason for narrow spans of management is that the number of organizational relationships between the superior and the subordinates increases geometrically rather than arithmetically. Terry expresses this idea in his Principle of Increasing Organizational Relationships.

51. Principle of Increasing Organizational Relationships: As additional persons or units are added to an organizational structure, the number of organizational relationships increases at a much greater rate than the number of persons or units added. (Ref 128:300)

Authority. Authority is one of the key factors which bind an organization together. It is the means by which groups of activities can be placed under a manager and coordination of organizational units can be promoted. Authority provides the primary line of communication in an organization and, consequently,

33

some of the most useful principles of organizing are associated
with it.

A clear understanding of the Scalar Principle is necessary
for proper organization functioning. Subordinates must know
who delegates authority to them and to whom matters beyond
their own authority must be referred.

> 52. Scalar Principle: The more clear the line of author-
> ity from the top manager in an enterprise to every
> subordinate position, the more effective will be the
> responsible decision making and organization communi-
> cation system. (Ref 75:444)

Delegation of authority is the essense of a formal organi-
zation. Unless management is willing and able to pass on to
subordinates the authority and responsibility for operating
their departments, a formal organization is of little use.

> 53. Principle of Delegation: Authority delegated to an
> individual manager should be adequate to assure the
> ability to accomplish the results expected. (Ref 75:
> 444)

A related principle explains that employees must know
exactly what is expected of them.

> 54. Principle of Single Accountability as to Task: Each
> employee's duties must be clearly distinguishable
> from all other workers' duties, and the employee's
> duties must be known and understood by the employee.
> (Ref 70:70)

The Principle of Authority naturally follows the Principle
of Delegation.

> 55. Principle of Authority: Managers have the right to
> perform their assigned duties and to command their
> subordinates. (Ref 70:60)

The Principle of Absoluteness of Responsibility means that
managers cannot escape the responsibilities that have been
assigned to them merely by passing these on to subordinates.

56. <u>Principle of Absoluteness of Responsibility</u>: The responsibility of subordinates to their superiors for performance is absolute, and superiors cannot escape responsibility for the organization activities of their subordinates. (Ref 75:444)

Since authority is the discretionary right to carry out assignments and responsibility is the obligation to accomplish them, it logically follows that the authority should correspond to the responsibility.

57. <u>Principle of Parity of Authority and Responsibility</u>: For sound organizational relationships, the authority of a manager should be commensurate with responsibility and, vice versa, responsibility commensurate with authority. (Ref 128:301)

The exercise of authority requires that subordinates report directly to only one boss. An unbroken line of authority should exist through the intermediate levels of management from the chief executive to the operative employees. Directions and other communications should be transmitted to subordinates and control exercised over them through these channels.

58. <u>Principle of Unity of Command</u>: The more completely an individual has a reporting relationship to a single superior, the less the problem of conflict in instructions and the greater the feeling of personal responsibility for results. (Ref 75:444)

The Principle of Authority-Level refers to the idea that work should be assigned to the lowest organizational level that can properly do the work.

59. <u>Principle of Authority-Level</u>: Maintenance of intended delegation requires that decisions within the authority competence of individual managers be made by them and not referred upward in the organization structure. (Ref 75:444)

<u>Line</u> <u>and</u> <u>Staff</u> Relationship. Four principles dealing with line and staff relationships are presented here. The first two

35

emphasize the importance of line functions; the second two insure that the products of the staff are properly utilized by the organization.

    60. <u>Principle of Staff Advice</u>: Staff should not be given rights of command, but rather, rights of advice, suggestion, and recommendation. (Ref 42:179)

    61. <u>Principle of the Limitation of Staff Economy</u>: In order for the primary or line functions to be performed with maximum effectiveness, it is sometimes necessary for the supporting staff to operate with less than maximum economy. (Ref 42:179)

In other words, it is the function of staff to serve the line with expert advice and services. It is not the function of the line to serve and adjust to staff. However, even though staff advice is not backed by direct authority, the line should listen.

    62. <u>Principle of Compulsory Staff Advice</u>: Line personnel are required to listen to and consider staff advice but are not compelled to accept it. (Ref 42:180)

Large organizations frequently employ staff experts in order to improve the quality of non-routine decisions. The Principle of Compulsory Staff Advice allows maximum use of the knowledge of the experts.

The line manager may insist on agreement with his decisions or judge the staff people as incompetent if there is disagreement. Under such conditions the staff will certainly become ineffective. The staff must have respect, independence and security to give advice freely.

    63. <u>Principle of Staff Independence</u>: Staff personnel should feel sufficiently secure to enable them to render truthful advice. (Ref 42:180)

The Structure of Organization. The structural aspect of organizations involves both the organization framework itself and the problems of assigning activities to the different organizational units.

The Principle of Division of Work deals with the concept that similar tasks should be grouped together. This principle is applied when major functions of an organization are grouped together by departments. The principle means that the manager should avoid the duplicating or overlapping of jobs.

64. Principle of Division of Work: The more an organization structure reflects a classification of the tasks or activities necessary to attain goals and assists in their coordination, and the more that roles are designed to fit the capabilities and motivations of people available to fill them, the more effective and efficient an organization structure will be. (Ref 75:444)

Division of work is sometimes misinterpreted or confused with the Principle of Specialization which is concerned with increasing efficiency through increased task specialization. The concept of specialization to increase efficiency was used extensively in the past and is still widely used today; however, managers have learned that specialization can be carried too far. Among other things, cost of increased coordination efforts and of low levels of job satisfaction sometimes can offset the gains of further task specialization.

65. Principle of Specialization: The more specialized the work assigned to individuals within the limits of human tolerance, the greater the potential for efficient performance. (Ref 5:105)

Sometimes difficulties are encountered in assigning activities that would logically be placed in separate departments but are, for some conflicting practical reason, best undertaken together. Functional interest can be useful in grouping activities that are closely related in terms of purpose.

66. <u>Principle of Functional Definition</u>: The more a position or a department has a clear definition of results expected, activities to be undertaken, organization authority delegated, and authority and informational relationships with other positions, the more adequately individuals responsible can contribute toward accomplishing enterprise objectives. (Ref 75: 445)

Responsibility for functions should also be clearly defined and assigned to a given individual. The fixation of definite responsibility is important because it assists in getting the work accomplished, points out areas needing remedial action, and minimizes buckpassing. It requires the individual so designated to perform the task.

67. <u>Principle of Fixed Responsibility</u>: For any given period, an individual will accomplish most when responsibility for the completion of a definite task is fixed upon that individual. (Ref 128:302)

The successful operation of organizations of all types requires that certain activities be undertaken purely as a check upon the effectiveness and propriety with which functions are carried out. These activities should be assigned to a manager independent of the executive whose work is being evaluated.

68. Principle of Separation: If some activities are designed to be a check on others, individuals charged with the former cannot adequately discharge their responsibility if they report to the department whose activity they are expected to evaluate. (Ref 75:445)

Louis Allen states four additional principles related to the structure of organizations. These are the Principles of Busyness, Management Emphasis, and Organization Levels.

On busyness, Allen says:

> If ten people are actually required to do the necessary work of an organization component, almost certainly twelve or fifteen could be easily engaged in the same activity. An individual who knows that he must appear busy, if he is to retain his job, will always find work to do.

69. Principle of Busyness: The more people in an organization, the more work they will find to do. (Ref 5:108)

The best solution to the busywork problem is a rational approach to organization, with each person carrying a full job of important work with authority to make most of his or her own decisions.

Most people are biased in favor of familiar things and those that yield greatest personal returns. A manager who supervises two different functions, such as engineering and research, after experience only in one, will normally show preference to that one by favoring it in budget allocations, assignment of personnel, and other ways.

70. Principle of Management Emphasis: When supervising two or more differing functions, products, or geographic units, a manager will tend to show preferential emphasis in his decisions and choices; the closer to the line of operations he is located organizationally and the greater the differences in the units he supervises, the greater will be his preference. (Ref 5:112)

39

The Principle of Organizational Levels deals with the concept that knowledge and skill required for management varies with the organizational level. Top managers tend to require more conceptual knowledge while supervisors require more technical knowledge.

> 71. <u>Principle of Organizational Levels</u>: The lower his organization level, the more technical work a manager tends to perform. (Ref 5:57)

<u>The Process of Organizing</u>. The principles in this section should serve as useful guides to the organizing process.

In every structure there is a need for balance. For example, the inefficiencies of broad spans of management must be balanced against the number of organization levels. The need for balance in organization is expressed in the Principle of Balance.

> 72. <u>Principle of Balance</u>: The organization must be continually surveyed to ensure that there is reasonable balance in the size of various departments, between standardization of procedures and flexibility, and between centralization and decentralization of decision making. (Ref 29:113)

Another important aspect of the organizing process is flexibility. Changes that take place within an organization should be planned and directed toward the achievement of established objectives and should not be influenced unduly by short-term conditions. An organization should be capable of coping with such problems as those resulting from sharp changes in business activity or the loss of personnel. George Terry calls this dynamic organizing. Koontz and O'Donnell call it the Principle of Flexibility.

73. <u>Principle of Flexibility</u>: The more provisions are made for building flexibility in organizational structures, the more adequately an organization structure can fulfill its purpose. (Ref 75:446)

Shrode and Voich go much deeper into the concept of flexibility with their series of four principles on how to achieve flexibility in an organization.

As organizations have grown in size and complexity, the degree of subsystem differentiation has continually increased. This differentiation is necessary to provide the added specialization required by the alteration and enlargement of organizational objectives in response to a rapidly changing environment.

74. <u>Principle of Multidimensionality</u>: An organizational structure that reflects a high degree of multidimensionality differentiation, that is, specialization by managerial level (vertical), by task (horizontal), and by technical expertise (staff)... generally will be more likely to achieve a highly diversified set of goals in a rapidly changing environment. (Ref 116:320)

In response to the changing environment, organizations must employ specialization and structural differentiation to achieve efficiency and to accomplish a diversified set of goals. This means that activities must be separated which makes coordination difficult. This leads to the need for integration of the activities to achieve common goals.

75. <u>Principle of (Subsystem) Integration</u>: An organization that achieves a high degree of coordination and integration of activities (or subsystems) derived from emphasis upon work as a set of interrelated input - output transformation processes... generally will be more likely to achieve a high level of overall organizational performance in a rapidly changing environment. (Ref 116:305)

41

According to Shrode and Voich, the key to providing a dynamic structure for organizational systems is a somewhat new and different view of the nature of man. This view recognizes the need for man to specialize, but it also stresses that man is an increasingly complex being with varied needs, interests, and capabilities. Therefore, there is a need for a principle for designing an adaptable organizational structure.

76. Principle of (Individual and Group) Adaptability:
An organization that provides a high degree of job flexibility and job variety and makes the organization structure more compatible with the varied interests and multiple talents of modern man...
generally will be more likely to attain a flexible, organizational system structure which is more adaptable to a rapidly changing environment. (Ref 116:308).

Shrode and Voich sum up the Principles of Multidimensionality, Integration, and Adaptability in the Principle of Management by Structure.

77. Principle of Management by Structure: The combined application of multidimensional differentiation and task specialization, subsystem coordination and integration, and individual and group task flexibility and variety...
generally will provide a more adaptable, dynamic organizational system structure which will likely be responsive to a complex, rapidly changing environment and thereby achieve a high level of organizational efficiency and effectiveness. (Ref 116:309)

The final principle in the area of organization process is the Principle of Leadership Facilitation.

78. Principle of Leadership Facilitation: The more an organization structure and its authority delegation make it possible for managers to design and maintain an environment for performance, the more it will facilitate their leadership abilities. (Ref 75:446)

In other words, the organization structure should create an environment in which the manager can most effectively lead.

The structure itself should not hinder leadership but should promote it by creating a situation in which the authority allocations and structural arrangements present the managers as leaders and facilitate their leadership tasks.

Staffing. The final section of organizing principles deals with staffing which is "the proper and effective selection, appraisal, and development of personnel to fill the roles designed into an organizational structure." (Ref 75:449) The purpose of staffing can be summarized in the following principle.

79. Principle of Staffing: The better the definition of organization roles, their human requirements, and the techniques of manager training and appraisal, the more assurance there will be of managerial quality. (Ref 75:530)

A number of principles explain the means by which staffing is most effectively accomplished.

80. Principle of Job Definition: The more precisely known the results that managers are expected to attain, the more the dimensions of their position can be determined. (Ref 75:531)

The Principle of Job Definition is quite similar to the Principle of Functional Definition noted earlier. Since organizational roles must be filled by people, it is obvious that built into these roles must be those elements - such as pay, status, power, discretion, and the possibility of accomplishment - that induce people to perform.

81. Principle of Managerial Appraisal: The more specific the management results intended, the more closely managers should be appraised in their terms. (Ref 75: 531)

43

The Principle of Managerial Appraisal highlights the fact that an enterprise can hardly wish to have managers who apparently know management but who cannot perform. And there is danger in having a performer who cannot manage. The best assurance for the future is a person who is both a good performer and a good manager.

82. Principle of Open Competition: The more an enterprise is committed to the assurance of quality management, the more it will encourage open competition among all candidates for management positions. (Ref 75:531)

Violation of the Principle of Open Competition in promotion has led many firms to appoint managers whose ability is inferior. Although social pressures are strongly in favor of promoting people from within the firm, these should be resisted whenever better candidates can be brought in from the outside. At the same time, the application of this principle places an obligation on an enterprise to appraise its people accurately and give them opportunities for development.

83. Principle of Management Training: The more effectively training programs provide information required by managers in their present positions, make them promotable, and involve top managers in the process, the better they will be. (Ref 75:531)

Managerial development means one thing: improving the ability of managers to perform their functions. As a consequence, training should always be a process of education directed toward meeting their needs for knowledge or overcoming weaknesses as these are identified through the appraisal program.

84. Principle of Continuing Development: The more an enterprise is committed to managerial competence, the more it requires managers to practice continuing self-development. (Ref 75:531)

The Principle of Continuing Development may seem unduly harsh, and yet the competitive demands upon an enterprise and its social responsibilities are such that it cannot afford to muddle through with managers who have no interest in developing themselves.

This concludes Chapter III and the presentation of principles of the planning and organizing functions. Chapter IV presents principles of the directing and controlling functions as well as a miscellaneous category of other principles.

IV Development and Analysis of Directing

and Controlling Principles

The preceding chapter presented principles of planning
and organizing. This chapter continues the presentation of
principles. Specifically, principles of the managerial func-
tions of directing and controlling as well as a miscellaneous
category of other principles.

Directing Principles

The third function of management - directing - has also
been called leading, actuating, stimulating, guiding, and
motivating. Any one of these terms clearly indicates that
this function of management is concerned with the human element
of an organization. It is a result of the efforts of each
member of an organization that goals are attained; therefore,
a major function of the management process is to direct the
organization so that objectives may be achieved.

Directing principles are classified into those dealing
with (1) the purpose of directing, (2) the process of directing,
(3) motivating, (4) training, and (5) communication.

The Purpose of Directing. The purpose of directing can
be emphasized in the following principle.

85. Principle of Directing and Leading: The more effec-
    tive directing and leading are, the greater will be
    the contribution of subordinates to organizational
    goals. (Ref 75:631)

While effective directing cannot do this without plans, organi-
zation structure, an adequate staff, and effective controls;

the job of getting people to understand their goals and roles and of motivating people is an integral part of the process.

Although employees work to satisfy needs not necessarily the same as the objectives of the organization, these needs should be in harmony with, and complementary to, the interests of the organization, and not contrary. Directing and leading of subordinates is undertaken as a means to facilitate their contribution to the enterprise. This is achieved most effectively if the individual and organizational goals are mutually supportive. Shrode and Voich refer to this concept as the Principle of Goal Congruence while Killen calls it the Principle of Unity of Purpose and Koontz and O'Donnell refer to it as the Principle of Harmony of Objectives.

> 86. Principle of Harmony of Objectives: An organization that develops an internal climate which continually recognizes the interdependency of individual, group, and organizational goals, and one that seeks to achieve a balance between individual needs and social-human values...
> generally can more likely develop an optimum set of goals that will be equitable for the organization and its members and will motivate them to pursue organizational goals as a means of satisfying their own personal needs and values. (Ref 116:341)

The Process of Directing. The process of directing is summarized in the principles listed in this and the following sections on motivation. Although motivating is part of the directing process, the large number of principles dealing with the motivation of employees warrants a separate section.

The utilization of objective devices for evaluation and correction of activities of subordinates to assure accomplishment of objectives is possible, but there is no substitute for

47

face-to-face contact with subordinates. Seldom is objective non-personal information adequate to give the manager all that is needed to accomplish the job effectively. This leads to the Principle of Direct Supervision.

> 87. Principle of Direct Supervision: The more direct personal contact with subordinates is, the more effective direction and leadership will be. (Ref 75:632)

The primary concern of every manager should be the performance of the management work assigned to his position. He should avoid the temptation to perform the work of his subordinates. To the extent that he concentrates on management, the manager can multiply his results by what he can get others to do for him. Louis Allen refers to this concept as the Principle of Management Results.

> 88. Principle of Management Results: A person in a leadership position tends to secure most effective results through and with others by performing the management work of planning, organizing, leading (directing), and controlling. (Ref 5:60)

Allen also states the Principle of Technical Priority. This principle deals with the idea that managers, who have usually advanced their careers by progression through technical specialisms, are more familiar with technical work, and are more comfortable with it. These managers are often experts in their fields and become impatient with the mistakes of their subordinates. This type of manager has a tendency to do the work himself so that he can be sure it meets his standards. Since this principle does not fit the definition established for this thesis, it is included here for informational purposes only.

Principle of Technical Priority: When called upon to do
management work and technical work during the same time
period, a manager will tend to give first priority to
technical work. (Allen 1973:60)

Another principle and caution provided in the directing

function is presented by Louis Allen in the Principle of Human

Reaction.

89. Principle of Human Reaction: Every action directed
at another person evokes a similar and increasing
reaction in the terms in which it is understood.
(Ref 5:17)

For example, a mild reproof tends to generate antagonism greater

than the words or intention warrant; hate generates even greater

hate.

The manager has many alternative techniques of directing

available for his use. The actual selections must be made

based on the effectiveness of each technique. The manager

must evoke the best performance possible. If quick action is

required, it might be necessary to temporarily disregard the

satisfaction of the subordinate. That is, not only must people

be considered, but situations as well.

90. Principle of Directing and Leadership Techniques: As
people, tasks, and organizational environment vary,
effective techniques of directing and leading will
reflect personalities, task structures, and contin-
gencies. (Ref 75:633)

Leadership is most effective when people can be encouraged

and inspired to work because they want to, not because they are

forced. However, when the situation requires, an effective

leader must be able to compel the necessary action. According

to Allen, the natural leader will intuitively apply the

Principle of Leadership Force.

49

91. Principle of Leadership Force: The greater the divergence of the individual objectives of the members of the group, the greater the leadership force required to ensure cohesive action. (Ref 5:32)

Rensis Likert places great significance on the importance of genuine, trusting, interpersonal and group relationships. A central idea in his view of leadership is his Principle of Supportive Relationship.

92. Principle of Supportive Relationship: The leadership and other processes of the organization must be such as to ensure a maximum probability that in all interactions and in all relationships within the organization, each member, in the light of his background, values, desires, and expectations, will view the experience as supportive and one which builds and maintains his sense of personal worth and importance. (Ref 1:499)

When a group of people performs near its total capability, it generally has some person as its head who is skilled in the art of leadership. Almost every possible role in an organization is made more satisfying to participants and more productive for the organization by those who can help fulfill desires for such things as money, status, power, or pride of accomplishment. This leads to a fundamental Principle of Leadership.

93. Principle of Leadership: Since people tend to follow those in whom they see a means of satisfying their own personal goals, the more managers understand what motivates their particular subordinates, how these motivators operate, and the more they reflect this understanding in carrying out their managerial actions, the more effective leaders they are likely to be. (Ref 75:632)

It is apparent from the preceding principle that an understanding of motivators and how they operate is important to the directing process. The following section presents principles dealing with the motivation of employees.

Motivation. Because managing involves the creation and maintenance of an environment for the performance of individuals working together in groups toward the accomplishment of a common objective, it is obvious that a manager cannot do this job without knowing what motivates people. The principles of motivation are presented in this section.

94. Principle of Motivation: Since motivation is not a simple cause and effect matter, the more managers carefully assess a reward structure, look upon it from a contingency point of view, and integrate it into the entire system of managing, the more effective a motivational program will be. (Ref 75:632)

Since what people will respond to depends on their personality, their perceptions and expectancies of rewards and tasks, and the organizational climate, simply identifying needs in general and building a system for motivating people on the basis of these needs often does not work. Because motivation is a highly personal thing and is contingent on many factors in a situation at a given time, it is an area of great complexity. Not only should "people programs" try to deal with this problem, but also motivators must be built into the entire system of managing. Motivators cannot be looked at as a separate and independent phenomenon. (Ref 75:632)

The more opportunity people have to participate in the decisions that will affect them, the greater the personal ownership they will have in the work and the results they will accomplish. People will be more motivated to accomplish results if they are given the opportunity to participate in the decisions affecting those results. This concept is known as the Principle of Involvement or Participation.

95. <u>Principle of Participation</u>: An organization that <u>provides real opportunities</u> for individuals to be involved in group activities and tasks through an open communication process and to participate in group decision making...
generally will be more likely to resolve group conflicts positively and to gain acceptance of organizational goals by its members, which should lead to increased organizational productivity and individual and group satisfaction. (Ref 116:353)

The manager who makes an obvious effort to keep subordinates informed is actually indicating to these subordinates that they are important and that they should know what is going on. The manager who withholds information from subordinates is telling these subordinates that they are of little importance and need not know what is occurring. The more a person knows about a matter, the more interest and concern that person will develop.

96. <u>Principle of Communication</u>: Motivation to accomplish <u>results tends to increase</u> as people are informed about matters affecting those results. (Ref 5:177)

People will continue to work hard if they receive appropriate recognition and satisfaction for their efforts. The manager who gives credit to a person who has earned it is making clear that that person is an important member of the team. However, recognition must be sincere. People know when they have done a good job. Unwarranted flattery will rarely fool them.

97. <u>Principle of Recognition</u>: Motivation to accomplish <u>results tends to increase</u> as people are given recognition for their contribution to those results. (Ref 5:178)

Managers who allow subordinates to make their own decisions about how a task should be done make it plain that they feel their subordinates are capable and important individuals. On

the other hand, managers who require subordinates to consult them for every small decision show that they believe their subordinates are not capable and cannot be trusted.

> 98. <u>Principle of Delegated Authority</u>: Motivation to accomplish results tends to increase as people are given authority to make decisions affecting those results. (Ref 5:179)

Another method of motivating people is to capitalize on the need for achievement which is a need characteristic to many people.

> 99. <u>Principle of Achievement</u>: An organization that tries to develop integrative attitudes and provides real opportunities for individual achievement, maturity, and growth...
> generally will be more likely to optimize individual and organizational productivity which will lead to the greatest possible level of human satisfaction. (Ref 116:365)

Still another method of motivation is job enrichment. The concept of job enrichment was originally developed by Frederick Herzberg to "improve both efficiency and human satisfaction by means of building into people's jobs, quite specifically, greater scope for personal achievement and recognition, more challenging and responsible work, and more opportunity for individual advancement and growth." (Ref 47:240)

<u>Principles of Job Enrichment</u> (Ref 47:241)

> 100. Removing controls while retaining accountability.

> 101. Increasing the accountability of individuals for their own work.

> 102. Giving a person a complete natural unit of work (module, division, area, etc.)

> 103. Granting additional authority to an employee in his activity; job freedom.

53

104. Making periodic reports directly available to the worker himself rather than to the supervisor.

105. Introducing new and more difficult tasks not previously handled.

106. Assigning individuals specific or specialized tasks, enabling them to become experts.

Another aspect of motivation is the concept of organizational behavior modification. O.B. MOD (as it is sometimes called), unlike other motivation theories, does not deal with needs or wants of individuals but rather encourages desired behavior through reinforcement. The basic premise of O.B. MOD is that behavior is a function of its consequences and that positive reinforcement of desired behavior will increase the frequency of that behavior.

Positive reinforcers can be either stimulus or response events. A stimulus is something that is actually received as a result of performing behavior on which the event is contingent. Examples include a promotion, an increase in salary, praise from a respected person, and the awarding of a prize. A response event is the opportunity to engage in some desired behavior. For example, the opportunity for an engineer to work on a project of his own choosing (Project A) may be made contingent on the engineer completing a project to which he has been assigned but on which he prefers not to work (Project B). This principle was originally formulated by D. Premack and bears his name.

107. Premack Principle: Any high probability behavior (Project A) can reinforce any low probability behavior (Project B) on which it is contingent. (Ref 1:411)

In some cases, employees may be motivated with the use of financial incentives.

108. Principle of Financial Incentive: The urge to do more work output for more pay is influenced mainly by the relative importance of more money to the recipient and that person's evaluation of the fairness of the plan under which the extra pay is received. (Ref 128:470)

This concludes the listing of motivation principles. The next section presents principles of training.

Training. Traditional managers have long placed great faith in training as a means of directing subordinates. Training is the process of increasing the knowledge and skill of an individual in a particular area.

Training is valuable to both the organization and the individual. For the organization, training increases productivity, reduces the need for supervision, enhances organizational stability and flexibility, and heightens morale. For the individual, training increases compensation resulting from better productivity, provides greater freedom from supervision, greater security and job opportunities, and improves job satisfaction. Self explanatory principles of training, as taken from the writings of Gibson, Flippo, Scanlan, and Morgan, follow without individual amplification.

109. The trainee must be both motivated to be trained and sufficiently interested in the content of the program. (Ref 42:338)

110. The trainee should be constantly informed concerning the progress of his development. On a continual and periodic basis the trainee should receive feedback on his performance. (Ref 112:429)

111. The higher the degree of trainee participation, through practice and discussion, the more effective and long lasting the training. (Ref 42:339)

112. The trainee should be rewarded (financial as well as nonfinancial) on the basis of results achieved. (Ref 112:429)

113. People learn best when material is distributed in parts over a period of time rather than when it is scheduled continuously. (Ref 98:291)

114. Development should proceed from the known to the unknown and from the simple to the complex. (Ref 42:339)

115. The trainee should have a clear understanding of what the major areas of accountability are and, specifically, what results he should be accomplishing in each area. (Ref 112:428)

116. People learn best when new ideas, subjects, topics, or exercises can be related to their present knowledge and past experiences. (Ref 98:292)

117. People learn skills best through practice and repetition. (Ref 98:292)

118. People learn concepts best when built from the "ground up" with relationship between elements clearly established and linked to the individual's experience and training. (Ref 98:292)

119. Within broad limits the trainee should be able to exercise his own initiative and ingenuity in determining how to achieve certain objectives. (Ref 112:428)

120. People learn best if the learning experience is pleasant and their first experiences are positive and successful. (Ref 98:291)

121. People learn and remember best when the experience is vivid, dramatic, or exciting, and is meaningful. (Ref 98:291)

This concludes a representative listing of principles in the area of training. Principles in the area of communication are presented next.

Communication. Since communication is the means by which people in organizations exchange information, managers have a special need for excellence in communication. The following principles provide guidelines for effectiveness in communication.

122. Principle of Clarity: A communication possesses clarity when it is expressed in language and transmitted in a way that is comprehended by the receiver. (Ref 75:633)

123. Principle of Integrity: All communications should be framed and transmitted in such ways as to support the integrity of the formal organization. (Ref 75:633)

124. Principle of Strategic Use of Informal Organization: The most effective communication results when managers utilize informal organization to supplement the communication channels of the formal organization. (Ref 75:633)

The Principle of Clarity highlights the fact that every message must be expressed in a language understandable to the listener and that full attention should be paid to its transmission and reception.

The Principles of Integrity and the Strategic Use of Informal Organization concern the transmission of communications within an organized group. Since it is important to maintain the integrity of the formal organization, all communications must support its objectives.

Informal organization is a phenomenon which managers must accept. It operates on entirely different bases from those of formal organization, but informal organization is always a part of formal organization. Information flows quickly through informal organizations. As a consequence, managers should take

advantage of this device to correct misinformation and to provide for transmission of information not appropriate for formal communication. This concludes the section on principles related to communication.

The listing of principles dealing with the management function of directing concludes with four principles concerned with correcting or disciplining employees - especially union members.

Kenneth Killen believes that when disciplining a union member, it is necessary to establish sound evidence that the employee needs to be disciplined. Killen believes that to build an effective case that will be defensible against union actions, it is necessary to follow the four principles of case building. The principles of case building are the Principles of Equal Treatment, Equal Effort to Reform, Increasing Severity, and Decreasing Value of Discipline Over Time.

> 125. Principle of Equal Treatment: Employees must be treated alike - they must be judged by the same standards. The penalties, however, do not have to be the same if the circumstances are different. (Ref 70:256)

For example, a worker who makes a bed in an out-of-the-way place and falls asleep during working hours deserves a much harsher penalty than an employee who oversleeps the lunch period due to some medication that was prescribed by a doctor.

> 126. Principle of Equal Effort to Reform: The manager must make an equal effort to correctively train all offending employees. He should not try harder to reform some employees than others. (Ref 70:256)

That is, the manager cannot harass one worker more than another if offenses are the same.

127. Principle of Increasing Severity: Disciplinary action should be increasingly harsh each time the offense is repeated. (Ref 70:257)

128. Principle of Decreasing Value of Discipline Over Time: The value of a disciplinary action diminishes as time passes. (Ref 70:257)

For instance, an employee who was given a written warning three years ago for tardiness cannot now be given a more severe penalty because of that past record. As far as case building is concerned, it is as if that employee had never been tardy before. As a general rule, if a year elapses before the same offense is repeated, the past record has little or no effect on the case. (Ref 70:257)

This concludes the listing of principles related to the directing function of management. The following section presents principles of the controlling function.

Controlling Principles

Controlling implies measurement of accomplishment of events against the specification of the plan, and the correction of deviations to assure attainment of objectives according to plans. Once a plan becomes operational, control is necessary to measure progress, to uncover deviations from plans, and to indicate corrective action. Control involves much more than measurement of deviations from plans. True control indicates that corrective action can and will be taken to return operations to the desired course. To a great extent, control is the function that closes the loop between objectives and achievement in the system of managing.

This section of Chapter IV presents the principles associ-
ated with the control function. Principles of control can be
grouped into four categories: (1) the nature and purpose of
control, (2) the structure of control, (3) the process of con-
trol, and (4) budgetary examples of controls.

The Nature and Purpose of Control. The nature and purpose
of control can be summarized by the principles listed in this
section.

129. Principle of Assurance of Objective: The task of
control is to assure that plans succeed by detecting
deviations from plans and by furnishing a basis for
taking action to correct potential or actual devia-
tions. (Ref 75:736)

Just as with all other functions of management, the purpose
of control is to enhance the attainment of objectives. The
control system should detect any deviation, preferably potential
rather than actual, from plans early enough to permit effective
corrective action.

Control, like planning, should ideally be forward-looking.
Historical data are not good enough for the most effective con-
trol.

130. Principle of Future-Directed Controls: Because of
time lags in the total system of control, the more
a control system is based on feedforward rather than
simple feedback of information, the more managers
have the opportunity of perceiving undesirable
deviations from plans before they occur and of taking
action in time to prevent them. (Ref 75:736)

A manager is made responsible for certain work through
delegation of authority and assignment of tasks. One who is
responsible for the work, should exercise control over that
work. This responsibility cannot be waived, although it might

be delegated, because in the end the manager is accountable for the accomplishment of the work.

      131. <u>Principle of Control Responsibility</u>: The primary responsibility for the exercise of control rests on the manager charged with the performance of the particular plans involved. (Ref 75:737)

Since control techniques have a way of becoming costly, complex, and burdensome, efficiency is particularly important in control. The detection of a deviation can sometimes cost more than it is worth if the manager becomes so engrossed that he forgets the purpose of control. The manager should not employ the control technique with such vigor as to negate the authority delegated to his subordinates. This would seriously interfere with the morale of those who must execute the plans and result in costs beyond measure.

      132. <u>Principle of Efficiency of Controls</u>: Control techniques and approaches are efficient if they detect and illuminate the nature and causes of deviations from plans with a minimum of costs or other unsought consequences. (Ref 75:737)

The more qualified managers are, the better they will perceive deviations from plans and take timely action to prevent them. This means that one direct form of all control is to take steps to assure the highest possible quality of managers. (Ref 75:737)

      133. <u>Principle of Direct Control</u>: The higher the quality of every manager in a managerial system, the less will be the need for indirect controls. (Ref 75:733)

Henry Sisk believes that controls should reveal trends in operations as well as the current status of operations. Sisk expresses this belief in his Principle of Control Design.

61

134. Principle of Control Design: Effective control
      systems are designed to be economical in their
      administration and to reflect organizational struc-
      ture. Such systems should provide management with
      information that is timely, of strategic value, and
      descriptive of the trends of operations as well as
      current status. (Ref 120:463)

The Structure of Control. The principles in this section

are aimed at pointing out how control systems and techniques

can be designed to improve the quality of managerial control.

The purpose of control is to help assure conformance to

plans. This is most easily accomplished when plans are reflected

in the controls.

135. Principle of Reflection of Plans: The more that
      plans are clear, complete, and integrated, and the
      more that controls are designed to reflect such
      plans, the more effectively controls will serve the
      needs of managers. (Ref 75:737)

Since it is the function of an organization structure to

define a system of roles, it follows that controls must be

designed to suit the role where responsibility for performance

of plans lies.

136. Principle of Organizational Suitability: The more
      that an organizational structure is clear, complete,
      and integrated, and the more that controls are de-
      signed to reflect the place in the organization
      structure where responsibility for action lies, the
      more they will facilitate correction of deviations
      from plans. (Ref 75:738)

Effective and timely control must be consistent with the

position, operational responsibility, competence, and needs of

the individual manager, since it is one task of controls to

inform the specific manager who must correct deviations from

plans.

137. Principle of Individuality of Controls: The more that
      control techniques and information are understandable
      to individual managers, who must utilize them for re-
      sults, the more they will be actually used and the
      more they will result in effective control. (Ref 75:
      738)

The Process of Control. This section presents principles
dealing with the process of control.

In any control system, there should be some way to measure
whether a planning program is being accomplished. Good stan-
dards of performance, objectively applied, are the key.

138. Principle of Standards: Effective control requires
      objective, accurate, and suitable standards.
      (Ref 75:738)

For a manager to follow every detail of planning execution
would not only be wasteful and unnecessary, but impossible. All
the manager needs to know is that plans are being performed
properly. The manager must concentrate his attention on salient
factors of performance that indicate any important deviations
from plans without watching everything.

139. Principle of Critical-Point Control: Effective con-
      trol requires attention to those factors critical to
      appraising performance against an individual plan.
      (Ref 75:739)

In a related principle, Louis Allen states that the people
doing the work have most acute and persistent concern for its
accomplishment. The Principle of Point Control recognizes this
and indicates that decentralized control is often the most
effective.

140. Principle of Point Control: The greatest potential
      for control exists at the point where action takes
      place. (Ref 5:214)

In exercising control, the manager can assume that a relatively small number of causative factors will be of greatest importance in securing the results he wants. For example, a relatively small number of customers may account for the greater part of the bad debts. The manager should identify the critical factors that can be expected to give rise to most of the consequences.

141. Principle of the Critical Few: In any given group of occurrences, a small number of causes will tend to give rise to the largest proportion of results. (Ref 5:213)

The manager should concentrate on those matters where performance significantly deviates from established standards. The manager does not need to concern himself with situations where performance equals or closely approximates the expected results.

142. Principle of Exception: Management supervision and correction control should concentrate on the exceptional activities which are not operating according to plan. Activities performing as planned should be handled routinely by subordinates. (Ref 62:194)

The exception principle should not be confused with the Principle of Critical-Point Control. The latter indicates only the points to be watched, whereas the exception principle refers to relative significance of deviations regardless of when or where they occur.

Controls must not be so inflexibly tied in with a plan as to be useless if the entire plan fails or is suddenly changed.

143. Principle of Flexibility of Controls: If controls are to remain effective despite failure or unforeseen changes of plans, flexibility is required in their design. (Ref 75:739)

Control is a wasteful use of managerial and staff time
unless it is followed by action when indicated to be necessary.
If deviations are found in performance, action is indicated,
in the form of either redrawing plans or making additional
plans for corrective action.

144. Principle of Action: Control is justified only if
      indicated or experienced deviations from plans are
      corrected through appropriate planning, organizing,
      and directing. (Ref 75:739)

When a manager closely supervises and corrects the work
of subordinates, the subordinates will tend to resent the sug-
gestions and will act with little enthusiasm. If people have
the tools to check themselves and can correct their own mis-
takes, they will find much greater satisfaction in doing a good
job.

145. Principle of Self-Control: Self-control tends to
      be the most effective control. (Ref 5:215)

Computer techniques and such analytic techniques as PERT
(Performance Evaluation and Review Technique) and CPM (Critical
Path Method) as well as other techniques, have been devised by
organizations for specialized applications related to planning
and control of project time and cost. These techniques provide
an analytical function in facilitating the control function of
management, and reflect the systematic characteristics of
interrelatedness, regulation, and adjustment of activities and
events. However, these techniques do require highly accurate
information to function properly.

Evaluation and adjustment of complex, highly interrelated
operations is a difficult task for management. Cybernetics and

PERT/CPM are important concepts for effecting self-regulation and adaptation to changes in the organizational environment.

146. Principle of Organizational Self-Regulation: An organization that develops timely, relevant, and reliable information for reporting and evaluating deviations in operations from plans and standards... generally will be better able to adjust the implementation of its operations as needed in a routine, timely manner, and thereby will likely improve the performance of the control function of management. (Ref 116:435)

Principles of Budgeting. Although budgeting might be more accurately classified as a business function, budgeting concepts and principles are often found in general management texts. The use of budgets is an effective approach used by managers for checking on the overall performance of an organization. What follows in this section are some general principles of budget preparation that apply mostly to expense budgets.

147. Principle of Variable-Cost and Fixed-Cost Relationships to Profit Potential: For a given enterprise, the lowest variable and highest fixed costs consistent with a break-even point which is less than the smallest probable total sales result in the maximum profit potential. (Ref 128:516)

148. Principle of Decentralized Budgeting: The manager charged with responsibility for controlling department expenses should have the authority to propose the budget for that department. (Ref 70:277)

The Principle of Decentralized Budgeting is a result of an earlier principle. Removing the authority of a manager to prepare his or her own budgets violates the Principle of Parity of Authority and Responsibility.

Every cost of doing business is controllable by someone. However, every cost is not necessarily controllable in every department.

66

149. Principle of Budgeting Accountability: Managers
should be held accountable for costs that they have
control over and should not be held accountable for
costs that they have no control over. (Ref 70:278)

150. Principle of Reporting Budget Results: Managers
should be required to make written monthly reports
to their superiors that explain the reasons for
significant variations between actual and budget
expenses. (Ref 70:279)

According to Killen, there are two reasons for managers
to report budget results. First, the reports keep superiors
informed about deviations from plan and the reasons for them.
Second, it provides an incentive to the managers themselves to
investigate and analyze the reasons for variations in the
spending plan. This in turn will place them in a better posi-
tion to understand and control costs.

This completes the listing of control principles. The
next section presents a few principles which do not readily
fit into the classifications of planning, organizing, directing,
and controlling.

Other Management Principles

Those principles dealing with management as a whole rather
than with a specific management function are presented below.

The concept that managerial skills are transferable from
one function or organization to another is expressed in the
Principle of Universality.

151. Principle of Universality of Management: The func-
tions of management are essentially the same regard-
less of the tasks of the organization or the level
of management. It follows that managerial skills
are transferable from one organization to another.
(Ref 62:194)

Shrode and Voich developed a series of three principles dealing with management as a system and how it relates to its environment. Shrode and Voich believe that the organization, as an open system, exists within and is affected by several key environmental interfaces: human, institutional, economic, technological, and knowledge based. These interfaces and the related environmental issues impinge directly and indirectly upon the organizational system and its basic elements.

152. Principle of Service: An organization producing products and/or services to satisfy the needs and values of its environment at costs of production which are less than the value or utility of its products and/or services to individuals, groups, and organizations in the environment... generally will be more acceptable to its environment, and consequently will be more likely to survive and grow. (Ref 116:185)

153. Principle of Multiple Values: An organization that recognizes more of the important diverse value systems of individuals, groups, and other organizations in its environment and formally weighs the importance of these value systems to its purpose, operations, and accomplishments... generally will attain a purpose and image which are more reflective and responsive, and therefore more equitable and acceptable to individuals, groups, and other organizations that affect and are affected by it. (Ref 116:191)

This Principle of Multiple Values, combined with that of Service, together provide management with general guidelines for interacting with the environment in order to identify equitable values and objectives for the organization. These principles constitute the basis for the search by the organization for opportunities to provide products and services of value to the environment. (Ref 116:191)

The third principle in the series is the planning Principle of Flexibility applied to the systems concept.

> 154. Principle of Organizational Viability: Acknowledgment of the inevitability of change and recognition that change can be an opportunity to plan for and develop better ways to serve the environment... generally will result in effective implementation of new programs for generating value and fusion of these programs into the organization with fewer problems and less resistance. (Ref 116:199)

The next three principles are also by Shrode and Voich. The first deals with the concept of management by objectives.

The Principle of Management by Objectives relates to both the planning and organizing functions of management, particularly to the principles of participation and of objectives. The major purpose of management by objectives is to transform the statement of organizational purpose into precise operating objectives, plans, and budgets in such a way as to influence the behavior of members of the organization in support of agreed-upon goals. (Ref 116:212)

> 155. Principle of Management by Objectives: The involvement of all managers in joint goal setting and evaluation of results, coupled with rewarding performance based on results... generally will provide greater integration of objectives, responsibilities, tasks and performance and will likely instill a spirit of organization based on self-evaluation and self-control. (Ref 116:213)

Management by people is another concept advocated by Shrode and Voich. Essentially the concept involves the application of three previously mentioned directing principles to the concept of organizational development (OD). Organizational development is a total organizational approach to management based on a set of behavioral techniques for managing organizational conflict and change.

69

156. <u>Principle of Management by People</u>: Application of the principles of goal congruence (harmony of objectives), involvement (participation), and achievement through the use of OD programs and techniques... generally will be likely to stimulate individual growth and integrative group attitudes which will lead to more effective management of change and to a more healthy and viable organization. (Ref 116: 380)

The final principle by Shrode and Voich advocates the application of the systems approach to the Management Information System (MIS) concept. MIS is defined as an "integrated group of information systems that serve total operations and management." (Ref 116:452)

157. <u>Principle of Management by Information</u>: The systems approach to the design of a management information system which provides an objective-user orientation in defining information needs for operations and management, links the information processes and inter-connects information (sub)systems through an integrated data base, and centralizes the management of all MIS design, implementation, and monitoring activities...
generally will lead to achievement of risk reduction, communication, and self-regulation through the provision of better information outputs for operations and management with optimum performance of the information-processing function. (Ref 116:452)

This concludes the listing of principles found in general management texts published since 1970 regarding the directing and controlling functions and the miscellaneous category of other management principles. An analysis of the list of principles and identification and discussion of trends follows.

V Comparison, Analysis, and
Discussion of Trends

Chapters III and IV presented and discussed management principles which were found during the review of general management texts published since 1970. This chapter compares the list of principles developed in Chapters III and IV to the list developed by the writers of the 1970 thesis. The result of the comparison is a division of principles into three general classifications. These are: (1) principles found during both studies, (2) principles listed in the 1970 study but not found during the research effort for the 1978 study, and (3) principles newly stated or developed since 1970. The principles of the first general classification, newly stated principles, are further classified into four categories representing a tentative identification of trends in the development of management knowledge. Each of the four categories of newly stated principles is then analyzed, discussed, and supported through further research and a final identification of trends is made.

Part of the further effort to identify and analyze trends in this chapter consists of comparing the latest editions of seven of the more popular general management texts to the earlier editions used in the 1970 study. In addition to providing support for the trends indicated by the analysis of newly stated principles, the comparison and analysis of earlier and latest editions of texts identified another, more recent

71

trend in management development. This additional trend is also discussed in this chapter.

The chapter concludes by reviewing and drawing conclusions about the objectives and research questions of this thesis.

Discussion and Methodology of Comparison

One of the purposes of this thesis was to identify trends in the continuing development of the management discipline. Part of the process of identifying trends consisted of comparing the list of 157 management principles compiled from the review of 116 general management texts published since 1970 to the list of 112 principles compiled in the earlier 1970 thesis on the same subject. The comparison led to the classification of all the principles of both lists into three general areas.

The first general classification consists of 51 principles which were found to be listed in both studies. The complete list of principles compiled during this study is shown in Appendix A and the principles which were listed in 1978 as well as in 1970 are identified in Appendix A by an asterisk (*). This classification consists mainly of such firmly established and accepted management principles as Unity of Command, Parity of Authority and Responsibility, Delegation, and Span of Management.

The second general classification of principles is shown in Appendix B and consists of 52 principles listed in the 1970 study but not found during the research effort for the 1978 study. Appendix B also shows the source and date of each principle.

72

A review of the dates of the principles in Appendix B shows that most of the principles listed are from the 1950s or earlier or were derived by the writers of the 1970 study. (The purpose of the 1970 study was not only to compile management principles as found in the literature but also to derive or develop new principles in areas where principles were not specifically stated by authors of management texts.) This observation could lead to two different conclusions. On the one hand, it may be that, since management is a dynamic discipline and principles represent current knowledge of the management discipline, these principles simply have not withstood the test of time. On the other hand, as discussed in Chapter I, some principles in Appendix B may simply be the result of the fact that some authors of management texts, rather than building on the body of knowledge already in existence and developing a complete set of principles, may have chosen to approach the subject on an individual basis, or may have simply been unaware of some previous compilation of principles in the literature.

In any case, it is beyond the scope of this study to determine the validity or invalidity of the respective principles. The list of principles in Appendix B is included for the sake of completeness and in the hope that it will contribute to the further development of a unified body of management knowledge.

The third general classification consists of 106 principles which, if the results of the comparison are accepted, have been developed since 1970. The large number of supposedly newly stated principles, however, provided little useful information

about trends and caused a certain amount of skepticism as to the validity of the results of the comparison. This led to further research of texts reviewed during the 1970 study and the subsequent discovery that a number of "new" principles were actually principles found in texts published before 1970. It is apparent that, although the writers of the 1970 thesis employed a definition of the term "principle" similar to that employed in this study, the writers chose to interpret the definition more stringently. As a result of reviewing several pre-1970 texts, 24 principles were reclassified into the first general classification, principles listed in both studies, and are identified in Appendix A by the double asterisks (**).

The principles (82) remaining in Appendix A are now classified as newly developed principles and serve as the ultimate basis for the identification of trends in this study as discussed in the following section.

Identification of Trends

As indicated in the preceding section, the comparison of the current list of principles with the 1970 list resulted in a classification of all of the principles from both lists into three general classifications: (1) principles listed in both studies (75 principles), (2) principles listed in 1970 but not in 1978 (52 principles), and (3) newly stated principles since 1970 (82 principles). The first two classifications serve no further purpose in this study. The third classification, newly stated principles, serves as the basis for the preliminary

identification of trends in this section. As a first step in the identification of trends the list of newly stated principles was subjected to further analysis and subclassified into four categories.

Further analysis of the list of newly developed principles indicated that 26 of the 82 principles, although newly stated principles, actually deal with "old" topics or variations or expansions of older principles. For example: the Principles of Present Choices and Positive Action deal with the planning function of management and are related to such firmly established planning principles as the Principles of Flexibility and Stability; the Principle of Single Accountability as to Task is actually a variation of the well known Principle of Unity of Command or, stated differently, the Principle of Single Accountability as to Superior; and the Principles of Reasonable Goals and Confidence in Objectives support the popular Principle of Participation in Planning.

The 26 principles mentioned above are listed in Appendix C and are classified as Category 1, principles closely dealing with or simply restating or reaffirming earlier established management concepts. The principles in Category 1 do not individually indicate any particular trends; however, as a group, Category 1 principles support the theory that management, as a dynamic discipline, continues to change and develop and principles continue to change and develop with it.

Another group of 22 principles seems to indicate a growth in the use of quantitative management techniques. For example:

the Principles of Risk Reduction, Measurement, Optimization, and Rationality all deal with a quantitative approach to decision making and can be interpreted as applications of operations research techniques. Other principles in this group, principles such as the Principle of Self-Regulation, can be interpreted as applications of production management techniques. This group of principles is listed in Appendix C and is classified as Category 2, principles possibly indicating growth in attention to quantitative management techniques.

The third category lists such principles as the Principles of Motivation and the Principles of Job Enrichment. These principles are classified as Category 3, principles tentatively indicating a growth in attention to behavioral concepts of management. There are 28 principles involved in this category.

The fourth and final group lists the Principles of Multidimensionality, Integration, Adaptability, Management by Structure, Service, Multiple Values, and Organizational Values all of which deal very explicitly with the concept of systems management. These seven principles are classified as Category 4, principles indicating possible growth in attention to the concept of systems management.

Throughout the descriptions of the four categories above, no definite statements about trends were made. This was done for two reasons: first, as discussed earlier, it is believed that the data used to develop the list of newly stated principles was not sufficient to provide conclusive information without further research. Second, the newly developed principles

listed in Appendix A do not necessarily represent the "latest"
developments in the field of management. It takes several
years after the development of a new management theory for
that theory to appear in general management texts. Still more
time is required for enough experience to be gained so that
new principles can be fully developed, tested, and accepted.

As an example, the theory of behavior modification, or
operant conditioning as developed by B.F. Skinner (Ref 160),
has been widely accepted and practiced in the field of psychol-
ogy since the 1950s. In the late 1960s behavior modification
was beginning to be recognized as a potentially powerful management
technique. (See "Of Pigeons and Men" Ref 159). In 1975,
in Organizational Behavior Modification (Ref 54:33-34), Luthans
and Kreitner stated three principles of organizational behavior
modification. However, the concept of behavior modification
is just beginning to appear in general management texts and
the three principles by Luthans and Kreitner were not found in
any general management text reviewed for this study.

In recognition of the facts that the results of the com-
parison of the 1978 list to the 1970 list may be inconclusive
and that some newly developed principles may not represent the
latest developments in the field of management and in a further
effort to identify and analyze trends, the latest editions of
seven popular general management texts were compared to the
earlier editions used in the 1970 study.

The texts used, as shown in the first part of Appendix D,
were by Dale, Hicks, Koontz and O'Donnell, Longenecker, Sisk,

Terry, and Voich and Wren. Contents of the earlier and latest editions of each text were compared and newly introduced or greatly expanded topics in the latest editions were identified. In this way it is believed that the latest trends in general management, as well as support for trends derived from the list of newly stated principles, could be identified.

The results of the topical comparison, as shown in Appendix D, indicate support for some of the trends derived from principles and clearly identify one major additional trend; the growth of attention to the concept of contingency management.

To summarize, this section of Chapter V has identified four groups of newly stated principles representing four apparent trends in the development of the management discipline in the 1970s. A fifth trend was identified through the comparison of texts and relates to the prevalence of the use of the term contingency management. The next section analyzes, discusses, and develops further inferences and observations about each of the five areas.

Analysis and Discussion of Trends

The preceding section identified four categories of principles as indicating trends in the development of management knowledge plus an additional trend as identified through the comparison of earlier and latest editions of seven texts. In condensed form the five categories are: (1) an increase in stated management principles, (2) quantitative management

techniques, (3) behavioral concepts, (4) systems management, and (5) contingency management. Each category is analyzed and discussed in this section.

Management Principles. A review of the data presented earlier in this chapter could lead one to the conclusion that the 1970s have seen a substantial change in the writing habits and a very significant increase in the number of principles stated by authors of general management texts. The figures show 157 principles listed in this study as opposed to 112 principles listed in the 1970 study and that 82 are classified as newly stated principles. The figures, however, should not be interpreted as being totally descriptive or self-sufficient without further explanation.

As discussed earlier, the fact that the definition of the term "principle" is subject to interpretation could account for much of the difference in the data. It was determined that, for purposes of this study, the results of the comparison of the two lists of principles could not be used to identify trends without support from further research. Further research accomplished by a comparison of earlier and latest editions of texts did not reveal convincing general evidence supporting any hypothesis regarding the number of stated management principles as having either increased, decreased, or remained the same during the 1970s. While the number of principles stated by some authors, such as Koontz and O'Donnell, have increased, the number of principles stated by others, such as Terry, have decreased. In short, it cannot be concluded that the number

of stated management principles has increased or decreased during the 1970s.

As discussed earlier, although the principles in Category 1 do not indicate any particular trends; as a group, Category 1 principles support the theory that management, as a dynamic discipline, continues to change and develop and principles continue to change and develop with it. While this observation may be readily apparent to some people, it is not universally accepted. During the research effort for this study, a number of texts were found in which the author criticized the use of management principles.

Principles have been criticized because they are not based on empirical research, because they are not consistent with other principles, and because they are too rigid. Douglas Basil believes that "the effective practice of management requires the judicious application of a set of managerial skills rather than the utilization of abstract principles." (Ref 10: preface) Other critics reject principles because principles tell managers the "one best way" to manage and there may be no one best way to suit all situations. This criticism is, to a degree, hollow. Proponents of the principles approach recognize that not all cases precisely fit within the guides they prescribe, but critics at times fail to note these reservations.

There are differences in the way outstanding individuals perform in any field - art, music, sports, and business - yet in every field there are some basic guides, principles, or theories which give some direction to a novice and to which

80

the expert returns when his performance begins to deteriorate.
These theories, or guides, can be translated into instructions
which are used to teach others how to act in a particular sit-
uation. Such a body of ideas and concepts from which appropriate
instructions can be derived exist in many areas of human know-
ledge, including management.

Principles are useful guides to action. Principles give
the manager some place to start when faced with a problem and,
if not viewed as presenting totally rigid requirements, can be
very helpful in finding a solution. Charles Perrow says that:

> Though the classical theory was derided for
> presenting principles that were only proverbs,
> all the resources of organization theory and
> research have not managed to substitute better
> principles (or proverbs) for those ridiculed...
> These principles have worked and are still
> working, for they address themselves to the
> very real problems of management... (Ref 8:26)

Principles are a basic and an important component of the
knowledge required to be successful in any endeavor. In all
fields there must be a basis for the development of additional
competence, and competence can only emerge after one has mas-
tered the fundamentals and has the capacity to subsequently
use them. Effective managers use the principles of management
as they are needed.

Quantitative Management Techniques. The second trend to
be discussed is that indicated by the group of principles in
Category 2, principles dealing with quantitative management
techniques. A review of the principles listed in Category 2
reveals that a number of these principles should be reclassified

81

into the first general classification, principles found during both the 1970 and the 1978 studies. Those principles to be reclassified are the Principles of Motion Economy and of Reducing Fatigue which have been available since the Gilbreths conducted their studies in the early 1900s.

The remaining principles in Category 2 (Principles of Risk Reduction, Measurement, Optimization, Rationality, Self-Regulation) are simply newly stated principles about old concepts such as operations research. Further research found no support for the hypothesis that there has been an increase in attention to quantitative management techniques in the 1970s. George Terry, Koontz and O'Donnell, as well as many other authors thoroughly discussed such quantitative decision making techniques as linear programming, game theory, and probability theory in earlier editions of their texts. Although it could be concluded that a number of principles dealing with quantitative techniques have been newly stated, it cannot be concluded that there is a trend to increased use of quantitative management techniques in the 1970s.

Behavioral Management Techniques. The third category of newly stated principles consists of those dealing with behavioral concepts in management. A closer analysis of the principles in category 3 revealed that the Principle of Supportive Relationships is actually a restatement of the "System 4" management concept (participative leadership) expressed by Likert in 1961. (Ref 144:103)

The Principles of Recognition and Delegated Authority are related to the well known Principles of Participation and the Principle of Management by People is simply restating and combining the Principles of Harmony of Objectives with the Principle of Participation. The remaining principles in Category 3, the Principle of Motivation, the Principle of Achievement, seven Principles of Job Enrichment, and the Premack Principle, deal with three specific behavioral concepts: (1) Job Enrichment, (2) Expectancy Theory, and (3) Organizational Behavior Modification.

Although the behavioral approach to management has been well known since the 1930s, there has been a resurgence of interest in the behavioral approach in conjunction with the development of the concepts of job enrichment, expectancy, and behavior modification in the 1970s. Job enrichment is essentially derived from the Herzberg theory of motivation in which job-content factors such as challenge, achievement, recognition, and responsibility are seen as key motivators. Expectancy theory is based on the premise that people are motivated to do things to achieve some goal to the extent that they expect certain actions on their part will help them achieve the goal. Behavior modification is based on the premise that behavior is a function of its consequences; that is, persons choose to act or not to act because of the effects of their actions. Thus, behavior can be modified by manipulating the results of that behavior.

During the research effort for this study, it was found that many of the texts reviewed introduced the three behavioral concepts discussed above as new topics in the latest edition. In the prefatory remarks to his 1978 editions, Ernest Dale says:

> The growing interest in behavioral science has prompted a number of companies to utilize behavioral theories in actually structuring parts of their organizations...Practical use of behavioral findings in planning an organization structure was rare only a few years ago, particularly among large companies. This is not true today. (Ref 29:xi)

George Terry expands his coverage of job enrichment, expectancy theory, and behavior modification. In his prefatory remarks, Terry comments on a new feature in the 1977 edition of Principles of Management.

> A new chapter on human behavior and management presents current behavioral knowledge vital to present day management practice. (Ref 128:vi)

A number of other authors such as Longenecker (Ref 81), Wren and Voich (Ref 138), and Koontz and O'Donnell (Ref 75), also introduce the three behavioral concepts discussed above in their latest editions. Thus, it is concluded that there has been growth in attention to new behavioral concepts of management in the 1970s.

Systems Management. The final category of principles, Category 4, contains seven principles clearly dealing with the systems approach to management. The systems concept is based on the premise that an organization may be viewed as a system of parts working together and interacting with each other and with their environment to achieve the goals of the

organization.   The principles listed under category 4 clearly

support this concept, as evidenced in the following example.

> 76.   Principle of (Individual and Group) Adaptability:
> An organization that provides a high degree of
> job flexibility and job variety and makes the
> organization structure more compatible with the
> varied interests and multiple talents of modern
> man...
> generally will be more likely to attain a flexible,
> organizational system structure which is more adapt-
> able to a rapidly changing environment.   (Ref 116:308)

Evidence to support the hypothesis that there has been

growth in attention to systems concepts in the 1970s is

plentiful.   Many authors have greatly expanded their coverage

of systems concepts.   Koontz and O'Donnell incorporated enough

systems theory into the sixth edition of their management text

to warrant changing the title to include the term "systems."

(Ref 75)   Koontz and O'Donnell support and stress the concept

that managers must operate in an open system (Ref 75:xii) and

state that:

> No book on management, and certainly no practicing
> manager, can overlook the systems approach...
> ... the authors of this book look upon managing as
> a system and upon the treatment of management con-
> cepts, theory, and techniques as a system.   (Ref 75:
> 14-15)

Other authors advocating the systems approach to management

in recent years are Longenecker, Reeser, Rue and Byars, and

Buchelle.   According to Longenecker:

> In recent years, adaptation of systems theory to the
> study of management has provided a valuable integrating
> viewpoint... Adaptation of systems theory to busi-
> ness organization and management has overcome many
> limitations inherent in the earlier (management)
> models and thus provides a more realistic picture
> of business organizations as living, functioning
> institutions.   (Ref 81:24)

Clayton Reeser believes "The only new theory developed in the 1960s... is systems management" (Ref 106:35); and Rue and Byars see the systems approach as "integrating the various approaches to the study of management" in the 1970s. (Ref 111:38) Robert Buchelle has a similar opinion.

> It now appears that the "multiple-modern" approach, strongly influenced by increasing use of computers, is developing into something that is being called systems management. Although systems management is as yet neither fully defined nor fully operational, it does appear to be the label under which the field will once again be unified. (Ref 19:23)

A number of texts built entirely on the systems concept have been published since 1970. Among these are: Organization and Management - Basic Systems Concepts by Shrode and Voich (Ref 116), Management: A Systems Approach by Cleland and King (Ref 24), and Modern Business Management: A Systems and Environmental Approach by Hicks and Gullett. (Ref 61) In recognition of the supporting evidence cited above, it is concluded that there has been growth in attention to the concept of systems management in the 1970s, and it can be expected that an influx of statements of principles will tend to follow within a predictable time lag.

Contingency Management. As discussed in an earlier section, part of the attempt to identify the latest trends in management development consisted of comparing the latest edition of seven texts to the earlier editions used in the 1970 study. The most significant result of the topical comparison of texts was the identification of what is perhaps the most recent major trend in the field of management. All seven of the texts compared

introduced the concept of contingency management as a new

topic in the respective latest editions.

Wren and Voich state that:

> Within the past few years, there has been an
> increasing interest in a set of ideas known as
> "contingency approaches" to management... While
> it is too early to predict the future of these
> approaches, they represent a logical evolution
> in attempts to integrate management theory.
> (Ref 138:45)

Henry Sisk believes that:

> What is needed is an approach that is more con-
> crete and applicable to organizations as we know
> them. Such an approach is known as a contingency
> approach or contingency view of organizations.
> (Ref 120:181)

According to George Terry:

> One of the most recent schools (of management)
> to emerge is the contingency management school.
> With increasing knowledge about the various
> psychological, sociological, and technical cir-
> cumstances of various situations, the contingency
> school will offer much to our theory and practice
> of management. (Ref 128:40-41)

In his prefatory remarks to his 1978 text, Ernest Dale

says:

> One of the developments of recent years has
> been the growing acceptance of "contingency
> management." In this edition an effort has
> been made to explain this theory more directly
> and to show how and why it is applicable to
> various management functions. (Ref 29:xi)

According to the contingency view, appropriate management

practice depends on adaptation to the situation at hand. More

specifically, the best type of organization structure, leader-

ship, or control system, depends on the circumstances and

unique features of the particular situation. Democratic lead-

ership, for example, may work in one situation but not in another.

The contingency concept helps explain many apparent contradictions - for example, why organizations in volatile and rapidly changing environments manage differently from those in placid and relatively stable environments. On the other hand, it now becomes necessary to identify the significant variables that distinguish one situation from another and then discover the most appropriate relationships, leadership, and other management practices in each situation.

Recognition of situational forces and contingencies is not the same as saying there is no better way or best way to manage, or, that the intuition of the manager will produce results that are as good on the average as those of the professionally trained manager possessing and using a knowledge of principles. Rather, it is recognized that management is more complex than it was once believed to be, and that a greater amount of preparation and knowledge is necessary for successful performance.

Since the concept of contingency management is relatively new, only one reference to the contingency approach was found in the list of principles. Koontz and O'Donnell use the contingency view in their Principle of Motivation.

94. Principle of Motivation: Since motivation is not a simple cause and effect matter, the more managers carefully assess a reward structure, look upon it from a contingency point of view, and integrate it into the entire system of managing, the more effective a motivational program will be. (Ref 75)

It is believed that the growth in popularity of the contingency approach will eventually lead to more principles based on the contingency view.

As further evidence of the growth of interest in the contingency concept, a number of management texts published since 1970 use the contingency approach. Among these texts are Organization and Management: A Contingency Approach by Gary Dessler (Ref 30), Management a Contingency Approach by Hillriegel and Slocum (Ref 58), and Introduction to Management: A Contingency Approach by Fred Luthans (Ref 83).

In view of the supporting evidence, it is concluded that there has been growth of interest in the contingency concept of management in the 1970s.

To summarize the identification, analysis, and discussion of trends, four trends have been tentatively identified from a preliminary analysis of the list of newly stated principles as follows: (1) a possible growth in the number of management principles since 1970, (2) a possible increase in attention to quantitative management techniques, (3) a possible increase of attention to behavioral management techniques, and (4) a possible increase in attention to the concept of systems management. A fifth trend, the growth of attention to contingency management concepts, was identified through topical comparison of the latest editions of seven texts to the earlier editions used in the 1970 study. It was concluded that three of the five trends discussed were indeed trends in the development of the management discipline in the 1970s.

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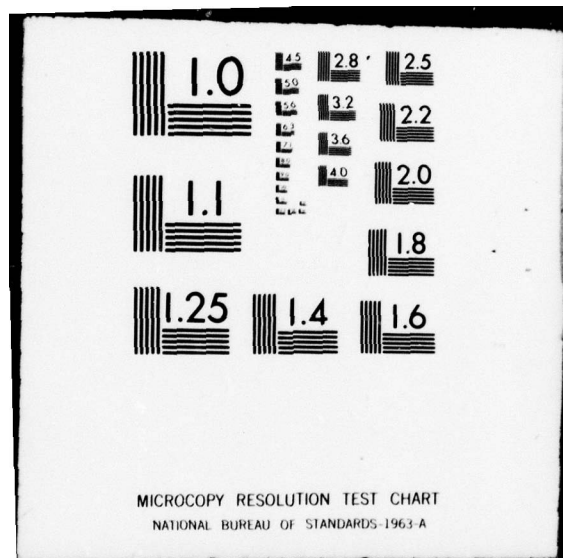
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1. Increased attention to the concept of systems management.

2. Increased attention to the concept of contingency management.

3. Increased attention to certain behavioral concepts of management. (Job enrichment, expectancy theory, behavior modification).

To conclude this chapter, the original objectives of this thesis are reviewed and inferences are developed and stated about each.

Review of Objectives

The primary objectives of this thesis were: (1) to compile a list of principles found in the literature since 1970, and (2) to update the previous study thus developing a complete, current list of management principles. The first objective was essentially achieved by the compilation of principles in Chapters III and IV. The second objective was achieved through the development and compilation of Appendices A and B which combine to provide and project a complete listing of all principles found during the research efforts for both studies.

A secondary objective of this thesis was to compare the list of principles compiled during this study to the list compiled in the 1970 study to identify and analyze trends. This secondary objective was achieved in Chapter V and resulted in the identification of trends in the development of management knowledge in the 1970s.

VI Summary and Conclusions

A list of current management principles was compiled in Chapters III and IV and was analyzed in Chapter V. This chapter summarizes the research presented in this thesis and presents the key conclusions reached.

Summary

Management theory in some form has been traced back to 4000 B. C., although it was several thousand years before anything approaching a continuing, logically consistent set of propositions was established.

The Industrial Revolution beginning in the middle 1700s sparked the development of management as we know it today. It was not until the early 1900s, however, that men such as F. W. Taylor and Henri Fayol advocated the development of management as a science based on principles. Taylor and Fayol were among the first to state principles to be used as broad guidelines for effective management.

Since the time of Taylor and Fayol many authors have published texts dealing with principles of management. Unfortunately, most of the authors, rather than building on the body of knowledge already in existence and developing a complete set of principles, approached the subject on an individual basis. Thus, even today, there is a need for a complete and concise compilation of management principles to serve as guides to the practitioner as well as to the educator and student.

An earlier effort to compile a complete list of management principles was conducted by Mascarella and Browne in a 1970 Air Force Institute of Technology Thesis under the direction of Professor Klug. The purpose of the current 1978 study was to compile a list of principles found in the literature published since 1970 and to update the previous study thus developing a complete and current composite listing of management principles. A secondary objective was to determine what, if any, trends are indicated by the newly stated principles in the continuing evolution of the management discipline.

A review of 116 general management texts published since 1970 resulted in the compilation of 157 management principles which were analyzed and classified according to the managerial functions of planning, organizing, directing, and controlling. The list of 157 current management principles was then compared to the list developed by the writers of the 1970 study. The result of the comparison was the division of principles into three general classifications. (1) Principles listed in both studies, (2) principles listed in 1970 but not in 1978, and (3) newly found or stated principles from the literature published since 1970. The first two classifications consisted of 75 and 52 principles, respectively, and served no further purpose in this study. The third general classification consisted of 82 principles newly stated since 1970 and served as the basis for the identification of trends.

The principles in the third general classification, principles newly stated since 1970, were subclassified into four

categories representing an identification of trends. Category 1
consisted of 26 principles closely dealing with or simply resta-
ting or reaffirming earlier established management concepts.
The 22 principles in Category 2 dealt with quantitative manage-
ment techniques. The third category consisted of 28 principles
related to the behavioral concepts of management while Category
4 dealt with the concept of systems management and contained
seven principles.

The four categories of newly stated principles provided
an identification of trends in the development of the manage-
ment discipline as follows: (1) an increase in the number of
stated management principles, (2) increased attention to quan-
titative management techniques, (3) increased attention to be-
havioral management concepts, and (4) increased attention to
the systems management concept.

It was noted that the newly developed principles do not
necessarily represent the latest developments in the field of
management. It takes several years after the development of a
new management theory for that theory to appear in general man-
agement texts. Still more time is required for enough experi-
ence to be gained so that new principles can be developed,
tested, and accepted.

In an effort to provide support for the trends identified
through the newly stated principles and to identify any trends
which may have been to recent to be found in a list of princi-
ples, the latest editions of seven popular management texts
were compared to the earlier editions used in the 1970 study.

93

The comparison of the earlier and latest editions of texts revealed one additional trend, related to the concept of contingency management, in the development of management knowledge in the 1970s. The comparative analysis of texts also led to the conclusions in the following section.

Conclusions

1. There has been an increase in attention to behavioral management concepts since 1970.

> Discussion: Although the behavioral approach to management has been known since the 1930s, there has been a resurgence of interest in the behavioral approach in conjunction with the development of the concepts of job enrichment, expectancy, and behavior modification in the 1970s. In many of the texts subjected to comparative analysis the authors introduced these behavioral approaches as new topics in their latest editions. In addition, a number of newly stated principles dealt with one or more of the three behavioral concepts discussed above.

2. There has been increased attention to the concept of systems management since 1970.

> Discussion: At least seven principles clearly dealing with the systems approach to management have been newly developed since 1970. Many authors have added or greatly expanded coverage of systems concepts. Several authors have published texts built entirely on the systems concept. These facts support the conclusion that the popularity of systems management has increased in recent years.

3. There has been growth in attention to the concept of contingency management during the 1970s.

> Discussion: The most significant result of the topical comparison of earlier and latest editions of texts was the identification of what is perhaps the most recent major trend in the field of management. All seven of the texts compared introduced the concept of contingency management as a new topic in the respective latest editions. As further evidence of the growth of interest in the contingency concept, a number of management texts published in recent years use the contingency approach.

94

Since the contingency concept is relatively new, only
one reference to the contingency approach was found in
the list of principles. The growth in popularity of
the contingency approach should eventually lead to more
principles based on the contingency view.

4. The number of principles dealing with quantitative manage-

ment techniques as found in this study has increased since 1970

but not sufficiently to conclude that there is a strong trend

toward increased use of quantitative management techniques in

the 1970s.

Discussion: A number of newly stated principles are re-
lated to the use of quantitative management techniques
and initially led to the conclusion that there has been
an increase in the use of quantitative management tech-
niques since 1970. Further research, however, did not
verify the initial conclusion. George Terry, Koontz and
O'Donnell, as well as many other authors of general man-
agement texts thoroughly discussed such quantitative
technique, as linear programming, game theory, and prob-
ability theory in earlier editions of their texts.

5. Results developed from the data used in this study did not

confirm a substantive change in the actual number of management

principles currently being published.

Discussion: The statistical data used in this research
effort shows 157 principles listed in this study as
opposed to 112 principles listed in the 1970 study and
that 82 are classified as newly stated principles. This
could lead one to the conclusion that the 1970s have
seen a substantial change in the number of principles
stated by authors of general management texts. The fact
that the definition of the term "principle" is subject
to interpretation could account for much of the difference
in the data. Further research did not reveal convincing
general evidence supporting any hypothesis regarding the
number of stated management principles as having either
increased, decreased, or remained the same during the 1970s.

This concludes the research effort. The primary objec-

tive of this study was accomplished by compiling a list of man-

agement principles found in general management texts published

since 1970 and combining the current list with the list compiled

95

in the earlier 1970 study. In this way, a complete, current list of management principles was established. The secondary objective was accomplished by comparing the current 1978 list to the earlier 1970 list and classifying principles into categories representing an identification of trends. These trends were verified and an additional trend identified through the comparison of texts.

It is hoped that this study will stimulate further interest in and contribute to the continuing development of a unified discipline of management.

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Appendix A

List of principles found in general management texts published since 1970. Those principles which were also listed in the 1970 study are indicated by an asterisk (*). Those principles which were not listed in the 1970 study but which were found to be pre-1970 are indicated by double asterisks (**). Each principle is followed by one or more references. The first reference is the source for the principles as it is quoted in this thesis. Other references are for authors who also use the principles although they may state it differently and/or list it under a different name.

Planning Principles

* 1. The Principle of Primacy of Planning: Planning logically precedes the execution of all other managerial functions. (75, 42, 62)

* 2. Principle of Objectives: Prerequisite to the starting of any organization or to carrying on any activity is a clear and complete statement of the objectives in view. Only after this can the organization be built and molded to foster the attainment of those objectives with the least amount of effort and cost. (112, 29, 120)

* 3. The Principle of Contribution to Purpose and Objectives: The purpose of every plan and all derivative plans is to facilitate the accomplishment of enterprise purpose and objectives. (75, 120)

4. The Principle of Risk Reduction: An organization that develops and utilizes relevant and reliable information relating to future demand and resource availability in the time and format required for planning... generally will be able to reduce the level of risk involved in achieving future goals and plans, and thereby will likely improve the performance of managerial planning. (116)

107

*   5. Principle of Efficiency of Plans: The efficiency of
        a plan is measured by the amount it contributes to
        purpose and objectives as offset by the costs and
        other unsought consequences required to formulate
        and operate it. (75)

*   6. Principle of Planning Premises: The more individuals
        charged with the planning understand and agree to
        utilize consistent planning premises, the more coor-
        dinated enterprise planning will be. (75)

** 7. Principle of Facts and Planning: To design an effec-
        tive plan, it is necessary to obtain all the available
        pertinent facts, face the facts, and in the plan in-
        clude the action that the facts dictate. (128)

** 8. Principle of Timing: The more plans are structured
        to provide an appropriately timed, intermeshed network
        of derivative and supporting programs, the more effec-
        tively and efficiently they will contribute to the
        attainment of enterprise objectives. (75, 5)

** 9. Principle of Strategy and Policy Framework: The more
        strategies and policies are clearly understood, the
        more consistent and effective will be the framework
        of enterprise plans. (75, 70)

* 10. The Commitment Principle: Logical planning covers
        a period of time in the future necessary to foresee,
        through a series of actions, the fulfillment of
        commitments involved in a decision. (75, 128)

* 11. Principle of Flexibility: The more that flexibility
        can be built into plans, the less the danger of losses
        incurred through unexpected events, but the cost of
        flexibility should be weighed against its advantages.
        (75)

* 12. Principle of Navigational Change: The more planning
        decisions commit for the future, the more important
        it is that the manager periodically check on events
        and expectations and redraw plans as necessary to
        maintain a course toward a desired goal. (75)

* 13. Principle of Planning Stability: The stability of a
        plan tends to vary inversely with its extension (over
        time). (5, 23)

   14. Principle of Present Choices: Current decisions tend
        to limit future action. (5)

15. Principle of Positive Action: The probability of a future event occurring tends to increase as effort is applied systematically towards its realization. (5)

16. Principle of Resistance to Change: The greater the departure of planned changes from accepted ways, the greater the potential resistance by the people involved. (5)

17. Principle of Tangibility: The more tangible an objective, the more direct and specific the effort to achieve it tends to be. (5)

18. Principle of Reasonable Goals: The establishment of reasonable goals provides incentive to accomplish those goals. (42)

19. Principle of Confidence in Objectives: The more respect and confidence accorded the objectives of an enterprise, the more they are accepted and, thus, the greater the likelihood of accomplishment. (42)

* 20. Principle of Participation: Participation in goal establishment by the members of an enterprise makes for greater understanding and acceptance of these goals, as well as a greater correctness in their determination. (42, 111, 116)

** 21. Principle of Ethics: Proper ethics in management require a manager to be honest with self and with society and to deal honorably with others just as one would like to be dealt with. (128)

** 22. Principle of Creativity: Strive for a quantity of ideas within a given time and abstain from evaluating them during the idea-getting step of the creativity process. (128)

** 23. Principle of Work Simplification: Waste in performing work can be eliminated by diligent application of work simplification, which stresses making every component of the work productive by the application of common sense aided primarily by participation with know-how and by employees. (128)

** 24. Principle of Overlap: The minimum overall time required to perform a group of successive tasks on one product is obtained by performing the tasks arranged with a maximum overlapping. (128)

Principles of Motion Economy: (70)

25. Motions of the two hands should be simultaneous and symmetrical.

26. Tools and materials should be located close to and directly in front of the operator so as to be within easy reach of the hands. Transport distances should be as short as possible and movements should be as few as possible.

27. There should be a definite and fixed place for all tools and materials.

28. Gravity feed bins and containers should be used to deliver materials close to the point of use.

29. Tools and materials should be prepositioned wherever possible.

30. "Drop deliveries" should be used wherever possible.

31. The hands should be relieved of all work that can be done more advantageously by the feet. Power-operated tools and equipment should be used wherever economical. A vise, jig, or fixture should be used to hold the work wherever possible, thus releasing the hands for productive work.

32. Materials and tools should be located to permit the best sequence of motions. Rhythm is essential to a smooth, easy work pattern.

33. Smooth, continuous motions of the hands are preferable to zigzag motions or straight-line motions involving sudden and sharp changes in direction.

34. The height of the workplace and the chair should preferably be arranged to permit alternate sitting and standing at work. Adequate lighting should be provided, and the worker should be made as comfortable as possible.

Principles for Reducing Fatigue: (70)

35. Use curved motions in place of sharp, jerky motions.

36. Have machines do the lifting.

37. Use the body correctly by using the right part of the body and by taking advantage of body momentum.

110

38. Provide good working conditions, such as proper lighting, proper temperature, and good ventilation. Eliminate factors such as excessive noise and floors that are hard to stand on like concrete or steel.

39. Allow rest periods for both physical and mental jobs. The harder a job is physically, the more time should be allowed for rest. It is a good idea for the rest period to be taken away from the work area. This is especially true in the case of mental work. Also, on hard physical jobs, many short rest periods are better than a few long rest periods.

* 40. Principle of Definition: A logical decision can be made only if the real problem is first defined. (5)

41. Principle of Adequate Evidence: A logical decision must be valid in terms of the evidence on which it is based. (5)

42. Principle of Identity: Facts may seem to differ, depending on the point of view and the point in time from which they are observed. (5)

43. Principle of Measurement: Measurement and quantification lead to accurate decisions. Use of precise measures in quantitative terms to define and describe all decision problems stemming from the physical processes that comprise organization work... generally will result in more accurate decisions and more effective problem solving. (116)

44. Principle of Optimization: Comparison of alternatives with objectives leads to optimal decisions. Selection of the best of a limited number of possible solutions consistent with explicitly stated objectives and based on formulation and testing of hypotheses or mathematical models... generally will result in optimal decisions and more effective problem solving. (116)

45. Principle of Rationality: Reason and objectivity lead to rational decisions. The use of reason and objectivity rather than emotion and subjectivity to make managerial decisions when employing the scientific method in problem solving and decision making... generally will result in rational decisions and will likely lead to more effective problem solving. (116)

46. <u>Principle of Management by Techniques</u>: Measurement, optimization, and rationality lead to effective decision making. The application of precise, quantitative measures to the examination of alternative solutions to managerial decision problems and the use of objectivity and reason... generally will result in rational decisions which are optimal in respect to the stated objectives and will likely lead to effective decision making and problem solving. (116)

47. <u>Principle of Decision by Exception</u>: A manager should make decisions on all matters that come to his or her attention except those for which the person does not have sufficient authority. Matters for which the manager does not have sufficient authority are decided upon by committee or higher management. (62)

Organizing Principles

* 48. <u>Principle of Unity of Objectives</u>: The objectives of each department and other units within the organizational structure should be integrated with and contribute to the achievement of the objectives for the organization as a whole. (23, 5, 23, 42, 47, 62, 75, 112, 116)

** 49. <u>Principle of Efficiency</u>: The organization should be so planned that the objective can be attained with the lowest possible cost, which may mean either money costs or human costs or both. (29, 75)

* 50. <u>Span-of-Management Principle</u>: There is a limit in each managerial position to the number of persons an individual can effectively manage, but the exact number will vary in accordance with the effect of underlying variables and contingencies and their impact on the time requirements of effective managing. (75, 1, 5, 23, 29, 51, 63, 70, 98, 111)

** 51. <u>Principle of Increasing Organizational Relationships</u>: As additional persons or units are added to an organizational structure, the number of organizational relationships increases at a much greater rate than the number of persons or units added. (128)

* 52. <u>Scalar Principle</u>: The more clear the line of authority from the top manager in an enterprise to every subordinate position, the more effective will be the responsible decision making and organization communication system. (75, 1, 47, 54, 111)

112

** 53. Principle of Delegation: Authority delegated to an individual manager should be adequate to assure the ability to accomplish the results expected. (75, 23, 29, 98, 112)

54. Principle of Single Accountability as to Task: Each employee's duties must be clearly distinguishable from all other worker's duties, and the employee's duties must be known and understood by the employee. (70, 63)

55. Principle of Authority: Managers have the right to perform their assigned duties and to command their subordinates. (70, 29, 98)

* 56. Principle of Absoluteness of Responsibility: The responsibility of subordinates to their superiors for performance is absolute, and superiors cannot escape responsibility for the organization activities of their subordinates. (75, 1, 23)

* 57. Principle of Parity of Authority and Responsibility: For sound organizational relationships, the authority of a manager should be commensurate with responsibility and, vice versa, responsibility commensurate with authority. (128, 1, 23, 29, 47, 62, 70, 75, 111, 112)

* 58. Principle of Unity of Command: The more completely an individual has a reporting relationship to a single superior, the less the problem of conflict in instructions and the greater the feeling of personal responsibility for results. (75, 1, 23, 29, 47, 54, 63, 98, 111, 112, 120)

* 59. Principle of Authority-Level: Maintenance of intended delegation requires that decisions within the authority competence of individual managers be made by them and not referred upward in the organization structure. (75, 5, 70)

* 60. Principle of Staff Advice: Staff should not be given rights of command, but rather, rights of advice, suggestion, and recommendation. (42)

* 61. Principle of the Limitation of Staff Economy: In order for the primary or line functions to be performed with maximum effectiveness, it is sometimes necessary for the supporting staff to operate with less than maximum economy. (42)

* 62. Principle of Compulsory Staff Advice: Line personnel are required to listen to and consider staff advice but are not compelled to accept it. (42, 63)

113

* 63. **Principle of Staff Independence:** Staff personnel should feel sufficiently secure to enable them to render truthful advice. (42)

* 64. **Principle of Division of Work:** The more an organization structure reflects a classification of the tasks or activities necessary to attain goals and assist in their coordination, and the more that roles are designed to fit the capabilities and motivations of people available to fill them, the more effective and efficient an organization structure will be. (75, 70, 128)

* 65. **Principle of Specialization:** The more specialized the work assigned to individuals within the limits of human tolerance, the greater the potential for efficient performance. (5, 1, 5, 23, 29, 47, 70)

** 66. **Principle of Functional Definition:** The more a position or a department has a clear definition of results expected, activities to be undertaken, organization authority delegated, and authority and informational relationships with other positions, the more adequately individuals responsible can contribute toward accomplishing enterprise objectives. (75)

* 67. **Principle of Fixed Responsibility:** For any given period, an individual will accomplish most when responsibility for the completion of a definite task is fixed upon that individual. (128, 1, 70)

** 68. **Principle of Separation:** If some activities are designed to be a check on others, individuals charged with the former cannot adequately discharge their responsibility if they report to the department whose activity they are expected to evaluate. (75)

69. **Principle of Busyness:** The more people in an organization, the more work they will find to do. (5)

70. **Principle of Management Emphasis:** When supervising two or more differing functions, products, or geographic units, a manager will tend to show preferential emphasis in his decisions and choices; the closer to the line of operations he is located organizationally and the greater the differences in the units he supervises, the greater will be his preference. (5)

71. **Principle of Organizational Levels:** The lower his organization level, the more technical work a manager tends to perform. (5)

* 72. <u>Principle of Balance</u>: The organization must be continually surveyed to ensure that there is reasonable balance in the size of various departments, between standardization of procedures and flexibility, and between centralization and decentralization of decision making. (29, 5, 75)

* 73. <u>Principle of Flexibility</u>: The more provisions are made for building flexibility in organizational sturctures, the more adequately an organization structure can fulfill its prupose. (75, 23, 128)

74. <u>Principle of Multidimensionality</u>: An organizational structure that reflects a high degree of multidimensionality differentiation, that is, specialization by managerial level (vertical), by task (horizontal), and by technical expertise (staff)...
generally will be more likely to achieve a highly diversified set of goals in a rapidly changing environment. (116)

75 <u>Principle of Integration</u>: An organization that achieves a high degree of coordination and integration of activities (or subsystems) derived from emphasis upon work as a set of interrelated input-output transformation processes...
generally will be more likely to achieve a high level of overall organizational performance in a rapidly changing environment. (116)

76. <u>Principle of Adaptability</u>: An organization that provides a high degree of job flexibility and job variety and makes the organization structure more compatible with the varied interests and multiple talents of modern man...
generally will be mor likely to attain a flexible, organizational system structure which is more adaptable to a rapidly changing environment. (116)

77. <u>Principle of Management by Structure</u>: The combined application of multidimensional differentiation and task specialization, subsystem coordination and integration, and individual and group task flexibility and variety...
generally will provide a more adaptable, dynamic organizational system structure which will likely be responsive to a complex, rapidly changing environment and thereby achieve a high level of organizational efficiency and effectiveness. (116)

** 78. <u>Principle of Leadership Facilitation</u>: The more an organization structure and its authority delegation make it possible for managers to design and maintain

115

an environment for performance, the more it will
facilitate their leadership abilities. (75)

** 79.   Principle of Staffing: The better the definition of
         organization roles, their human requirements, and
         the techniques of manager training and appraisal,
         the more assurance there will be of managerial
         quality. (75)

** 80.   Principle of Job Definition: The more precisely
         known the results that managers are expected to attain,
         the more the dimensions of their position can be
         determined. (75)

** 81.   Principle of Managerial Appraisal: The more specific
         the management results intended, the more closely
         managers should be appraised in their terms. (75)

** 82.   Principle of Open Competition: The more an enterprise
         is committed to the assurance of quality management,
         the more it will encourage open competition among
         all candidates for management positions. (75)

** 83.   Principle of Management Training: The more effectively
         training programs provide information required by
         managers in their present positions, make them pro-
         motable, and involve top managers in the process, the
         better they will be. (75)

** 84.   Principle of Continuing Developing: The more an en-
         terprise is committed to managerial competence, the
         more it requires managers to practice continuing
         self-development. (75)

Directing Priciples

** 85.   Principle of Directing and Leading: The more effec-
         tive directing and leading are, the greater will be
         the contribution of subordinates to organizational
         goals. (75)

* 86.   Principle of Harmony and Objectives: An organization
         that develops an internal climate which continually
         recognizes the interdependency of individual, group,
         and organizational goals, and one that seeks to
         achieve a balance between individual needs and social-
         human values...
         generally can more likely develop an optimum set of
         goals that will be equitable for the organization and
         its members and will motivate them to pursue organi-
         zational goals as a means of satisfying their own
         personal needs and values. (116, 70, 75)

116

* 87. Principle of Direct Supervision: The more direct personal contact with subordinates is, the more effective direction and leadership will be. (75)

* 88. Principle of Management Results: A person in a leadership position tends to secure most effective results through and with others by performing the management work of planning, organizing, leading (directing), and controlling. (5)

89. Principle of Human Reaction: Every action directed at another person evokes a similar and increasing reaction in the terms in which it is understood. (5)

* 90. Principle of Directing and Leadership Techniques: As people, tasks, and organizational environment vary, effective techniques of directing and leading will reflect personalities, task structures, and contingencies. (75)

* 91. Principle of Leadership Force: The greater the divergence of the individual objectives of the members of the group, the greater the leadership force required to ensure cohesive action. (5)

92. Principle of Supportive Relationship: The leadership and other processes of the organization must be such as to ensure a maximum probability that in all interactions and in all relationships within the organization, each member, in the light of his backgroung, values, desires, and expectations, will view the experience as supportive and one which builds and maintains his sense of personal worth and importance. (1, 96, 121)

* 93. Principle of Leadership: Since people tend to follow those in whom they see a means of satisfying their own personal goals, the more managers understand what motivates their particular subordinates, how these motivators operate, and the more they reflect this understanding in carrying out their managerial actions, the more effective leaders they are likely to be. (75)

* 94. Principle of Motivation: Since motivation is not a simple cause and effect matter, the more managers carefully assess a reward structure, look upon it from a contingency point of view, and integrate it into the entire system of managing, the more effective a motivational program will be. (75)

* 95. Principle of Participation: An organization that provides real opportunities for individuals to be involved in group activities and tasks through an

117

open communication process and to participate in group decision making...
generally will be more likely to resolve group conflicts positively and to gain acceptance of organizational goals by its members, which should lead to increased organizational productivity and individual and group satisfaction. (5, 116)

* 96. <u>Principle of Communication</u>: Motivation to accomplish results tends to increase as people are informed about matters affecting those results. (5, 116)

97. <u>Principle of Recognition</u>: Motivation to accomplish results tends to increase as people are given recognition for their contribution to those results. (5)

98. <u>Principle of Delegated Authority</u>: Motivation to accomplish results tends to increase as people are given authority to make decisions affecting those results. (5)

99. <u>Principle of Achievement</u>: An organization that tries to develop integrative attitudes and provides real opportunities for individual achievement, maturity, and growth...
generally will be more likely to optimize individual and organizational productivity which will lead to the greatest possible level of human satisfaction. (116)

<u>Principles of Job Enrichment</u>: (47)

100. Removing controls while retaining accountability

101. Increasing the accountability of individuals for their own work.

102. Giving a person a complete natural unit of work (module, division, area, etc.)

103. Granting additional authority to an employee in his activity; job freedom.

104. Making periodic reports directly available to the worker himself rather than to the supervisor.

105. Introducing new and difficult tasks not previously handled.

106. Assigning individuals specific ar specialized tasks, enabling them to become experts.

107. <u>Premack Principle</u>: Any high probability behavior (Project A) can reinforce any low probability behavior (Project B) on which it is contingent. (1, 84)

108. <u>Principle of Financial Incentive</u>: The urge to do more work output for more joy is influenced mainly by the relative importance of more money to the recipient and that person's evaluation of the fairness of the plan under which the extra joy is received. (128)

<u>Principles of Training</u>: (42, 47, 98, 112)

109. The trainee must be both motivated to be trained and sufficiently interested in the content of the program. (47)

110. The trainee should be constantly informed concerning the progress of his development. On a continual and periodic basis the trainee should receive feedback on his performance. (112)

111. The higher the degree of trainee participation, through practice and discussion, the more effective and long lasting the training. (42)

112. The trainee should be reward (financial as well as non-financial) on the basis of results achieved. (112)

113. People learn best when material is distributed in parts over a period of time rather than when it is scheduled continuously. (98)

114. Development should proceed from the known to the unknown and from the simple to the complex. (42)

115. The trainee should have a clear understanding of what the major areas of accountability are and, specifically, what results he should be accomplishing in each area. (112)

116. People learn best when new ideas, subjects, topics, or exercises can be related to their present knowledge and past experiences. (98)

117. People learn skills best through practice and repetition. (98)

118. People learn concepts best when built from the "ground up" with relationship between elements clearly established and linked to the individual's experience and training.(98)

119. Within broard limits the trainee should be able to exercise his own initiative and ingenuity in determining how to achieve certain objectives. (112)

120. People learn best if the learning experience is pleasant and their first experiences are positive and successful. (98)

121. People learn and remember best when the experience is vivid, dramatic, or exciting, and is meaningfull. (112)

* 122. Principle of Clarity: A communication possesses clarity when it is expressed in language and transmitted in a way that is comprehended by the receiver. (75)

* 123. Principle of Integrity: All communications should be framed and transmitted in such ways as to support the integrity of the formal organization. (75)

* 124. Principle of Strategic Use of Informal Organization: The most effective communication results when managers utilize informal organization to supplement the communication channels of the formal organization. (75)

125. Principle of Equal Treatment: Employees must be treated alike- they must be judged by the same standards. The penalties, however, do not have to be the same if the circumstances are different. (70)

126. Principle of Equal Effort to Reform: The manager must make an equal effort to correctively train all offending employees. He should not try harder to reform some employees than others. (70)

127. Principle of Increasing Severity: Disciplinary action should be increasingly harsh each time the offense is repeated. (70)

128. Principle of Deacreasing Value of Discipline Over Time: The value of a disciplinary action diminishes as time passes. (70)

Controlling Principles

* 129. Principle of Assurance of Objective: The task of control is to assure that plans succeed by detecting deviations from plans and by furnishing a basis for taking action to correct potential or actual deviations. (75, 128)

* 130. Principle of Future-Directed Controls: Because of time lags in the total system of control, the more a control system is based on feedforward rather than simple feedback of information, the more managers have the opportunity of perceiving undesirable deviations from plans before they occur and of taking action in time to prevent them. (75)

* 131. Principle of Control Responsibility: The primary re-
        sponsibility for the exercise of control rests on the
        manager charged with the performance of the particular
        plans involved. (75)

* 132. Principle of Efficiency of Controls: Control techniques
        and approaches are efficient if they detect and il-
        luminate the nature and causes of deviations from plans
        with a minimum of costs or other unsought consequences.
        (75)

* 133. Principle of Directed Control: The higher the quality
        of every manager in a managerial system, the less will
        be the need for indirect controls. (75)

  134. Principle of Control Design: Effective control systems
        are designed to reflect organizational structure. Such
        systems should provide management with information that
        is timely, of strategic value, and descriptive of the
        trends of operations as well as current status. (120)

* 135. Principle of Reflection of Plans: The more that plans
        are clear, complete, and integrated, and the more that
        controls are designed to reflect such plans, the more
        effectively controls will serve the needs of managers.
        (75)

* 136. Principle of Organizational Suitability: The more that
        an organizational structure is clear, complete, and in-
        tegrated, and the more that controls are designed to
        reflect the place in the organization structure where
        responsibility for action lies, the more they will fac-
        ilitate correction of deviations from plans. (75)

* 137. Principle of Individuality of Controls: The more that
        control techniques and information are understandable
        to individual managers, who must utilize them for re-
        sults, the more they will be actually used and the more
        they will result in effective control. (75, 112)

* 138. Principle of Standards: Effective control requires
        objective, accurate, and suitable standards. (75)

* 140. Principle of Critical-Point Control: Effective control
        requires attention to those factors critical to appraising
        performance against an individual plan. (75)

  141. Principle of Point Control: The greatest potential for
        control exists at the point where action takes place.
        (5)

* 141. Principle of the Critical Few: In any given group of
        occurrences, a small number of causes will tend to give

121

rise to the largest proportion of results. (5)

* 142. Principle of Exception: Management supervision and correction control should concentrate on the exceptional activities which are not operating according to plan. Activities performing as planned should be handled routinely by subordinates. (62, 1, 42, 63, 70, 75, 111, 112, 120, 128)

* 143. Principle of Flexibility of Controls: If controls are to remain effective despite failure or unforeseen changes of plans, flexibility is required in their design. (75)

**144. Principle of Action: Control is justified only if indicated or experienced deviations from plans are corrected through appropriate planning, organizing, and directing. (75)

145. Principle of Self-Control: Self-control tends to be the most effective control. (5, 112)

146. Principle of Organizational Self-Regulation: An organization that develops timely, relevant, and reliable information for reporting and evaluating deviations in operations from planns and standards...
generally will be better able to adjust the implementation of its operations as needed in a routine, timely manner, and thereby will likely improve the performance of the control function of management. (116)

**147. Principle of Variable-Cost and Fixed-Cost Relationships to Profit Potential: For a given enterprise, the lowest variable and highest fixed costs consistent with a break-even point which is less than the smallest probable total sales results in the maximum profit potential. (128)

148. Principle of Decentralized Budgeting: The manager charged with responsibility for controlling department expenses should have the authority to propose the budget for that department. (70)

149. Principle of Budgeting Accountability: Managers should be held accountable for costs that they have control over and should not be held accountable for costs they have no control over. (70)

150. Principle of Reporting Budget Results: Managers should be required to make written monthly reports to their superiors that explain the reasons for signifigant variations between actual and budget expenses. (70)

122

Other Management Principles

151. **Principle of Universality of Management:** The functions of management are essentially the same regardless of the tasks of the organization or the level of management. It follows that managerial skills are transferable from one organization to another. (62)

152. **Principle of Service:** An organization producing products and/or services to satisfy the needs and values of its environment at costs of production which are less than the value or utility of its products and/or services to individuals, groups, and organizations in the environment...
generally will be more acceptable to its environment, and consequently will be more likely to survive and grow. (116)

153. **Principle of Multiple Values:** An organization that recognizes more of the important diverse value systems of individuals, groups, and other organizations in its environment and formally weighs the importance of these value systems to its purpose, operations, and accomplishments...
generally will attain a purpose and image which are more reflective and responsive, and therefore more equitable and acceptable to individuals, groups, and other organizations that affect and are affected by it. (116)

154. **Principle of Organizational Viability:** Acknowledgment of the inevitability of change and recognition that change can be an opportunity to plan for and develop better ways to serve the environment...
generally will result in effective implementation of new programs for generating value and fusion of these programs into the organization with fewer problems and less resistance. (116)

155. **Principle of Management by Objectives:** The involvement of all managers in joint goal setting and evaluation of results, coupled with rewarding performance based on results...
generally will provide greater integration of objectives, responsibilities, tasks and performance and will likely instill a spirit of organization based on self-evaluation and self-control. (116)

156. **Principle of Management by People:** Application of the principles of goal congruence (harmony of objectives), involvement (participation), and achievement through the use of OD programs and techniques...
generally will be likely to stimulate individual

growth and integrative group attitudes which will
lead to more effective management of change and to
a more healthy and viable organization. (116)

157. <u>Principle of Management by Information</u>: The systems
approach to the design of a management information
system which provides an objective-user orientation
in defining information needs for operations and
management, links the information processes and
inter-connects information (sub)systems through an
integrated data base, and centralizes the management
of all MIS design, implementation, and monitoring
activities...
generally will lead to achievement of risk reduction,
communication, and self-regulation through the pro-
vision of better information outputs for operations
and management with optimum performance of the infor-
mation-processing function. (116)

Appendix B

Principles listed in the 1970 study but not found in
texts published since 1970. Those principles listed without
an author/year reference were derived by the writers of the
1970 study.

1. Principle of the Dynamics of Objectives. Businesses
exist in a dynamic setting that requires continued
evaluation of objectives if the firm is to meet competi-
tion and environmental change.

2. Principle of Acceptance of Objectives. Objectives must
be fully accepted by the members of the organization to
be fully effective.

3. Principle of Policies. If top management provides and
administers a system or network of clear and stable
policies, the members of the organization will find them
a consistent guide and source of direction that is essen-
tial to their participation in the organization effort.
(McFarland 1950)

4. Principle of Stating Policies. To facilitate acceptance,
the statement of policy should be explicit and under-
standable to those affected by the policy. (McFarland
1950)

5. Principle of Policy Influence. To be effective policies
should be formed after considering the possible reaction
of groups or individuals affected by the policies.
(McFarland 1950)

6. Principle of Facts in Policies. To encourage acceptance
and instill confidence, policies should be based on facts
and sound judgment.

7. Principle of Currency of Policies. To the extent that
policies can become outdated, policies should be period-
ically reappraised, realigned and restated in line with
current trends. (Terry 1964)

8. Principle of Stability of Policies. To the extent that
constantly changing policies may be detrimental to busi-
ness success, stability of policies is essential.

9. Principle of Number of Policies. To the extent that an excessive number of policies can become confusing or meaningless, there should be only as many policies as necessary to cover conditions that can be anticipated.

10. Principle of Multiple Alternatives. A better solution to a problem is more likely to be found if two or more possible alternatives are considered. (Davis 1951)

11. Principle of Quantifying of Alternatives. To the extent that quantification of variables in alternatives will assist in making better decisions, alternatives should be quantified when appropriate.

12. Principle of Decision Assistance. To be fully effective, decisions should not be rendered, time permitting, until all persons able to contribute to the decisions have been consulted. (Davis 1951)

13. Principle of Competitive Strategy. The more the conditions under which a firm operates are competitive, the more important it is that plans be chosen in light of what the competitor will or will not do in the same area. (Koontz and O'Donnell 1968)

14. Principle of Policies in Management. If top management provides and administers a system or network of clear and stable policies, the members of the organization will find them a consistent guide and source of direction that is essential to their effective participation in the organizational effort. (McFarland 1950)

15. Principle of Stated Policy. To facilitate the acceptance of policies, these policies should be presented as explicit statements.

16. Principle of Individual Productivity. A worker attains his best productivity when assigned to the work of his highest skill, either natural or acquired. (Hodges 1956)

17. Principle of Incentives. If incentive wages are not based on standards of accomplishment, morale and productivity may be adversely affected. (Hodges 1956)

18. Principle of Formal and Informal Leadership. To the extent that a leader can gain acceptance by the group members, he then becomes a genuine leader of the group.

19. Principle of Authority. Subordinates will accept orders beyond the zone of indifference if the authority of leadership is combined with the authority of position. (Barnard 1950)

20. Principle of Issuance of Orders. If orders are to be carried out effectively they must be clear, complete, and within the capabilities of subordinates to accomplish. (Massie 1964)

21. Principle of Group Evolution. Dynamic disequilibrium leading to change will tend to exist within an organized group until personal satisfaction is enjoyed by the largest possible number of members of the group. (Allen 1964)

22. Principle of Focal Points. The experience of cooperating in an activity that involves a minimum of conflicting interest facilitates those situations in which personal objectives must be subordinated completely for the accomplishment of organizational objectives. (Davis 1951)

23. Principle of Potential. The success of an endeavor over the long term tends to be proportional to the abilities of the individuals in the group. (Allen 1964)

24. Principle of Job Satisfaction. An individual's contribution to group objectives tends to be proportional to his ability to find personal satisfaction in the work he does. (Allen 1964)

25. Principle of Future Characteristics. An individual's past performance and attributes tend to foreshadow his future achievements. (Allen 1964)

26. Principle of Line Loss. The more people through whom a communication passes, the more meaning tends to be delayed, diffused, distorted, and lost.

27. Principle of Emotional Appeal. Since appeals to emotion tend to be communicated more readily than appeals to reason, emotional appeal is an effective communication technique.

28. Principle of Place Emphasis. The place at which information is presented in a message has a definite bearing on whether the information will be accepted, rejected, or understood at all. (McLaughlin 1964)

29. Principle of Attention. To increase the effectiveness of communication, the receiver should give full attention to the sender.

30. Principle of Coordination. Coordination helps to maximize the achievement of a group by means of obtaining a balance among, and a smooth blending of, the essential component activities; therefore, encouraging the participation of the group in the early stages of planning, and winning acceptance of the group's goal from every member. (Terry 1964)

31. Principle of Direct Contact. To the extent that direct personal communication is more efficient than by any other method, coordination should be achieved through inter-personal, vertical, and horizontal relationships of people in an enterprise. (Mary Follett in Koontz & O'Donnell 1968)

32. Principle of Early Coordination. If efficiency of plans is to be kept at a maximum, coordination should be achieved in the early stages of planning and policy making. (Mary Follett in Koontz & O'Donnell 1968)

33. Principle of Reciprocality. Since a factor in a given situation is influenced to some degree by various other factors; these factors should be coordinated for more effective results.

34. Principle of Personnel Coordination. Promotions, wage changes, and disciplinary action should usually be approved by the executive immediately superior to the one directly responsible for more effective results. (Fox 1968)

35. Principle of Control. The effectiveness of control is directly proportional to the accuracy of planning, the efficiency of mechanical operations, the perfection of standards, the thoroughness of technometry, and skill of supervision applied to human and physical resources in relationship to quantity, quality, time, and place. (Glover 1958)

36. Principle of Unflinching Control. Managers must prevent unforeseen circumstances from dictating their actions by the use of thoughtfully prepared plans and continuous comparison of performance. (Jerome 1963)

37. Principle of the Human Factor. For a control system to be more effective, it should be understood that the psychological manner in which human beings view the system affects this system.

38. Principle of Effective Control. To be effective, controlling must constrain actual performance to assure conformance to plan.

39. Principle of Complete Control. To be effective, the particular control system used must: 1) be warranted by the situation, 2) cover every factor to be controlled, and 3) must be administered by competent personnel properly authorized. (Trindle 1948)

40. Principle of Control in a Direct Manner. The function of control should remain essentially with the line managers for faster and more economical control. (Haynes & Massie 1969)

41. Principle of Fact Control. A fact becomes pertinent through its relation to all other facts in a given situation. (Alford 1967)

42. Principle of Classification. Classification is very essential for effective and efficient control.

43. Principle of Standardization. Standardization provides predetermined patterns and levels for performance which should increase efficiency of operations, decrease the cost of production, and provide for a better product. (Glover 1958)

44. Principle of Measurement and Appraisement. The accuracy of measuring and evaluating the performance of an activity is directly related to the reliability of the measuring or appraising instruments and the efficiency of the human element conducting the evaluation. (Glover 1958)

45. Principle of Technometry. The accuracy of measuring or appraising performance, progress, and improvement of activity is directly proportional to the nature and characteristics of the technometric standard or criterion and the efficiency of the human element performing technometry. (Glover 1958)

46. Principle of Inspection. To facilitate inspection, a definitive standard or criterion must be developed and established for each material, part, method, process, operation, performance and product.

47. Principle of Inspective Action. To the extent that the item inspected conforms to the established standard and is within the respective specified limits, accept the item.

48. Principle of Inspection Rectification. The cause and effect of variation or deviation from standard or criterion must be discovered and corrective action initiated to eliminate the cause. (Glover 1958)

49. Principle of Corrective Action. Indicated or experienced deviations from planned performance must be corrected through appropriate planning, organizing, and directing or there can be little justification or pay-off for control efforts expended.

50. Principle of Facts. For more effective results, corrective action should be based on facts rather than opinion.

51. Principle of Scientific Control. The use of thorough investigation and evaluation and careful interpretation of the resultant data provide a reliable basis for the determination of the need for corrective action in a control system.

52. Principle of Feedback. Feedback, the process of adjusting future actions based upon information about past performance, is essential for effective control. (Massie 1964)

Appendix C

Classification of Newly Developed Principles by Trends

Category 1 (26 principles)

Principles dealing with established management concepts:

14. Principle of Present Choices

15. Principle of Positive Action

16. Principle of Resistance to Change

17. Principle of Tangibility

18. Principle of Reasonable Goals

19. Principle of Confidence in Objectives

41. Principle of Adequate Evidence

42. Principle of Identity

47. Principle of Decision by Exception

54. Principle of Single Accountability as to Task

55. Principle of Authority

69. Principle of Busyness

70. Principle of Management Emphasis

71. Principle of Organization Levels

89. Principle of Human Reaction

125. Principle of Equal Treatment

126. Principle of Equal Effort to Reform

127. Principle of Increasing Severity

128. Principle of Decreasing Value of Discipline Over Time

134. Principle of Control Design

140. Principle of Point Control

148. Principle of Decentralized Budgeting

149. Principle of Budgeting Accountability

150. Principle of Reporting Budget Results

151. Principle of Universality of Management

155. Principle of Management by Objectives

Category 2 (22 principles)

Principles dealing with Quantitative Techniques:

25-34. Ten Principles of Risk Reduction

35-39. Five Principles for Reducing Fatigue

43. Principle of Measurement

44. Principle of Optimization

45. Principle of Rationality

46. Principle of Management by Techniques

146. Principle of Organizational Self-Regulation

157. Principle of Management by Information

Category 3 (28 principles)

Principles dealing with behavioral concepts of motivation
(job enrichment, expectancy, behavior modification, QOL):

92. Principle of Supportive Relationships

94. Principle of Motivation

97. Principle of Recognition

98. Principle of Delegated Authority

99. Principle of Achievement

100-106. Seven Principles of Job Enrichment

107. Premack Principle

109-121. Thirteen Principles of Training Employees

156. Principle of Management by People

Category 4 (7 principles)

Principles dealing with management and its environment as a system:

74. Principle of Multidimensionality

75. Principle of Integration

76. Principle of Adaptability

77. Principle of Management by Structure

152. Principle of Service

153. Principle of Multiple Values

154. Principle of Organizational Viability

Appendix D

Results of the comparison of the latest editions of
seven texts with editions used for the 1970 study.

Texts Reviewed and Compared

Dale, Ernest. Management: Theory and Practice. New York:
McGraw-Hill, 1969 (second edition), 1978 (fourth edition).

Hicks, Herbert G. The Management of Organizations. New York:
McGraw-Hill, 1967 (first edition).

_____ and Gullett, C. Ray. The Management of Organizations.
New York: McGraw-Hill, 1976 (third edition).

Koontz, Harold and O'Donnell, Cyril. Principles of Management:
An Analysis of Managerial Functions. New York: McGraw-Hill,
1968 (fourth edition).

_____. Management: A Systems and Contingency Analysis of
Managerial Functions. New York: McGraw-Hill, 1976 (sixth
edition).

Longenecker, Justin G. Principles of Management and Organiza-
tional Behavior. Columbus, Ohio: Merrill Pub. Co., 1969
(second edition), 1977 (fourth edition).

Sisk, Henry L. Principles of Management: A Systems Approach
to the Management Process. Cincinnati: South-Western Pub.
Co., 1969 (first edition).

_____. Management and Organization. Cincinnati: South-Western
Pub. Co., 1969 (first edition).

Terry, George R. Principles of Management. Homewood, Illinois:
Irwin, 1968 (fifth edition), 1977 (seventh edition).

Voich, Dan Jr. and Wren, Daniel A. Principles of Management:
Resources and Systems. New York: Ronald Press, 1968 (first
edition).

_____. Principles of Management: Process and Behavior.
New York: Ronald Press, 1976 (second edition).

Listing of New or Expanded Topic Coverage by Author

AUTHOR	NEW TOPICS
1. Dale	contingency management behavioral concepts quantitative techniques

2. Hicks	contingency management
	systems management
	behavioral concepts
	    - expectancy theory
	    - behavior modification

3. Koontz and O'Donnell	systems management
	contingency management
	behavioral concepts
	    - job enrichment
	    - expectancy theory
	    - behavior modification

4. Longenecker	behavioral concepts
	    - expectancy theory
	    - quality of life

5. Sisk	systems management contingency management behavioral concepts management information systems
6. Terry	contingency management behavioral concepts
7. Voich and Wren	behavioral concepts contingency management

Appendix E

List of Publishers and Sample Letter to Publishers

Allyn and Bacon, Inc.
Appleton-Century-Crofts
Austin Press
Business Publications, Inc.
Charles E. Merrill Publishing Co.
Commerce Clearing House, Inc.
Harcourt, Brace, and Jovanovich, Inc.
Cummings Publishing Co., Inc.
D. C. Heath and Co.
Dryden Press
W. H. Freeman and Co.
Harper and Row Publishers
Harvard University Press
Hayden Book Co., Inc.
Holden-Day, Inc.
John Hopkins Press
Houghton-Mifflin Co.
International Textbook Co.
Intext Educational Publishers
Richard D. Irwin, Inc.
Iowa State University Press
The MIT Press
Macmillan Publishing Co., Inc.
McGraw-Hill Book Co.
New York University Press
W. H. Norton and Co., Inc.
Prentice-Hall, Inc.
Stanford University Press
Wiley/Hamilton
W. B. Saunders Co.
The University of Chicago Press
Oxford University Press
Princeton University Press
Random House, Inc.
Rand McNally and Co.
The Ronald Press Co.
Van Nostrand Reinhold Co.
Wadsworth Publishing Co., Inc.

VITA

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REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER AFIT/GSM/SM/78S-14	2. GOVT ACCESSION NO.	3. RECIPIENT'S CATALOG NUMBER
4. TITLE (and Subtitle) A STUDY OF TRENDS IN THE CONTINUING DEVELOPMENT OF MANAGEMENT PRINCIPLES IN THE 1970S.		5. TYPE OF REPORT & PERIOD COVERED M.S. Thesis
		6. PERFORMING ORG. REPORT NUMBER
7. AUTHOR(s) Gilbert J. LaPointe, Jr. Capt. USAF		8. CONTRACT OR GRANT NUMBER(s)
9. PERFORMING ORGANIZATION NAME AND ADDRESS Air Force Institute of Technology (AFIT/EN) Wright-Patterson AFB OH 45433		10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS
11. CONTROLLING OFFICE NAME AND ADDRESS Air Force Institute of Technology (AFIT/EN) Wright-Patterson AFB OH 45433		12. REPORT DATE September 1978
		13. NUMBER OF PAGES 144
14. MONITORING AGENCY NAME & ADDRESS(if different from Controlling Office)		15. SECURITY CLASS. (of this report) UNCLASSIFIED
		15a. DECLASSIFICATION/DOWNGRADING SCHEDULE

16. DISTRIBUTION STATEMENT (of this Report)

Approved for public release;   distribution unlimited

17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report)

18. SUPPLEMENTARY NOTES

Approved for public release; IAW AFR 190-17

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Director of Information

19. KEY WORDS (Continue on reverse side if necessary and identify by block number)

General management
Management principles
Management guidelines

20. ABSTRACT (Continue on reverse side if necessary and identify by block number)

The fact that most authors of management texts have chosen to approach the subject on an individual basis has led to the need for a review and compilation of management principles. One compilation of principles was accomplished in 1970. A representative sample of general management texts published since the earlier compilation was accomplished in 1970 is reviewed and a summary list of current management principles is compiled. The current

DD FORM 1473 EDITION OF 1 NOV 65 IS OBSOLETE
1 JAN 73

UNCLASSIFIED

list of principles is compared to the list compiled in 1970. Newly stated principles are identified and subclassified into categories to identify trends in the development of management knowledge during the 1970s. In addition, in an effort to identify more recent management trends as well as to verify trends identified through the analysis of newly stated principles, the latest editions of a number of popular texts are compared to the earlier editions used in the 1970 study. Identified trends are then analyzed and discussed. In general it was found that, in the 1970s, there has been increased attention to the concepts of systems management, contingency management, and some of the more recent behavioral concepts such as job enrichment, expectancy theory, and behavior modification.