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THE MANAGEMENT OF DECLINE IN UNIVERSITY DEPARTMENTS: AN EXPLORATORY STUDY

The Ohio State University

Ph.D. 1983

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THE MANAGEMENT OF DECLINE IN UNIVERSITY DEPARTMENTS:

AN EXPLORATORY STUDY

DISSERTATION

Presented in Partial Fulfillment of the Requirements for
the Degree of Doctor of Philosophy in the Graduate
School of The Ohio State University

By

Marilynn Mikolusky, B.A., M.A.

* * * * *

The Ohio State University

1983

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ACKNOWLEDGMENTS

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My family and friends must know how much I appreciated their love and support when I needed it most. Finally, I thank my supervisors and colleagues in Clarion for their understanding and cooperation.
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Chapter I
INTRODUCTION

In education, as in other sectors of society in the United States, the period from 1870 to 1970 was a century of growth. Education held a high position in our nation, and major forces encouraged and contributed to its expansion. This national commitment to education, combined with an atmosphere of progressivism, created a benign environment for institutions of higher learning. Increased access to higher education was a national priority, both in the sense of providing an educated citizenry, and in addressing the need for creative and intellectual capacity. Higher education also provided a service function to agriculture, industry, and the professions.¹

Educational administrators were successful at solving the problems of growth. Obtaining resources in a supportive environment was a predictable and controllable exercise. The attention of administrators was focused on the internal development of the institution. New buildings, and often new campuses were designed and constructed. Programs and courses were developed and expanded to meet the needs of growing numbers of students. Legislation was passed which provided abundant financial support to students and institutions, and the numbers of students in higher education continued to grow.
By the early 1970's however, a number of changes had taken place in our nation which had begun to erode the supportive environment which educational administrators had enjoyed for so long. Problems in the economy worsened. Inflation led to labor unrest, with accompanying strike activity. The Vietnam War brought demonstrations and destruction to the campus. Public support for higher education had begun to diminish.

Problems became even more severe by the early 1980's, with double-digit inflation, high interest rates, and a general recession. Federal and state dollars for research, aid to students, and operating revenues decreased dramatically. At the same time colleges and universities began to experience the effects of demographic shifts. Both the total number of students available to higher education and the percentage of students who chose to attend college had begun to decline.

These changes had serious implications for administrators in institutions of higher education. The abundant resources which they had enjoyed were no longer readily available, and administrators were forced to face the new challenges created by these changes. Tight budgets, "tenured in" faculties, and declining enrollments presented a new set of problems. Unfortunately, the solutions were often highly unpopular with faculty and students alike, and had far reaching implications for the health, and in a few cases the very life of the institutions involved.

Although administrators had been searching for solutions to these "new" problems, many have found that successfully combining or
eliminating existing programs in an effort to conserve resources has been a difficult task. Decisions concerning the allocation of scarce resources have given rise to value conflicts, and have added to the growing list of internal and external problems facing administrators in higher education today. The difficulties associated with managing decline have created demands for new behaviors and skills from college and university administrators. The problem is that we have so little information about adjusting to decline that we are not yet certain which behaviors are necessary or desirable. The management literature has shown a bias toward growth, since businesses in decline have most often closed their doors and ceased to exist. In education, it is expected that some institutions will close due to financial difficulty, but because education is so crucial to our society most institutions need to survive.

Since the topic of adjustment to decline has not been heavily researched, it seems appropriate that efforts be made to direct attention to gathering information which will help administrators in higher education make sound management decisions both now and in the future. The importance of education to our society should reinforce the need to search for the best possible tools to meet the challenge ahead.

OBJECTIVES OF THE STUDY

The purpose of this study was to explore and provide insights into the differences in the managerial behavior of educational administrators under conditions of growth, and the lack of growth, i.e. steady state or decline, to determine: (a) if growing units were managed
differently from those in decline; (b) if there were differences in management styles or strategies among those administrators managing decline, and (c) if some managers were better able to manage decline than others.

In view of the state of theory development and the lack of research studies directly concerned with the management of organizations in decline, an exploratory study was undertaken. Similarities and differences were identified between administrators experiencing growth and decline in a number of areas:

a. Perceptions of the task environment
b. Perceived problems in relation to the task environment
c. Preferred outcomes or goals
d. Personal modes of processing information
e. Preferred strategies for dealing with problems
f. Actual outcomes in relation to preferred outcomes

SIGNIFICANCE OF THE PROBLEM

The importance of effective management in institutions of higher education is founded in the importance of maintaining a strong educational system in our society. Our position as the most technologically advanced society in the world rests upon an educational base, which must remain strong regardless of demographic or public opinion shifts.

If we recognize that management in a hostile environment is more challenging than managing growth, and provides less room for error, it would serve us well to examine these differences, and to identify effective coping strategies. Perhaps through the study of management
styles and strategies, scarce resources can be conserved through the development of more effective organizations.

OVERVIEW OF RESEARCH DESIGN AND METHODOLOGY

This study was exploratory in nature and did not involve the testing of specific hypotheses. Exploratory studies have been described by McCormick as those intended to be suggestive rather than definitive. They are most often descriptive and the data obtained permit the researcher to develop propositions or hypotheses which will form the basis of future research.²

Field study methods were used to investigate the research problem. Although some authors (Katz, Hughes)³ have defined field studies as in depth studies of a single social structure involving intimate observation of behavior, this study more closely conformed to the broader definition offered by Scott. Scott expanded the definition of field work to include that which "refers to observation of theory in situ" in the sense that "observation" included all of the techniques used by social investigators to gather data. Therefore, a researcher might visit subjects briefly to gather more general information than that obtained by staying with the subjects and observing them "intimately."⁴

In conducting the study, eight academic departments were identified at a large, midwestern university, four of which experienced large course enrollment increases during the period from 1972-1977, and a comparison group of four which had greatly decreased in enrollment. Background data were gathered for these departments and examined for evidence of changes in resources and personnel, and the interviews were
conducted with each department chairman. In addition to the interviews, chairmen were asked to complete a questionnaire and three paper and pencil instruments measuring personality variables. Eight faculty members from each of these departments were also personally contacted and asked to complete two paper and pencil instruments, in an effort to assess satisfaction levels and to examine leader behavior as a possible moderating variable. The data were tabulated, and comparisons were made between the two groups. The results were discussed and conclusions drawn within the theoretical framework.

The departments examined in the study were chosen on the basis of specific criteria, and thus the results would not be generalizable to other departments or institutions. The focus of the study was the department level, and although the departments were housed in the larger university, no attempt was made to examine the university as an organization. The study was also subject to other limitations. Research of university departments is complicated by the problems inherent in the examination of social organizations and the people in them such as the ex post facto character of the research, the number of variables involved, and the risk of improper interpretation of the results. Each of these concerns applies to this study.

OVERVIEW OF THE DISSERTATION

The study has been divided into six chapters. The first chapter contained an introduction and overview of the research. Chapter 2 reviewed the development of declining resources in institutions of higher education in the United States. In the third chapter, a conceptual
model for the study of decline in organizations was presented.

Chapter 4 described the research design and methodology used in conducting the study. The research findings were presented in Chapter 5. A discussion and summary of the findings comprised the sixth chapter, including the conclusions drawn by the researcher, and implications for practice and further research.
DEFINITION OF TERMS

Many terms common to organizational behavior literature have been used in establishing a theoretical framework for this study. They are:

Boundary-Spanning Roles - Those roles which link the focal organization with other organizations of social systems and are directly relevant for the goal attainment of the focal organization.

Cognitive Orientation - Involves systems for the organization of information, observation and thought in the process of individual and group problem-solving.

Domain - Identifies the points at which the organization is dependent upon inputs from the environment.

Domain Consensus - Defines a set of expectations both for members of the organization and for others with whom they interact, about what the organization will and will not do.

Growth - Change in an organization's size when size is measured by the organization's membership or employment. For purposes of this study, Starbuck's definition was narrowed in the sense that growth was defined only in relation to course enrollments (membership). Specifically, growth or positive enrollment growth departments were those which had an increase in course enrollment in at least five of the six autumn quarters between 1972 and 1977. Decline, or negative enrollment growth departments were those which had a decrease in enrollment in at least five of the six autumn quarters between 1972 and 1977.

Motivation Orientation - Systems for the organization of values and evaluation in the process of individual and group choice. Bobbitt and Ford have used the term "motivational orientation" rather than Solo's "cultural system."

Strategy - The choices made by organizational decision-makers concerning the products/services that will be offered, the customer/clients who will be served, the technology that is used, and the location at which the work will be performed.

Task Environment - Those parts of the organization's environment which are relevant or potentially relevant to goal setting or goal attainment. Major sectors of the task environment identified by Dill include clients, suppliers, competitors, and regulatory groups.

Uncertainty - The difference between the amount of information required to perform the task and the amount of information already possessed by the organization.
Chapter I

Footnotes


8Ibid, p. 29.


10Solo, p. 361.


Chapter II

THE DEVELOPMENT OF EDUCATIONAL DECLINE

Higher education in the United States has experienced growth and change throughout its history. Events in other sectors of society such as economic problems, wars, government policy decisions, and international relations often had a great impact on our educational system. The purpose of this chapter is to review some of the most important changes in education as they relate to the topic of this study, the management of institutions of higher education in an environment of declining resources and increasing uncertainty.

THE EARLY YEARS

Although education has always been primarily a function of state government, much of the early support for higher education was initiated by congressional acts which supported education as a means to solve other national problems such as the need for technical expertise or agricultural research. By the late 1700's the federal government had begun to aid territories and later states in education through the endowment of schools with public lands. The Morrill Act in 1862 provided land grants for colleges in support of adding agriculture and vocational training to the college curriculum. After the Morrill Acts, additional federal legislation and federal funding provided continuing support for the promotion and development of agricultural and vocational education.1
From the late 1860's through World War I, the number of schools increased, and a number of curricular and extra-curricular changes occurred. The Hatch Act of 1887 paved the way for agricultural experiment stations and federally funded practical research. In 1914 the Smith-Lever Act was passed by Congress, which provided cooperative funding with the states in the establishment of extension services in the area of agriculture and home economics. During this period state universities encouraged higher education for the common man, and the community college idea was born.²

After World War I, legislation was passed which promoted rehabilitation training for disabled veterans, and later for persons disabled in industry. During the depression years, Congress supported educational programs through the Federal Emergency Relief Administration, and provided part-time employment to college students through the National Youth Administration. Although the number of students enrolled in colleges and universities dropped in 1933-34, college administrators were aware that they faced the Great Depression along with the rest of the nation.³ Faculty rights were the focus during this period, with the founding of the American Association of University Professors.⁴

THE EXPANSION YEARS

Following World War II, higher education experienced a period of great expansion. The Servicemen's Readjustment Act of 1944 enabled veterans to attend colleges and universities in unprecedented numbers. The National Defense Education Act of 1958 was a strong statement of support for education by the Congress, coupled with federal appropriations of more than a billion dollars. Among the provisions in this
broad legislation were low interest loans to college students, vocational education programs, financial assistance for strengthening science and math programs, the identification and encouragement of able students, and the development of media for educational purposes.5

During the decade of the 1960's growth accelerated at an even faster pace. The number of degree-credit student enrollments more than doubled from 3.8 million in 1960 to 7.8 million in 1970. This increase was due to a combination of the large growth in the number of 18-21 year olds in the population, and a rise in the college enrollment rates.6

Educational institutions rapidly expanded during this period to meet the ever-growing demand for higher education. New colleges were established during the 1960's at the rate of one per week.7 Teachers colleges expanded into comprehensive institutions, and universities became universities. A Carnegie Commission recommendation that a community college be established within commuting distance of all youth in the nation was an added impetus to the rapid growth of community colleges. Community colleges also provided an opportunity for higher education for great numbers of students who may not have been admitted to colleges with selective admissions policies.8

Along with building programs and the expanded curriculum, the use of technology in higher education was also greatly expanded during this period. Both the National Defense Education Act and the Higher Education Facilities Act helped to improve facilities and further the utilization of television and other media in the classroom.9 In addition, the computer began to have a major impact on classroom teaching and research as well as on the administrative functions of the university.
Educational administrators during this period found particularly abundant resources available. The university enjoyed great prestige, and was expected to provide the solution to social problems, the key to a better life, and the means to maintaining our leadership in technology.

NEW CHALLENGES: THE PERIOD OF DECLINE

Toward the end of the 1960's, a number of economic and social changes occurred which began to alter the solid relationship between the university and its environment. Friction between the university and other sectors of society increased. The university was expected to become the champion of social change in response to pressure from blacks, women and other minority groups. Campuses were subject to demonstrations and riots related to the Vietnam War and other social issues. Economic problems surfaced, including recession and accompanying inflation. Education was under scrutiny from both the public and the legislature.

Murray Ross described four major forces which changed education between 1950 and 1975. Although some of these changes had begun as early as the 1950's, their most serious impact was felt in the late 1960's. The forces were: (1) the acceptance of the populist philosophy in the university; (2) the alteration of the university's hierarchical structure; (3) the disintegration of the normative order in the university; and (4) the change in the status of the university in society.11

By the late 1960's universities had come under pressure to adopt "open admission" policies, which would allow every citizen access to higher education and admit increased numbers of blacks, women and other minority groups. This pressure was extended to include the representation of minorities among faculty ranks. There were also movements to
adopt flexible grading standards, allowing credit for work experience, and generally "loosen" curriculum requirements.\(^\text{12}\)

Pressure increased for changes in the traditional roles of student, professor, and administrator. Students viewed university attendance as more of a right than a privilege, and assumed the role of "member-consumers," which included demands for participation in policy decisions and demands for quality and service. Professors began to view their relationship with the university as one of employer-employee, which gave rise to salary demands and increased union activity. As new forms of governance with greater constituent participation became commonplace, the chief administrator had less authority and more frequently performed the role of mediator among various factions within the university. Chief officers were also more likely to be appointed to a specific term of office, and to have their leadership more directly challenged.\(^\text{13}\)

The breakdown in the normative order occurred in many parts of campus life as divisions occurred over the university's role in dealing with social injustice, the neutrality of scholarship, non-traditional curriculums, institutional loyalty, and many other issues. The long established normative order had been the common focus for conflict resolution, and its disintegration produced internal uncertainty. It was the disruption in campus life by demonstrations, violence, and individual actions on the part of students and faculty, however, that attracted media attention and had a negative impact on the public image of the university.\(^\text{14}\)

Internal strife, student dissatisfaction and media attention to university problems eroded public confidence in higher education.
Questions about the value of a college education and the large allocations of public tax dollars came increasingly under discussion. Ultimately, the public university lost its power position to competing demands on the public purse. Its programs and functions also became subject to closer examination by the public and the legislature.\textsuperscript{15}

**DEMOGRAPHIC SHIFTS**

Although all of these environmental changes created new challenges for educational administrators, perhaps the most widely feared change has been the demographic shifts which have already closed many public schools, and have begun to affect colleges and universities. Although the actual number of 18 to 21 year olds in the United States continued to rise through about 1980, enrollment growth has been slowing down. The U.S. Department of Labor reported that the rate of college attendance of high school graduates showed a substantial decline between the years 1971 and 1972 for both men and women. In 1962, fifty percent of the high school graduates went to college, and by 1968 that figure had risen to a high of fifty-four percent. By 1972, however, the college-going rate had dropped back to the 1962 level.\textsuperscript{16}

The lower fertility rates of the 1970's have already affected our grade schools, and will have an impact upon the pattern of our educational system for the next twenty years or more. Although reports vary in predicting the length and severity of future enrollment declines, it is generally agreed that we are approaching a period of downward adjustments in our growth rate. Even the more optimistic reports project only slow growth by the year 2000.\textsuperscript{17}
Changes in the labor market have also contributed to the present state of higher education. The U.S. Department of Labor estimated that in 1980 only twenty percent of all jobs required more than a high school education. Since the college-going rate in the mid-1970's was fifty percent, it is predicted that many college graduates in future years will be working in jobs that do not require a college education. These predictions are contributing factors to decreasing enrollments in higher education. They have also had an effect on student demands for accountability and the renewed interest in their academic environment.\textsuperscript{18}

Although there has been an increase in the use of media in recent years, education remains a labor intensive technology. A high proportion of college and university budgets are spent on faculty salaries. These costs will continue to rise with inflation, but there will be no parallel rise in productivity.\textsuperscript{19} The tenure system in higher education and the changes in retirement legislation also pose major constraints to flexibility as the demand for different types of education changes with shifts in the labor market.

In addition, rapid advances in technology have proven costly. Colleges and universities have found it increasingly difficult to keep pace with the latest technical equipment for use in teaching or research. Even media libraries have suffered from insufficient funding.

Since the early 1970's there have been signs of increasing numbers of colleges failing, merging, or changing from private to public status. The growth in the number of campuses has slowed. Federal dollars for construction were drastically cut in the 1970's, and there has been a substantial decrease in state and private sources.\textsuperscript{20} Even without
additional buildings, an even increasing share of the institutional bud­
get is being allocated to debt service and the utility and maintenance
costs of existing buildings. Government restrictions relating to occupa­
tional safety, legislation requiring facilities for the handicapped, and
environmental protection have placed still greater strains on limited
funds.

It is evident that the changes in the educational scene in recent
years have been dramatic in their effects on colleges and universities.
These changes have created a number of "new" problems for educational
administrators, most noticeably in the environment outside the university
walls. Educational organizations are already beginning to face the prob­
lems of managing scarce resources, and the projections indicate that the
problems will worsen in the next decade or two. Dressel et al., in a
study of academic departments at fifteen universities, commented on the
effects of these changes for academic administrators:

Administrative leadership seems to be most highly
regarded, both on and off campus, when its presence
is documented by new buildings, new programs, new
levels of graduate-professional education, and
increased faculty and students. Leadership in
critical review of existing operations and in
their improvement is much more difficult. It is
highly unpopular with the faculty, and is unlikely
to result in many bouquets for harassed administra­
tors who pursue this thorny path.21

Trow has suggested that a no growth or "steady state" situation
requires fundamental changes in administrative styles and tasks. Deci­
sions must be made which are certain to make some people and institutions
extremely unhappy. He explains that:
. . . top administrators and the administrative staffs they have built up are often poorly suited to academic planning. The planning staffs and in many cases the top administrators themselves have been appointed to be the managers of growth. Steady state forces them to be once again educators, making decisions about the fate of programs and departments, professional schools and research units. This entails a fundamental change in administrative style which each institution is dealing with in its own way; and the changes give rise to uncertainties.22

Problems associated with decline have often been discussed in professional education journals. Earl Cheit, who popularized the term "new depression" in his 1971 study of the financial problems of colleges and universities, has summarized the basic theme of this literature:

Without growth, the interdependence of decision cannot be ignored or left to be absorbed by future changes. The method of change becomes substitution or even contraction. This squeeze places great stress on choice. Decision points become more formal. Criteria for judgment are often those that are measurable. In short, the basic questions of goals, governance, allocation of funds, and measurement of results are now coming within the influence of management methods, whether folk or systems.23

In summary, the evidence suggests that the education environment is changing, creating new challenges for educational administrators. The environment is becoming more uncertain and hostile, with fewer available resources. Management in an environment of declining resources is more difficult than managing growth, and there are fewer rewards for administrators. Boulding has underscored this argument in his comments concerning this management of decline:

There is a strong case to be made for the argument that decline requires greater skill, better judgment, a stronger sense of community, and a higher order of leadership than growth does. It is easy to adjust to growth. If you make mistakes, time will generally correct them . . . In decline, however, time aggravates mistakes.24
Questions concerning the differences between the management of growth and decline have prompted this investigation. In the study, educational administrators were examined under conditions of growing and declining enrollments. Similarities and differences were identified and discussed to determine if growth departments were managed differently from those with declining enrollments, if there were differences among the managers of decline, and if some managers of decline departments were more successful than others.
Chapter II

Footnotes


Ibid, pp. 32-45.

3 Ibid, pp. 32-33.


5 Quattlebaum, pp. 33-41.


9 Carnegie Foundation, p. 34.

10 Richman and Farmer point out that the words "management," "managerial," or "manager" appear in book titles much more frequently today than the words "administration," "administrative," or "administrator," although the reverse was true fifteen to twenty years ago. This is true of books in higher education as well as those in business and industry. Here the term "manager" or "organizational decision-maker" appear most often, but the terms have been used interchangeably. For a discussion of the differences between the terms "manager" and "administrator," see Chapter 1 in Barry M. Richman and Richard N. Farmer, Leadership, Goals, and Power in Higher Education (San Francisco: Jossey-Bass, 1974).


14 Ibid, pp. 265-266.

15 Ibid, pp. 268-270.

17 Kenneth A. Boulding, Foreward to *Adjustments of Colorado School Districts to Declining Enrollments*, by Mark Rodekohr. Monograph of the Study Commission on Undergraduate Education and the Education of Teachers (Lincoln, Nebraska: University of Nebraska, 1974), pp. 3-4.

18 Kerr, pp. 42-43.


20 Carnegie Foundation, p. 2.


24 Boulding, p. 2.
Chapter III

A CONCEPTUAL MODEL FOR THE STUDY OF DECLINE IN ORGANIZATIONS

This chapter provides the conceptual model which guided the examination of the management styles and strategies used by educational administrators in attempting to solve organizational problems related to environmental change. A conceptual model can provide a simplified picture of the component variables of a particular organization, and illustrate the relationships among variables. The problem for the organizational decision-maker is that the "real" world is never quite as simple as the model would suggest. Models do, however, provide a clearer picture of complex relationships, and aid in our understanding of these relationships. They also provide an outline of important variables.

In the abstract, educational organizations, like all other organizations, receive inputs from their environment and return outputs to the environment. Management would be a simple task if all of the elements involved in receiving inputs and returning outputs were known and controlled. While managers in the "real" world are seldom if ever able to reach the goal of full knowledge and control of relevant variables, educational administrators functioning in a benign environment were closer to reaching them than in most organizations.
In order to identify variables relevant to the study of decline in educational organizations, a model was constructed based upon current organizational theory literature. First, variables were identified: environmental perceptions, factors related to the organizational decision-maker(s), the transformation process from desired state to end state, and outcomes. Leadership style was also examined as a moderating variable. These variables were discussed in relation to existing theory in the development of the model.

In this chapter, the literature review leads to the conceptual model. Specific research questions were presented within the framework of the model. The responses to the research questions were used in the discussion of the broader questions posed in Chapter I.

THE ORGANIZATIONAL ENVIRONMENT

The environment of an organization, broadly speaking, has been defined as that part of the total organization which lies outside its boundaries. Organizations have normally dealt with only a small part of this larger environment. Dill has referred to those parts of the
organization's environment which are "relevant or potentially relevant to goal attainment" as the task environment. He identified the major sectors of an organization's task environments as clients, suppliers, competitors, and regulatory groups.¹

Thompson discussed a second important concept in examining relationships between organizations and their environments.² He elaborated on Levine and White's concept of an organization's domain. In a study of health agencies, Levine and White defined the organization's domain as "claims which an organization stakes out for itself in terms of (1) diseases covered, (2) population served, and (3) services rendered."³ Thompson expanded this idea by explaining that:

The organization's domain identifies the points at which the organization is dependent on inputs from the environment. The composition of that environment, the location within it of capacities, in turn determine upon whom the organization is dependent.⁴

He further explained that in order for an organization's domain to be operational, its claims to domain had to be recognized and supported by those in the task environment who were able to provide the necessary support. Domains were essentially exchange agreements between the organization and elements of the task environment. These agreements rested on domain consensus, or a set of expectations for both organization members and those with whom they had exchanges, "about what the organization will and will not do."⁵ Because organizations negotiated these exchange agreements with many different elements, the task environment presented both contingencies and constraints. Organizations managed their dependency on the task environment elements
by choosing various strategies which allowed them to maintain power or gain control in relation to them.\textsuperscript{6}

Domain choices were made by individual decision-makers within the organization who acted on behalf of the organization. Some of their choices were straightforward decisions based upon clearly identifiable choices. Often, however, difficult choices based on incomplete or uncertain information had to be made.

Thompson believed that coping with uncertainty was the major concern facing organizations. He explained that when decision-makers faced a situation in which they did not know which events affecting their outcomes would occur, did not know the causal links in the environment, had little control over the environment, or were in an unstable environment, they were dealing with environmental uncertainty. Uncertainty was thought to exist in decision situations where the decision-maker had only partial knowledge of the relevant variables.\textsuperscript{7} Galbraith defined uncertainty as the "difference between the amount of information required to perform a task, and the amount already possessed by the organization."\textsuperscript{8}

In recent years, research efforts have begun to focus on the organizational designers, or chief decision-makers within an organization. Bobbitt and Ford proposed that contingency variables such as the organization's structure, technology, and size should be viewed as information which became available to the organization and was processed through individuals who acted on the organization's behalf. An organization's size, technology, or structure would be at least
partially determined by those decision-makers who made choices on behalf of the organization. The values assigned by the organizational designers to the different variables would determine the goals of the organization.9

The Enactment Process

In confronting the problem of how the environment became known to the managers of an organization, Weick developed the notion of an "enacted environment":

...the human creates the environment to which the system then adapts. The human actor does not react to an environment, he enacts it.10

Weick attributed the development of the concept of an enacted environment to the earlier work of Schutz11 regarding the concept of time. Basically, the argument suggested that man could only define a stimulus after a response had been completed, or a person could only know what he had done after he had done it. Weick discussed some of the properties of an enacted environment:

First, the creation of meaning is an attentional process, but it is attention to that which has already occurred. Second, since the attention is directed backward from a specific point in time (a specific here and now), whatever is occurring at the moment will influence what the person discovers when he glances backward.12

Pfeffer and Salancik further elaborated Weick's concept. They offered some important implications for understanding organizational actions in their environments:
The question of what the environment is, is meaningless without regard to the focal organization which enacts it, or more precisely, the individuals who enact it in planning the activities of the organization. If environments are enacted, then there are as many environments as there are enactors, which may explain why there are so many typologies of organizational environments and even different individuals within each may react differently to what appears to be the same context.\textsuperscript{13}

Child, in a similar vein, suggested that the emphasis on environmental characteristics had failed to allow for manifestations or strategic choice by organizational decision-makers. Decision-makers had some opportunities to select the type of environments in which they would operate. And in powerful organizations, decision-makers could actually influence the prevailing conditions in their present environment. Thus, he focused attention on the importance of strategic choices of those who directed the organization.\textsuperscript{14}

\textbf{IMPORTANCE OF STRATEGIC CHOICES}

Strategy describes the ways in which an organizational decision-maker chooses to relate to elements in the environment in an effort to achieve organizational goals. Galbraith has discussed the concept of strategic choice in organizations:

The notion of strategic choice suggests that there are choices of goals and purpose, choices of different organizing modes, choices of processes for integrating individuals into the organization, and finally a choice as to whether goals, organizations, individuals, or some combination of them should be changed in order to adapt to changes in the environment.\textsuperscript{15}
He has explained that strategy involves two basic choices. First is the choice of the organization's domain, or distinctive competence. This choice determines which parts of the total environment have relevance for the organization in establishing its goals. Actually, four basic factors determine the organization's domain: products or services offered, clients or customers to be served, the technology to be employed, and the location where the work is performed. The second choice determines the ways in which the organization will relate to these environmental elements, and the setting of organizational priorities for goal achievement. The breadth of this study extends to only the first of these choices.\textsuperscript{16}

Bourgeois, in a review of the strategy and environment literature, concluded that:

\begin{quote}
The strategy concept has its main value, for both profit-seeking and nonprofit organizations, in determining how an organization defines its relationship to its environment in the pursuit of its objectives.\textsuperscript{17}
\end{quote}

However, even though this general statement would probably be accepted, there has been little uniform treatment of the concept in the literature. In an effort to clarify the differences, Hofer, and Schendel compared the strategy definitions of a number of writers, and identified three primary areas of disagreement: (1) The breadth of the concept of business strategy, (2) the components, if any, of strategy, and (3) the inclusiveness of the strategy-formulation process.\textsuperscript{18} Furthermore, related terms such as business policy, strategic planning, long-range planning, and strategic management probably have as many definitions as there are experts.\textsuperscript{19}
Although the process of organization-environment interaction has not been examined extensively, strategy formulation appears to be a central concept. Miles and Snow have referred to it as the neocontingency perspective, and have characterized it as a perspective which:

1. Views managerial or strategic choice as the primary link between the organization and its environment.

2. Focuses on management's ability to create, learn about, and manage the organization and its environment.

3. Encompasses the multiple ways in which organizations respond to environmental conditions.

Strategy has been used to describe the coalignement process that links the organization to the environment and technology. Mintzberg defined strategy as "a pattern in a stream of decisions." He made a distinction between intended strategy, and realized strategy, and noted that:

...when a sequence of decisions in some area exhibits a consistency over time, a strategy will be considered to have formed.

A decision-maker might consciously formulate a strategy before making specific decisions, or a strategy might gradually form, possibly unintentionally, through a series of single decisions.

Mintzberg did exploratory research involving intensive historical studies of single organizations over periods of decades. Chronological listings were made of important organizational decisions and actions, and of environmental trends. The results of his study were reported in three general statements:
1. Strategy formation can be viewed as the interplay between a dynamic environment and bureaucratic momentum, with leadership mediating between the two.

2. Strategy formation over periods of time appears to follow distinct regularities which may prove vital to understanding the process.

3. The study of the interplay between intended and realized strategies may lead to the heart of this complex organizational process.  

Mintzberg combined his intended and realized strategies in three ways: (1) Deliberate strategies, or intended strategies that were realized, (2) Unrealized strategies, or intended strategies that were not realized, and (3) Emergent strategies, or realized strategies that had never been intended, whether they had not been intended at all or were displaced along the way.

Finally, Mintzberg made an important observation about organizational learning. Strategies were not fixed plans that changed at scheduled intervals. Strategy formation was more accurately described as a learning process, where there was feedback from the implementation process back to formulation, and intentions were modified along the way resulting in emergent strategies.

Active and Passive Strategies

Whether or not an organization is effective is based on its domain choice, and a variety of approaches have been used by organizational decision-makers in making these choices. One common thread of theories of the strategic adaptation and response of organizations to their environments was the active or passive quality of the alternatives considered. Glueck defined an active or offensive strategy as one in which the organizational decision-maker(s) took action in their
environment before they were forced to react to threats or opportunities in the environment. Conversely, a passive or defensive strategy was one in which the organization reacted to pressures from the environment only when circumstances forced a move.²⁸

Nystrom et al. referred to the processes used by organizations to adjust to demands or threats in the environment in a similar fashion. Adaptive or reactive processes involved such activities as forecasting and interpreting environmental events, seeking outside advice, buffering variations in resource flows across organizational boundaries, selecting environments to inhabit, and learning from previous decisions. Manipulative or proactive processes included advertising, negotiating agreements, educating employees, forming coalitions, and enacting supportive environmental niches. These were descriptions of pure types which often occurred in a mixed form, and intended manipulations or adaptations often began a long chain of actions and reactions.²⁹

The authors further explained the result of this process:

Organizations store up their learning in the form of programmed behaviors, and because these programs are activated with minimal reflection, they often produce unexpected consequences.³⁰

Organizations which had found themselves in a benevolent environment had been likely to program or standardize much of their behavior, and repeated successes had reinforced their beliefs. When the environment changed, the inertia of the proven program most often continued, even though the programmed responses might then have actually been dysfunctional. Nystrom et al. theorized that organizations must go
through a process of unlearning old behaviors before new behaviors could be found. This has been of general concern in relation to the management of decline in institutions of higher education, because the environmental change since the late 1960's has been significant after many decades of growth.

In summary, it is well documented that the environment in which most institutions of higher education operate has become increasingly hostile in recent years, creating problems with both the input and output variables which must be addressed by managers. The effectiveness of these organizations is based upon domain choices made by individual decision maker(s) within the organizations. The variables used in making choices will undoubtedly be more uncertain and less controllable in the future than they have been in the past. In addition, there will be fewer "slack" resources available, making errors more costly to the organization than before. This situation will create new challenges for those who manage the organizations.

In an effort to increase our knowledge of the management of decline in institutions of higher education, this study explored the management styles and strategies of chairmen in university departments with growing and declining enrollments. The departments examined in the study shared a common environment as a part of a large university, but each department also had a distinct academic environment. For some, inputs were plentiful and outputs readily absorbed into the environment. For others, however, inputs were scarce, and outputs were far less easily absorbed. The researcher sought to determine whether
growing units were managed differently from those in decline, whether there were differences in the management styles and strategies of chairmen in the departments with declining enrollments, and whether some chairmen were better than others in their ability to successfully maintain resource levels.

THE ORGANIZATIONAL DECISION-MAKER

Focus on the role of the organizational decision-maker(s) as information processing agents within organizations has led to increased research emphasis in this area. Theorists have begun to emphasize the importance of individual abilities and methods of processing the tremendous information loads which act as constant stimuli to the decision-maker. Within the past two decades, researchers have attempted to understand better the role of managerial perceptions, and in doing so have studied the ways in which individuals process information internally.

The way in which people make decisions has been of interest to researchers in a variety of fields for many years. It is evident that people within organizations are responsible for making the organizational decisions which determine the goals and strategies to be pursued by the organization. The study of managerial perceptions and decision-making involves the study of the internal processing of information by individuals, since personal preferences influence decisions. The process of decision-making and the factors affecting individual perceptions are thought to be extremely complex. The literature reviewed in the following section pertains to the decision behavior of individuals
in their roles as organizational decision-makers.

Rational Paradigm

Man as decision-maker has most often been described as a rational being. When a decision was necessary he would gather relevant data in order to generate all of the alternatives available, carefully evaluate each alternative, and decide on the best alternative to maximize his gains. The environment of the rational man of economics or statistical decision theory was clearly defined and highly specified, allowing him to "optimize" his decisions. The rational paradigm demonstrated the way in which a decision should be made in order to maximize a particular behavioral outcome, and for many years it was presented to managers as the preferred mode of decision-making.

Some theorists disagreed with this approach because it did not appear to describe the decision-making process in reality. Simon was an early critic who pointed out that man was unable to make optimal decisions for two basic reasons. First, he suggested that man was seldom able to devote the time and attention that would be required to search for the optimal or perfect solution to the problem. He would most often "satisfice" or concern himself with the selection of a satisfactory alternative. The second problem identified by Simon was that most often man could not process all of the information necessary to discover all of the possible alternatives included in a real decision situation, and therefore had to deal with limits on his rationality, or "bounded rationality."
To account for the failure of rational theory to explain all of the observed phenomena which occurred in decision-making for complex decision problems, theorists through the years describes practical constraints on the ideal rational process such as the limits of time, the costs of information, and the influence of additional values. More recently, researchers in a number of disciplines have begun to question the assumptions of the model itself, and a new set of assumptions concerning the decision process has emerged which is distinctly different from those of rational theory. The common thread in this research has been the logic of cybernetics, the simple decision-making mechanisms in the human body which transmit mechanical-electrical communications between the nervous system and the brain.34

**Cybernetic Paradigm**

Steinbruner described the difference in the central focus of the rational or analytic paradigm35 and the cybernetic paradigm as that of finding an optimal solution under given constraints by direct calculation versus the process of eliminating the variety inherent in any significant decision problem. The difference was further clarified in relation to an individual dealing with uncertainty. The rational paradigm assumed that the individual would calculate alternative outcomes and develop a sensitivity to pertinent information. The cybernetic paradigm assumed that the individual would control his uncertainty by screening out information which his established set of responses was not programmed to accept, and by avoiding direct outcome calculations. Using this paradigm, the decision-maker did not calculate alternative outcomes and was not broadly sensitive to pertinent
information, and therefore many factors which did in fact affect outcomes were not considered in the decision process.\textsuperscript{36}

In complex environments, cybernetic logic would dictate that the decision-maker must have a more elaborate repertory of responses to maintain an adaptive capacity. It was suggested that as the environment became increasingly complex, decision-making organizations arose which attempted to match environmental complexity by means of an internal complexity consisting of a collective rather than a single decision-maker. In the organization, direct coordination by managers provided for the establishment of organizational routines for the collective. The organization was divided into subunits, and the management focused on the issues raised by the various subunits in a sequential order, preserving the cybernetic paradigm.\textsuperscript{37}

Cybernetic logic, however, was also subject to question. Steinbruner identified two critical problems with cybernetic logic. First, simple cybernetic decisions depended upon an environment which was highly structured and properly arranged, which posed a potential problem in explaining decision-making in a complex, interactive environment. Secondly, a view of the human mind was projected which did not account for its ability to make inductive inferences on its own initiative.\textsuperscript{38} In view of the discussion above, it would appear that a decision of great complexity and uncertainty would "boggle the human mind and render it incapable of action." However, individuals have been observed in many settings making decisions under such conditions with relative ease. This decisiveness under complexity, which was not adequately explained by either the rational or cybernetic paradigms, was readily
explained by those who studied the fundamental operations of the human mind.  

Cognitive Theory  

Cognitive theory examined the ways humans structured their beliefs, and cognitive principles sought to explain the ways in which highly complex decision problems were structured with enough stability for cybernetic processes to operate. Steinbruner explained that the cognitive operations of the human mind worked in interaction with organizational structure to set workable limits on highly diffuse decision problems.  

Messick conceptualized a person's cognitive orientation as "stable attitudes, preferences, or habitual strategies determining a person's typical modes of perceiving, remembering, thinking, and problem-solving." They were essentially habitual modes of processing information, although they were not directly learned in the sense of being acquired and extinguished as in learning theory. Cognitive orientations developed slowly and experientially and did not appear to change easily through specific instruction or training. They functioned as high level heuristic devices controlling behavior across many different domains.  

Cognitive orientations were not synonymous with abilities. They were viewed as having broader coverage than abilities, and as being more pervasive in their application. Cognitive orientations also differed from abilities in the sense that the high end of an ability dimension was consistently more adaptive, while each end of a cognitive style dimension had adaptive value, dependent upon the nature of the
situation. It appeared that cognitive orientations functioned as higher order heuristics used to organize lower-level strategies, operations and inclinations in complex sequential processes such as learning and problem-solving. The controlling mechanisms which determined the characteristic regulation and control of impulse, thought, and the expression of behavior in diverse areas were also seen as a part of the concept of cognitive orientation.

Cognitive theorists have concentrated on the study of the inferential capacity of the mind which takes an active role in imposing structure on highly ambiguous data. This capacity is viewed as a fundamental force in the process of decision-making. Since there is little argument that the ultimate locus of decision making is the human brain, it could be further argued that if systematic regularities existed in the way in which the human mind deals with disproportionate values and structural uncertainty, knowledge of such regularities could lead to important theoretical gains concerning the process of decision-making. Steinbruner noted that:

"Within the content of decision theory and the complex policy problem, however, the implications of basic principles of cognitive theory have not been seriously and systematically drawn. As a consequence their impact in this area is potentially significant."

ELEMENTS OF COGNITIVE ORIENTATION

Although Messick has defined nineteen cognitive orientation dimensions, only those which have been studied in the context of organizations or are of particular importance to organizational decision-makers have been included here. Researchers have studied
managers in organizations to gain a better understanding of their perceptions and behavior, and have begun to examine factors relating to their information processing modes. Solo described cognitive orientations as "systems for the organization of information, observation, and thought in the process of individual and group problem-solving." Organizational theorists have been most interested in the ways in which individuals in organizations process information, and researchers have attempted to identify the factors which might influence the types and/or magnitudes of the differences found among individual decision-makers. The assumption upon which this research rests is that individuals possessing different modes and capabilities for information processing will have different perceptions of the same objective phenomena. A number of factors have been examined which are believed to influence information processing in decision-makers such as cognitive structure, intelligence, and personality characteristics.

Cognitive Structure

Personality theorists have used the term cognitive structure in reference to the "relatively enduring patterns of organization in the person's representation of the social and physical environment." During the past twenty-five years the number of psychological research studies relating to various aspects of cognition has grown so rapidly that Kreitler and Kreitler have referred to a "cognitive revolution." They have observed that:
The most characteristic property of the domain is the production of a great many specific models lacking integration into a broader theoretical framework.\textsuperscript{51}

Apparently this situation has not significantly improved in the past decade or longer, since in 1966 Bieri noted that:

It is no secret that present theoretical formulations and empirical analyses of the problems of cognitive structure are both vague and at times contradictory.

Bieri defined cognitive structure as "a hypothetical link between stimulus information and an ensuing judgment which refers to those cognitive processes which mediate the input-output sequence."\textsuperscript{53}

Bieri pointed out that even though a wide variety of definitions exists for the term cognitive structure which refer to different psychological processes, some commonalities exist. First is the notion of cognitive structures as organized systems whose properties are dependent upon the interrelations of the varied elements in a particular system. Secondly, theorists have tended to agree that knowledge of cognitive structures implies that it is possible to make predictions concerning the way in which an individual copes with his environment.

More recently, theorists have used the term "information processing" to describe the ways in which man adapts to his environment.\textsuperscript{54}

Suedfeld states that man's interaction with the environment involves:

...the identification and acquisition of potentially useful stimuli, the translation and transformation of the information received into meaningful patterns, and the use of these patterns in choosing an optimal response.\textsuperscript{55}
The major interest of researchers in this area has been the study of various aspects of cognition. Cognitive theories and models have been incorporated into almost every subfield in psychology. It has become a dominant theoretical movement in experimental psychology. Personality theorists have also supported the movement, and are now using the parameters of the acquisition, transfer, and utilization of information to explain both behavioral tendencies and individual differences. However, most of these theories are narrow in focus, and have referred only to partial systems.56

Elements of cognitive structure were described by early theorists in a unidimensional way. Properties such as cognitive complexity-simplicity or abstractness-concreteness were thought of as a continuum of a single human information processing dimension. Later theorists argued that information processing was more accurately described in a multidimensional way.

**Simple-complex dimension**

Cognitive complexity-simplicity is a property of cognitive structure. In a broad sense, the term cognitive complexity has been used to describe the way an individual structures his social world. More specifically, the term has been studied as an information processing variable in efforts to predict the ways in which subjects transform specified social stimuli into various judgments of a social or clinical nature. Bieri defined cognitive complexity as the tendency to construe social behavior in a multidimensional way, using the word "dimension" to refer to bi-polar descriptive terms such as friendly-unfriendly,
mature-immature, and responsible-irresponsible. Cognitive complexity permitted researchers to analyze both the nature of the stimulus and the cognitive structure of the judge in the common terms of the relative dimensionality of each. Bieri believed that a highly complex person would differentiate among a number of dimensions of social behavior in construing others, and therefore would have a more versatile system available for perceiving their behavior.

Bieri studied the predictive accuracy of the behavior of individuals. He defined a construct as representing discrimination in the environment, or differential perceptions, and suggested that the degree of differentiation of an individual's construct system reflected his cognitive complexity or simplicity. He hypothesized a positive relationship between the ability of one's system of constructs to differentiate people in the environment, and his ability to predict the behavior of these people. In his results Bieri confirmed his hypothesis, but he also reported the tendency of his subjects to predict accurately the differences between themselves and others more accurately than the similarities.

Bieri and Blacker studied the generality of cognitive complexity, comparing the complexity of a subject's cognitive system in the perception of people with their perception of inkblots. Their research results indicated that a person's manner of structuring interpersonal experiences is related to his manner of structuring other realms of experience.
Zimring objected to the practice of using the extent to which differences were used by subjects as the measure of complexity. His research demonstrated that persons who found more similarities than differences in tests of cognitive complexity could also be classified as complex rather than simple.61

**Abstract-concrete dimension**

Harvey et al. modified Bieri's concept, developing the concrete-abstract dimension. In this theory, "concreteness was described as the use of few dimensions of information with a simple integrating schemata, and "abstractness" was defined as the use of many dimensions of information and complex integrative schemata. Concreteness-abstractness was seen as an attribute of the patterning of stimuli rather than the stimuli themselves. It was described as the quality of the linkage between a subject and object, rather than a reference to the subject or the object.62

In 1962 Schroeder and Streufert developed the Sentence Completion Test to assess this new theory, and in 1965 Schroeder et al. published a study in which they argued that "abstract" decision-makers were likely to process greater amounts of information in a complex environment than "concrete" decision-makers, who would reach an overload state more rapidly under complexity. In simple decision environments, they found that "concrete" decision-makers needed a greater amount of information to reach a decision than their counterparts.63
In a similar vein, Sieber and Lanzetta found differences in the ability to re-use information between "concrete" and "abstract" decision-makers. They reported that "concrete" individuals needed more information under sub-optimal loads, since they tended to relate one stimulus to one response. "Abstract" decision-makers were able to more successfully re-use information for more complex integrations.

Multi-dimensional theories

Vannoy investigated the generality of cognitive complexity in a study where subjects were given a battery of instruments, and discovered that no single dimension was being measured. Rather, three broad classes of behavioral tendencies were identified:

1. The number of variables used in judgments
2. The coarseness of distinctions made on any one variable
3. The orderliness of the world

McKenny and Kean also criticized one-dimensional views of information processing. They believed that consistent modes of thinking developed along two dimensions: information gathering and information evaluation. Information gathering referred to the perceptual processes by which the mind organized the stimuli it encountered. The second dimension of the McKenny and Keen model, information evaluation, referred to the processes used in analyzing data to solve problems. Their model was developed in an effort to explain the processes which affect a manager's assessment of his environment. They developed an instrument to measure their concept of cognitive orientation, and found experimental evidence to support the model.
McKenney and Keen argued that their model differed from the theories of rationality or other theories which tended to equate decision-making with problem solving. They stated that:

decision-making is above all situational, and, therefore, includes problem finding. The manager scans his environment and organizes what he perceives. His efforts are as much geared to clarifying his values and intents as to dealing with predefined problems.67

These theorists recognized that some problems, especially in a crisis situation, forced their way into the manager's awareness, but they assumed that generally he could choose the problems he dealt with and could set his own level of aspiration. Because his activities were bounded by formal job constraints, informal traditions, and expectations explicit in his roles, his decision-making activity was influenced to a great degree by his perception of the position he held.68

McKenney and Keen also argued that:

A decision "situation" exists when he sees some event or cue in his environment that activates him into a search-analyze-evaluate sequence that results in a decision. This sequence is initiated by and depends on his environmental assessment.

The behavioral aspects of finding, recognizing, and defining the problem were an important part of the decision-making process, and one idea implicit in this focus on problem findings was that some modes of cognition would be better suited to certain contexts than others. If a "fit" existed between the cognitive orientation70 of the decision-maker and the information processing constraints of the task, the individual would be more likely to gather environmental information which would lead to success in problem finding. In addition, the
decision-maker would be able to evaluate the information gathered
in a manner which would facilitate his success in solving the problem.  

In this model, the authors stressed that the modes they described
"relate more to propensity than capacity." Modes of thinking developed
out of an individual's experience, and often people developed a pattern
of reinforcing their strengths. They were most likely to approach
problems and tasks using the mode of thinking which they found most
comfortable.  

Hellriegel and Slocum presented a model for differentiating the
orientations used by managers in problem-solving. Their ideas were
based on the work of psychologist Carl Jung in his study of the orienta-
tion of personality. Jung viewed personality from an open systems
perspective, and described it as consisting of a number of differenti-
tated but interacting subsystems. He developed behavioral dimensions
to describe the ways in which individuals observed, evaluated, and
acted upon information in their environment. Although these dimensions
included attitudes (judgment vs. perception) and orientations to life
(introversion vs. extroversion), most management studies have focused
upon the psychological functions. Jung described four basic psycholog-
ical functions as sensing, intuition, thinking, and feeling.  

Of the four functions, sensation and intuition were seen as
paired opposites which ranged in intensity along a continuum, and
represented the extreme perceptual orientations. Perception in this
sense referred to the ways in which people became aware of their envi-
ronment, similar to the "information gathering" modes of the McKenney
and Keen model. Thinking and feeling represented a continuum of the decision-making orientations of managers. These orientations were thought to influence evaluations and judgments of the "facts" in the environment, or the information evaluation mode of McKenney and Keen.74

Generally only one of the four functions was thought to dominate in each individual, and the dominant function was often supported by one of the functions from the other pair. Hellriegel and Slocum illustrated their model by describing prominent businessmen in each of the four pure type composite orientations. Dominant feelings types were described as empathetic individuals who related well to people and who had a strong preference for the avoidance of conflict. At the opposite end of the feeling-thinking dimension, dominant thinking types were described as unemotional, impersonal, and dependent upon intellectual processes in decision-making.75

Preferred methods of perceiving information for sensing types included a preference for standard ways of problem-solving, patience with detail, and preference for a standard routine. Intuitive types preferred solving new problems and searching for new possibilities. They intended to attack an entire problem at once and evaluate alternatives quickly, sometimes re-defining the problem in the process.76

Although Hellriegel and Slocum described pure composite orientations, they cautioned against trying to categorize all managers into a pure type. Jung's theory stated that as the individual developed, he would move toward a balance and integration of all four functions. They also warned against inferences that a manager could not adapt to
situations which did not fit his preferred style, even though they agreed that the requirements of a particular organizational role might be more natural to a particular style.\textsuperscript{77}

Other studies have been based on the Jungian theory. Mitroff and Kilmann studied the stories created by managers who were asked to describe their ideal organization. Three separate groups of managers were each divided into four groups according to their dominant Jungian personality type after they had written short stories which expressed their concept of an ideal organization. Each group was then asked to compose a single group story which expressed the group's concept of its ideal organization.\textsuperscript{78}

Combinations of the two information gathering modes and the two information evaluation modes resulted in four Jungian personality types: sensation-feeling (SF), sensation-thinking (ST), intuition-thinking (NT), and intuition-feeling (NF). The stories created by ST subjects emphasized control and certainty, factual details, conditions of the physical work environment, work roles rather than individuals, and well-defined lines of authority. Opposite stories were created by NF subjects. They emphasized broad, global issues, with particular attention to general personal and human goals. The ideal NF organization existed to serve the needs of people and had no clear lines of authority or fixed rules of behavior. Intuitive-feeling individuals described a flexible, decentralized organization using alternatives to a hierarchical structure.\textsuperscript{79}
Not only were the ideal organizations of ST's and NF's vastly different, but those of SF's and NT's were also far apart. The stories of SF's were primarily concerned with details of individuals and their relationships within the organization. Their descriptions were more realistic than the NF descriptions, and tended to focus upon the interpersonal environment of the organization. In contrast, the NT stories focused upon global, ill-defined issues and abstract theories. Their preferred organization was described as idealistic and impersonal.  

Kilmann and Thomas studied the relationship between Jungian personality orientations and an individual's choice of interpersonal behavior in handling conflict. Eighty-six male graduate students were administered Jungian personality measures and instruments classifying conflict handling modes. The researchers reported that the thinking-feeling dimension was significantly related to an individual's conflict handling behavior. Subjects who were dominant feeling types tended to emphasize accommodation toward others more than the thinking types. They also tended to be more cooperative, less assertive, and less competitive.  

Slocum studied 152 change agents with questionnaires and interviews in an effort to determine whether the manner in which a change agent approached a client organization depended upon his personality orientation. Although the results indicated that the change agents studied were fairly similar with regard to the pieces of information sought from clients, Slocum concluded that change agents with different cognitive orientations differed in the amount of information used in
Mitroff and Kilmann have explained that both the nature of the organization's task environment and the personality characteristics of the organizational decision-maker(s) contribute to the design of the organization. The two basic organizational structures most often discussed in the literature are the bureaucratic structure, described as highly effective in a stable environment, and the organic structure, which is more effective in a changing or uncertain environment. In the Mitroff and Kilmann study, the ideal organization of the sensation-thinking types was similar to the bureaucratic organization, contrasted with the preference of the intuitive-feeling types for an organic structure. If the assumptions are true that both the nature of the task environment and the personality of the manager are factors in the organization design, what happens when the nature of the environment changes? Must the manager also change if the organization is to operate effectively.

These studies have provided data supporting the arguments that individuals use different modes of processing the information found in their environment and that the ways in which they process information may affect their problem-finding and problem-solving behavior as managers. Although there is still a great deal to be learned about the ways in which individuals structure their world, it seems likely that this aspect of managerial behavior is worthy of further consideration in examining organizational decision-makers.
Intelligence

Another variable which has been examined in relation to the information-processing capacity of managers is intelligence. Taylor and Dunnette studied a sample of line managers in a manufacturing company using intelligence as one of the independent variables and strategies adopted in a decision-making exercise as the dependent variable. They found that more intelligent managers tended to process information more quickly and with greater accuracy than those who were less intelligent. They also noted, however, that even though intelligence was an important factor in evaluating the possible consequences of a decision, it had little influence of the confidence with which the decision was made.83

Although Taylor has noted that it appears reasonable to conclude that a positive relationship exists between intelligence and information processing capacity, its nature remains unclear. Further research is necessary to clarify this question.84

Dogmatism

Dogmatism is among the personality factors thought to influence one's information processing capabilities. In 1950 Adorono et al. studied the relationship between personality traits and overt prejudice, especially in relation to the potentially fascist individual. As a result of this work, a Fascism (F) Scale was developed as a technique to measure prejudice indirectly and without naming any minority group. It was also designed to identify those personalities with a predisposition toward fascism. The broader concept believed to be investigated
in the use of the F Scale was authoritarianism. 85 

Gradually, use of the F Scale by others shifted from the measurement of "Fascist authoritarianism" to "general authoritarianism." Because of this, Rokeach tried to distinguish between the structure and content of belief systems. He attempted to develop a more satisfactory instrument which would measure the nature of belief systems, regardless of their content. Rokeach conceptualized belief systems along a continuum or "open" and "closed", and produced the Dogmatism (D) Scale as a measure of the openness or closedness of an individual's belief system. 86

Brightman and Urban have offered a definition of dogmatism as referring to "the extent to which an individual receives, analyzes, and synthesizes information relative to pre-existing beliefs." 87 They studied the information processing strategies of high and low dogmatic subjects and concluded that the dogmatism variable had some explanatory power for individual differences, but only in an uncertain environment. Brightman and Urban believed that the inability of the dogmatic individual to synthesize additional information into a pre-existing belief structure was the reason for his resistance to change. 88

In another study, Block and Peterson found that dogmatic individuals were more likely to reject or misinterpret information, and confidently held on to a decision with little flexibility once it had been reached. 89 This finding may have resulted from the inability to synthesize additional information discussed in the Brightman and Urban study.
Long and Ziller administered the Rokeach Dogmatism Scale and four decisional measures of the tendency to reserve judgment to seventy-two freshman women. The less dogmatic women tended to engage in more predecisional information search and required more time for judgment and decision. On this basis, the researchers interpreted dogmatism as a defense mechanism which limits the intake of information and thus interferes with the processing of pre-decisional information.90

Tolerance of Ambiguity

Tolerance of ambiguity has also been researched as a personality factor which influences the information processing capabilities of decision-makers. Historically, the concepts of "rigidity" and "tolerance of ambiguity" have been interrelated. Frenkel-Brunswik used the term "rigidity" to refer to both "intolerance of ambiguity" and resistance to change.91 Eynsek used the term "rigidity" as being almost interchangeable with intolerance of ambiguity. The rigid person was described as one who attempts to gain security by grouping concepts into rigid categories of black and white, refusing to acknowledge that shades of gray may also exist.92

Budner maintained that these concepts were both theoretically and empirically separate in that one who was intolerant of ambiguity tended to manifest certain response modes regardless of the phenomena being responded to at a particular time. A rigid person would cling to a belief despite evidence to the contrary, whereas a person could be both flexible and intolerant of ambiguity. Budner defined tolerance
of ambiguity as "the tendency to perceive (i.e. interpret) ambiguous situations as desirable." 93

Tolerance of ambiguity has been used as an independent variable in a number of studies. MacDonald correlated a tolerance of ambiguity measure with a measure of performance in ambiguous tasks, and found that students with a high tolerance of ambiguity tended to excel in the performance of ambiguous tasks. 94

Budner developed a scale to measure tolerance of ambiguity and attempted to determine some of the specific areas in which it might be a significant variable. He suggested that individuals with a high tolerance of ambiguity may be less likely to perceive situations as uncertain. 95

In a simulated laboratory study, McCaskey found tolerance of ambiguity positively related to perceived environmental uncertainty. McCaskey suggested that "organization members seem to adjust the level of environmental uncertainty they perceive to fit their own needs for stimulation and closure." He also noted limited evidence and called for further research. 96

MOTIVATIONAL ORIENTATION

Although there is a growing body of research evidence documenting theories of cognitive orientation, these variables only account for a part of the variance in the behavior of decision-makers. Majeres has supported the idea that decision-makers with the same cognitive orientation examining the same decision environment may
behave differently due to their motivational orientation. His research results confirmed his hypothesis, and documented the importance of the role of motivation in cognitive theory.97

In McCaskey's study of tolerance of ambiguity and perception of environmental uncertainty, he suggested that organization members attempted to create an environment which fit their personal needs for stimulation and closure. Persons with a greater tolerance of ambiguity might prefer to work under conditions of greater uncertainty, and might actually be motivated to create an uncertain decision environment for themselves.98

Solo has defined motivational orientation99 as "systems for the organization of values and evaluation in the process of individual and group choice."100 It is an important aspect of decision-maker choice which has helped to account for the individual variance found in dealing with decision problems which appeared similar. Studies of the motivational orientation of decision-makers have included a number of factors such as values, personality variables, and commitment. Only the area of values or ideology as it has been applied to organizational theory has been examined for purposes of this study.

Values

England developed a theoretical model for analyzing the impact of values on behavior in a study of the personal value systems of 1072 managers. He defined a personal value system as "a relatively permanent perceptual framework which shapes and influences the general nature of an individual's behavior."101 Values and attitudes were
similar, but values were more ingrained, permanent, and stable in nature. England identified behavior channeling and perceptual screening as the two primary ways in which values influenced behavior. Behavior channeling referred to "the direct influence of values on behavior" in that a person could ignore or avoid behaviors which were inconsistent with his value system. Perceptual screening referred to selective perception, or the indirect influence of values on behavior. Individuals would select, filter, and interpret what they heard according to their personal value systems. England surveyed the values of individuals in many different groups, and presented generalizations based on his studies. Briefly, they are:

1. The personal value systems of managers, although complex, could be meaningfully measured.

2. Although there were large individual variations, a general value pattern emerged which was characteristic of American managers.

3. Personal values operated at both the individual decision level and the corporate strategy level.

4. The personal value systems of managers had both a direct and indirect influence on the organization, and at the same time were influenced by organization life.

5. Differences in personal value systems were, in part, responsible for conflicts between individuals in organizations.

6. The examination of one's personal value system could help to make the manager's actions more consistent with his beliefs.102

England also identified three basic managerial value structures as pragmatic, ethical-moral, and affective. The pragmatic mode had its focus on success-failure considerations. Managers in the
ethical-moral mode were primarily concerned with "right" versus "wrong" in influencing behavior, and decisions in the affective mode centered on increasing pleasure and decreasing pain. England found that among American managers, the pragmatic mode was the most prevalent.103

Reports of later studies of the values of managers in different cultures and different organizational settings by England and his associates substantiated his earlier findings. As demonstrated with the American managers, he reported large individual differences and similarities were found in examining group patterns from various cultures. A 1972 follow-up of a 1966 study with comparable groups of U.S. managers indicated that personal value systems were relatively stable. Further studies demonstrated that the personal value system of managers did influence the way they behaved on the job.104

Personal value systems were also found to be related to career success, with the most successful managers favoring the pragmatic mode. When comparisons were made of different types of organizational groups such as labor leaders with managers, value patterns differed. However, it was not known if these differences were due to the type of people who chose a particular organizational context or to what extent an individual's value system adapted to the organizational context in which he was located.105

Harrison studied what he termed "organizational ideologies". These ideologies provided both a set of prescriptions and prohibitions for the organization, and the rationale for them. He believed organizational ideologies were a function of managerial value systems which
influenced organizational goals and affected the relationship between
the organization's interests and those of its members. They also
influenced the way in which the organization dealt with the external
environment.  

Harrison described four pure types of organization ideologies
or orientations as power, role, task, and person, and suggested that
decision-makers who held a particular orientation would prefer a
different organizational structure. Power oriented organizations
would try to dominate their environments, and were ruthlessly compe­
titive. People and their needs were likely to be disregarded in this
type of organization. Organizations classified as role oriented
stressed order, rationality, legitimacy, legality, and responsibility.
This strong emphasis on hierarchy and rules suggested an organizational
structure similar to bureaucracy.

In task oriented organizations, value was placed on achievement
of the major goal, which was not necessarily economic. Authority was
based on competence, and the organization maintained a flexible
structure. Finally, Harrison described the person-oriented organiza­
tion, whose primary function was to serve the needs of its members.
Decisions were made by consensus, and individuals were assigned roles
on the basis of personal preference. Although Harrison noted that
ideologies as pure types were seldom found in organizations, he found
that most organizations tended to center on one ideology.

Research on motivational orientation has suggested that in addi­
tion to the cognitive elements which affect individual decision-making
behavior, motivational elements also play an important role. In particular, personal value systems were found to affect the decisions made by managers in organizations.

**STYLE**

Although the cognitive and motivational orientation of the organizational decision-maker may be the basis of choice patterns, the individual's set of beliefs and norms about management comprise his management style. Khandwalla has suggested that, "If ideology is the invisible network of values, beliefs, and norms, management style is its visible, operating manifestation." Management styles have been examined both conceptually and empirically, and a number of style elements have been proposed.

In the 1950's McGregor developed opposing assumptions about man in the organization. He suggested that managers generally fell into one of two categories. Theory X managers basically felt that most people dislike work and responsibility, and must be coerced, threatened, and pushed by management to obtain their compliance in the achievement of organizational goals. Theory Y managers assumed that people enjoy work and the exercising of responsibility, and would exercise self-direction if allowed. As a practical outcome of Theory Y, management by objectives was purposed as a system where the worker could take responsibility for setting his own objectives.

In their descriptive studies of electronics firms, Burns and Stalker distinguished between mechanistic systems, where roles were precisely defined and duties and methods prescribed, and organic
systems, where role were determined by the nature of the task. They studied the appropriateness of different organizational structure and management practices to different environmental demands. Organic firms were found to be able to cope better with rapidly changing environments, and mechanistic management systems were appropriate for stable conditions.  

Likert developed four models of organizational design which described a variety of organizational functions such as leadership, motivation, communication, interaction and influence, decision-making, and goal-setting. The authoritative and participative models were sharply contrasted, with the benevolent authoritative and consultative modes in between. Likert promoted the participative model as the most successful and desirable.

The basic approaches to problem-solving described by Braybrooke and Lindbloom were also viewed as management styles. The rational-comprehensive (root) approach began with the enumeration of fundamental aspects of the problem, and built an outline of possible alternatives to solve the problem most effectively. It was seen as a comprehensive approach in which the decision-maker sought to find the most appropriate means to the desired end. This was contrasted with the successive limited comparison (branch) method, in which a decision-maker continually built by small increments to solve the problem. Means and ends were not distinct, and often means-ends analysis was limited. However, this approach was seen as the only workable approach to solving complex problems because of limits on human intellectual capacities and on available information.
Mintzberg conceptualized three pure types or modes of management styles as the entrepreneurial modes, the adaptive mode, and the planning mode. The entrepreneurial mode was characterized by centralized power in one person, who rules boldly using personal power and charisma. The dominant goal of an organization operating in this mode was growth, which represented achievement to the entrepreneur.\textsuperscript{114} The adaptive mode was created with Braybrooke and Lindbloom's\textsuperscript{115} "muddling through" decision-maker in mind. Power was diffused in this mode, and decisions were made in incremental steps. Decisions were made as "reactive" solutions to existing problems instead of "proactive" searches for new opportunities. The focus in the planning mode was on systematic analysis, usually done by a business planner. The interrelatedness of decisions was the key factor in this mode. In reality, the modes have often been mixing the pure modes, mixing modes by function, or mixing modes between the subunit and the larger organization.\textsuperscript{116}

Building on the basic elements suggested by these theorists, Khandwalla described five dimensions found in every management style:

1. Risk-taking - measures the degree to which management aggressively interacts with the external environment.

2. Technocracy - measures the degree of commitment to planning and reliance on management science techniques and the advice of technically qualified persons.

3. Organicity - an administrative dimension, characterized by preference for a more informal, adaptive, flexible, organismically responding organization.

4. Participation - the degree of commitment to participative management and human relationships at work.
5. Coercion - the degree to which managerial behavior is arbitrary, fear-evoking, and authoritarian.  

Various combinations of the five style dimensions have been translated into seven different styles:

1. Neo-scientific management style - characterized by sophisticated long-range planning and modern management techniques.

2. Entrepreneurial style - bold, risky, aggressive decision-making, charismatic leaders, a strong commitment to growth, an emphasis on administrative flexibility.

3. Quasi-scientific style - strongly acccents technocracy, but participation is not strongly accented and coercion is not discouraged.

4. "Muddling through" style - decision makers muddle through on the basis of experience and common sense.

5. Conservative style - management is strongly risk averse in its external strategy, and tends to discount technocracy and participation.

6. Democratic style - strong emphasis on participation and consensus. Also a premium on organic relations and flexibility, collegial relationships.

7. Middle-of-the-road style - firm faith in moderation, tries to be both traditional and novel.

Khandwalla described these as "ideal types", and pointed out that his list was certainly not exhaustive. However, the styles represented the major schools of thought in management. In a study where 103 public companies were surveyed, a measure was taken on the "success rate", or percentage of highly successful companies with managers in each of the seven styles. He found that, in general, the new-scientific and entrepreneurial styles were highly desirable and the
muddling through, quasi-scientific, and middle-of-the-road styles were the least desirable. The conservative and democratic styles produced average results.\textsuperscript{119}

Khandwalla speculated that efforts of organizational development could be made with relative ease by moving top management from an ineffective style to a highly effective one. However, he also noted that such a change would, in part, be subject to situational considerations. His data indicated that in several contextual situations there was more than one type of response by organizational decision-maker(s) operating in that condition, which did not support the contingency theory notions of a unique response of an organization to a particular contextual property. The contextual environment of an organization did, however, have a powerful influence on the practicality of a particular style. Khandwalla also briefly discussed the question of whether style affected performance to a greater or lesser degree than performance affected style, and reported that the evidence favors the conclusion that the greater effect was that of style on performance.\textsuperscript{120}

**LEADER BEHAVIOR**

The topic of leadership has been one of the most researched variables in the study of organizational behavior. It is also one of the least understood. One major problem in leadership research has been the lack of agreement concerning the definition of the term. Stogdill reported in his review of the leadership research that "there are almost as many different definitions of leadership as there are persons who have attempted to define the concept."\textsuperscript{121}
Research approaches have attempted to explain leadership based upon leader traits, or what leaders are; leader behaviors, or what leaders do; and situational approaches, or which situational variables are involved in effective leader behaviors and characteristics.\textsuperscript{122}

For the purpose of this study, leadership has been defined as "the influential increment over and above mechanical compliance with the routine directives of the organization."\textsuperscript{123} Thus, an effective leader is one who is able to stimulate and direct others to perform those tasks considered important by the leader.\textsuperscript{124}

There are two important ways in which leaders influence members of a work group. First, leader performance influences the level of work performed by group members. This relationship is moderated by the fact that leaders most often operate in an environment which includes constraints upon leader behavior such as the philosophy of top managers, institutional policies, operating procedures, and the physical and geographical characteristics of the organization. Secondly, leaders influence the stability of a group, and the satisfaction levels of group members. The regard held by subordinates for their leader affects the degree of intragroup cooperation, member satisfaction, and absenteeism and turnover rates.\textsuperscript{125}

The basic dimensions of leader behavior used to describe department chairmen in this study were initiating structure and consideration. Initiating structure referred to the leader's behavior in defining and structuring the relationship between leader and subordinate. Leaders high in initiating structure were those who established procedures,
planned and scheduled operations, communicated information, and
created a psychologically structured work environment. Consideration
referred to behaviors of warmth and mutual respect between leader and
subordinate. A leader who fostered trusting relationships, encouraged
participation in decision-making, and showed concern for the feelings
of subordinates was high in consideration.\textsuperscript{126}

The initiating structure and consideration dimensions were
identified by Halpin and Winer, part of a group of researchers at The
Ohio State University who began an extensive examination of leader
behavior during the 1940's.\textsuperscript{127} Since that time numerous studies have
been conducted using these dimensions, but several reviewers (Kerr and
Schriesheim, 1978; Korman, 1966; Stogdill, 1974; Yukl, 1971) have
concluded that neither dimension is consistently related to subordinate
performance.\textsuperscript{128} Kerr et al. have suggested that the effects of the
initiating structure and consideration dimensions depend upon the
particular situation.\textsuperscript{129}

Situational leadership research has focused upon the identification
of situational "moderator variables" in efforts to determine what type
of leader traits or behaviors will be the most effective in a particular
situation. These theories have been referred to as "contingency
theories" because the leader behaviors and attitudes which produce
effective results are contingent upon the situation.\textsuperscript{130}

The earliest situational theorist was Fiedler, who examined the
relationship between leader attitudes and organizational performance.
Through years of research, Fiedler and his associates developed a
contingency model which hypothesized that the type of leader attitude which led to effective group performance depended upon the degree to which the leader was involved in a favorable or unfavorable group situation.\textsuperscript{131}

In Fiedler's research, leader attitude was measured by the LPC score, or the opinion of the leader toward his least preferred co-worker. The LPC score was interpreted as a measure of the leniency of the leader toward others. The three situational variables included in the code were the type of leader-member relations, the position power of the leader, and the degree of structure in the task. Fiedler concluded that in situations either very high or very low in situational control, leaders with low LPC scores obtained more effective group performance than those with high LPC scores. When situations were moderately favorable or moderately unfavorable, however, more lenient leaders with high LPC scores were more effective.\textsuperscript{132}

Fiedler's research has been criticized on a number of grounds, from his arbitrary changes in theory interpretation to the weak and inconsistent supporting results. It has, however, been tested and changed over time, and represents a useful conceptual framework.\textsuperscript{133}

Another situational theory, the Path-Goal Theory of Leadership, examined the relationships between behavior and subordinate motivation and satisfaction. In this theory, situational moderator variables such as the nature of the task, subordinate characteristics, and the type of work environment determined which behaviors would motivate and satisfy subordinates in a particular situation.\textsuperscript{134} The Path-Goal Theory,
refined by House and Dressler, was based upon two basic propositions. The first proposition defined a leader's function as supplemental, and suggested that a leader was effective only to the extent that he provided rewards such as guidance and support not found in the work environment. The second proposition was that the motivational impact of specific leader behaviors depended upon the situation, as determined by the characteristics of subordinates and the demands and pressures of the environment.\textsuperscript{135}

If the behavior of the leader was perceived as either an immediate or future source of satisfaction, it would be accepted. Thus, the effect of the leader's behavior would depend upon how effectively the leader clarified the paths to a particular subordinate's goals. If the task was routine, the group norms clear, and the rules and procedures formalized, the leader's attempts to clarify paths would be viewed by subordinates as unnecessary. For a less satisfying task, leader behavior would be effective to the extent that it helped subordinates cope with frustration and environmental uncertainty.\textsuperscript{136}

Research studies testing the Path-Goal Theory have also produced conflicting results. Schriesheim and Kerr have criticized the theory, concluding that, "the conceptual underpinnings of Path-Goal Theory are certainly questionable."\textsuperscript{137} Even though the theory has been criticized, however, it has provided another conceptual framework which attempts to explain the complexities of effective leader performance.

In this study leadership behavior was examined as a situational variable or moderating influence on the relationship between the subunit goals as reported by the leader, and the extent to which the
subunit was successful in goal attainment. Leader behavior was included in the model because of speculation that leadership in an environment of declining resources is a more difficult task than leadership in growth.

When faculty members determine that the department chairman is no longer effective at maintaining previous resource levels, faculty dissatisfaction increases. In addition, if the chairman loses the ability to influence the faculty or the group becomes unstable, goal attainment becomes more difficult. The Path-Goal theorists suggest that leader behavior is accepted only if it is revealed as an immediate or future source of satisfaction. In view of these considerations, it may become difficult or perhaps impossible for chairmen of departments with declining resources to enjoy long-term survival in the organization.

SUMMARY

Thompson has explained that organizations negotiate agreements with elements of their task environment to reduce uncertainty and protect their core technology from the effects of environmental fluctuation and change. In these negotiations, the organization attempts to maintain as much control and autonomy over environmental elements as possible. Many organizational variables can be controlled and manipulated by managers in making strategy decisions. However, some variables are not controlled by management. Thompson identified these as contingencies, or factors which could change but are not under the manager's control, and constraints, described as fixed conditions.
which must be accepted. In essence, the success of an organization depends upon the ability of individuals who make strategic decisions on its behalf to establish and maintain domain consensus with the environment.\textsuperscript{138}

To discover the variables which distinguish successful organizations from those which are unsuccessful has long been of interest to organizational theorists. In recent years a theoretical focus has been placed on the examination of individuals who make strategic decisions on behalf of the organization. Bobbitt and Ford,\textsuperscript{139} and Child are among those who have stressed the importance of strategic choice by individual organization members. Child has argued that decision-makers even have some opportunities to select the type of environment in which they will operate.\textsuperscript{140}

Educational administrators are now facing increasing complex and hostile environments. The number of variables over which they have control is decreasing. Student enrollments, federal, state and private funding, favorable legislation, and job market projections are included in the variables which were once basically controlled. In many institutions these variables have now become contingencies or even constraints to managers.

A number of elements are important to the process of organization decision making in relation to environmental change. The task environment itself is important because a "real" environment does exist and is constantly changing. However, if educational administrators do not perceive these changes or refuse to recognize them, they may be making strategic decisions based upon erroneous information, and perhaps
wasting valuable resources. Re-using the strategies that have been
successful in past years may also result in unintended consequences for
the institution.

Pfeffer and Salancik have explained that environmental information
is first interpreted by individuals within the organization. Thus,
educational administrators internally process the information they have
received and the perceptions formed become the basis of decision-making.
The factors considered most important to the study of managers in
organizations and the ways in which they process information have been
included in the model. Since ultimately decision-making activity
occurs in the human brain, cognitive and motivational elements have been
included. In previous studies, researchers have found that some
individuals differentiate among more dimensions of behavior than
others, that some are able to process greater amounts of information
under complexity, and that some are better able to reuse information
than others. These factors can affect the ability of particular
individuals to solve management problems.

In addition, the study of personality factors has provided
insights into individuals as decision-makers. Dogmatism has been
identified as a factor which may affect an individual's ability to
process information relative to existing beliefs. Tolerance for
ambiguity studies have found that some individuals prefer a more
ambiguous environment, and excel in the performance of ambiguous tasks.
Researchers have also completed studies about the effects of motivational
orientation in solving decision problems. They have discovered that the
personal value systems of a manager influence his job performance.
In an effort to understand the ways in which an individual's personality characteristics are related to his management behavior, theories of management style have been developed. Khandwalla has built on earlier research efforts to identify five different style dimensions, which he has translated into seven different styles. Ideally, efforts at organizational development could be accomplished by moving a manager in a particular situation from an ineffective style to an effective one.

An examination of the transformation process helps to clarify the intentions of the educational administrator. His perceptions of the current stage of the institution and his desired state of achievement are discussed. Both qualitative and quantitative outcomes can then be examined to determine whether the objectives have been met.

A number of moderating variables from the weather to one's health may prevent the organizational decision-maker from reaching his goals. However, only one of these "moderating" variables, leadership, has been included in the model. Leadership has been included on the basis that it is a moderating variable over which the organization might be able to exercise some control. The ability of an organizational decision-maker to successfully attain the organization's goals depends in part, upon cooperation from those with whom he works. How he is perceived by his subordinates may affect his ability to accomplish his objectives, since the productivity and satisfaction of the employees may be affected by his leadership behavior.
By examining these variables in an exploratory study, it was hoped that some differences among managers of situations of growth and decline might emerge that would suggest directions for further research. The researcher recognizes, however, that the complexities of the variables and the relationships involved will produce only tentative conclusions.
Model for the Study of Organizational Decision-Makers
Under Conditions of Environmental Change
SPECIFIC RESEARCH QUESTIONS TO BE ANSWERED

The purposes of research are to test hypotheses and to raise questions. If the inquiry is directed to an area where we are unsophisticated, it is appropriate to raise questions rather than propose hypotheses. Because this study is exploratory, the following research questions were developed to guide the research. The specific research questions are listed below, with a brief statement of the procedures used to collect data for each question in addition to the interview data. Questions were answered for each element in the Assessment Model. Information on the instruments used to gather data is discussed in detail under a separate heading.

Specific Research Questions

1. Are there differences between department chairmen with positive and negative enrollment growth in their perceptions of the heterogeneity, turbulence, hostility, technical complexity, or restrictiveness of their task environment?

Department chairmen completed a brief questionnaire section of ten items adapted from a pre-tested questionnaire developed by Khandwalla in a 1973 study of 103 Canadian firms. Separate scores were obtained for perceived environmental heterogeneity, turbulence, hostility, restrictiveness, and technical complexity. The data were confirmed by information gathered in the interview.

2. Do department chairmen with positive and negative enrollment growth differ in their perceptions of competitive pressures within the task environment?

Department chairmen completed a second questionnaire section of six items adapted from the Khandwalla questionnaire noted above. The
questions focused on the intensity of perceived competition with
other universities for students, research dollars, faculty, costs, and
variety and quality of programs and services. (Appendix B). Additional
insights were gained through interview data.

3. Do the performance aspirations of department chairmen with positive
enrollment growth differ from those with negative enrollment growth?

A third set of five questions adapted from the Khandwalla ques­
tionnaire provided data concerning the importance of goals concerning
budget levels, enrollment growth, faculty satisfaction and commitment,
maintaining strength as a department, and public image. (Appendix A).
Again, interview data was used as additional information.

4. Do department chairmen in situations of positive or negative
enrollment growth differ in their tolerance for ambiguity as
measured by the Budner Intolerance of Ambiguity Scale?

Department chairmen were asked to complete the Budner Intolerance
of Ambiguity Scale (Appendix B). This instrument was developed by
Stanley Budner in 1962. Intolerance of ambiguity has been studied as
an important cognitive variable in management, and was chosen as one of
two specific aspects of cognitive orientation examined in this study.

5. Are there differences in the cognitive orientations of department
chairmen with positive and negative enrollment growth as measured
by a form of the Myers-Briggs Type Indicator?

Subjects were asked to complete an abridged form of the Myers-
Briggs Type Indicator, which measured the sensing-intuitive mode of data
gathering, and the thinking-feeling mode of information evaluation.(Appendix C). Kilmann discussed the basic advantages of this typology
in organizational research as:
1. Its dimensions are directly related to various managerial and organizational styles, allowing comparisons between different personality and organizational types.

2. The typology emphasizes major strengths and weaknesses of each type without making value judgments concerning the superiority of any type over any other.147

This instrument has been used extensively in research studies in a number of disciplines, and recent studies have related it directly to the decision-making preferences of managers.

6. Do department chairmen with positive enrollment growth differ from those with negative enrollment growth in their motivational orientations as measured by the Harrison Scale? Department chairmen also completed the Harrison Scale, which was designed as a measure of the preferred motivational orientations of individuals in organizations. (Appendix D). Harrison depicted four pure type orientations as power, role, task, and people.148 The instrument was developed to identify personal preferences of managers.

7. What differences exist between the management styles of department chairmen with positive enrollment growth and those with negative enrollment growth in relation to the management styles of risk-taking, optimization, flexibility, participation, and coercion?

The Khandwalla questionnaire provided a measure of five different dimensions of management style: risk taking, optimization, flexibility, participation, and coercion. These were translated into seven management styles, reflective of different preference combinations on the five dimensions. (Appendix A). The management styles developed by Khandwalla described management behavior in organizations, rather than personality characteristics of the manager.149 Interview data were used
as supporting evidence.

8. Do department chairmen with positive enrollment growth differ from those with negative enrollment growth in their use of independent strategies, cooperative strategies, or strategic maneuvering?

The strategy categories developed by Jay Galbraith provided a framework for answering this question. Independent strategies were described as those where the organization draws on its own resources and creativity, and involved using slack, slack substitutes, or demand influence. Cooperative strategies were concerned with joint problem-solving through coordinated actions with other organizations, and were described by level of commitment as implicit cooperation, contracting, and coalition. Attempts to change or alter the task environment were categorized as strategic maneuvering, which involved changes in strategy, technology, or location.\textsuperscript{150}

Data were gathered through the standardized, open-ended interview. The questions reviewed changes in many aspects of the department's relationship with its task environment elements such as enrollments, staff research dollars, and outside organizations. Chairmen were asked to describe their responses to these changes. The responses were examined for general patterns in types of strategies most often used by each subject. (Appendix E).

9. Do differences exist between department chairmen with positive and negative enrollment growth in their ability to maintain levels of faculty positions, research dollars, or University allocations as measured by official University documents?\textsuperscript{151}

Official University publications were examined for the period 1972-1976 to record changes in staff or financial allocations.
Percentage of change was used to compare departments. No data were available concerning additions or changes in budget or staff after the official allocations had been made.

10. Do faculty members in departments with positive enrollment growth describe the leadership behavior of their chairmen differently than faculty members in departments of negative enrollment growth as measured by the Leader Behavior Description Questionnaire?

Since department chairmen without faculty support may find it more difficult to achieve their performance objectives, leader behavior was examined as a possible moderating variable. It also provided information concerning the department chairman from an alternate source. A sample of eight faculty members from each department was asked to complete this paper and pencil instrument. (Appendix F).

11. Are there differences in job satisfaction between faculties of department chairmen with positive and those with negative enrollment growth as measured by a job satisfaction scale?

The sample of eight faculty members from each department was also requested to complete a short-job-satisfaction instrument. The instrument measured extrinsic job satisfaction, intrinsic job satisfaction, job pleasantness, and job autonomy. (Appendix G). This was done to supplement the quantitative outcomes of the department with qualitative data.
Chapter III

Footnotes


4Thompson, pp. 26-27.

5Ibid., p. 29.

6Ibid., pp. 29-31.

7Ibid., pp. 159-160.


12Weick, pp. 64-65.


15Galbraith, p.5.

16Ibid, pp. 5-6.


22 Ibid., p. 935.

23 Ibid., p. 935.

24 Ibid., p. 936.

25 Ibid., p. 941.

26 Ibid., p. 945.

27 Ibid., pp. 947-948.

28 Glueck, p. 117.


30 Nystrom, Hedberg, and Starbuck, p. 214.

31 Ibid, p. 220.

32 The use of the word "man" and the subsequent use of the pronoun "he" is used in the most universal sense. To improve readability it will be used throughout, but it is not intended to suggest that these concepts are not equally applicable to women. It is true, however, that the majority of research studies of manager behavior have used male subjects. It should also be noted that all of the department chairs in the study were male subjects.


35 Steinbruner explains that the terms "paradigm", "theory", and "model" contain subtle but important differences in The Cybernetic Theory of Decision, p. 11. The word "paradigm" is used in reference to a set of fundamental and critical assumptions from which theories and models are developed, and therefore, is less completely specified. He also points out that the term "paradigm" has a residual vagueness in that often it is not feasible to make an exhaustive list of the assumptions of paradigm. Thus, the word may refer both to noted assumptions, and some which may be critical but remain unrecognized.

36 Ibid., pp. 56-57.

37 Ibid., pp. 68-87.

38 Ibid., pp. 13-14.

39 Ibid., pp. 89-90.

40 Ibid., pp. 12-14.

41 The term cognitive "orientation" has been chosen here rather than Messick's choice of the term cognitive "style" since it will later be defined in this study as the active manifestation of the manager's cognitive and motivation orientations.


43 Ibid., p. 6.

44 Ibid., p. 9.

45 Steinbruner, pp. 90-92.


47 Solo's use of the term cognitive "systems" has been replaced by the term cognitive "orientation" to maintain a constant terminology and to retain the differences previously noted in the use of the terms "orientation" and "style".


52 Bieri et al., p. 13.

53 Ibid., p. 184.

54 Ibid., p. 184.


56 Ibid., p. 4.


58 Bieri et al., p. 196.


67Ibid., p. 81.

68Ibid., p. 81.

69Ibid., p. 81.

70The term "cognitive orientation" has been substituted for McKenney and Keen's "style" in an effort to maintain the consistent use of terminology as defined for purposes of this study.

71McKenney and Keen, pp. 81-82.

72Ibid., p. 82.


74Ibid., p. 31.


76Ibid., pp. 32-33.

77Ibid., pp. 34-37.


79Ibid., pp. 193-195.

80Ibid., pp. 194-201.


82John W. Slocum, Jr., "Does Cognitive Style Affect Diagnosis and Intervention Strategies of Change Agents?", Group and Organization Studies 3 (June 1978): 204-209.


88 Ibid., pp. 266-276.


95 Budner, pp. 37-38.


McCaskey, p. 75.

The term "motivational orientation" has been used in place of Solo's "cultural systems" (p. 361) to improve clarity in definitions as used in this study.

Ibid., p. 361.


Ibid., pp. 54-68.

Ibid., p. 59.


Ibid., pp. 83-86.


Ibid., pp. 121-122.

Ibid., pp. 122-123.


Ibid., pp. 24-26.

Ibid., pp. 29-31.

Ibid., pp. 31-37.


Filley, House, and Kerr, pp. 211-212.

Andrew W. Halpin, Manual for the Leader Behavior Description Questionnaire (Columbus: The Ohio State University, Bureau of Business Research, 1957), p. 1.


Ibid., pp. 260-265.

Yukl, p. 139.


Ibid., pp. 29-62.

Ibid., pp. 29-62.


Thompson, pp. 29-160.


Child, p. 4.

Pfeffer and Salancik, p. 73.


Ibid., pp. 637-698.

Budner, pp. 29-50.


Harrison, pp. 119-120.


151 The Ohio State University Current Funds Budget, Columbus, Ohio, for the years 1972-1976; Annual Report, The Ohio State University Research Foundation, Columbus, Ohio, for the years 1972-1976.
Chapter IV

RESEARCH DESIGN AND METHODOLOGY

In view of the state of research on the management of decline in higher education, this study explored research questions and did not involve the testing of specific hypotheses. Kerlinger has identified three basic purposes of exploratory field research as (1) the discovery of significant variables in field situations; (2) the discovery of relations among variables, and (3) the creation of a foundation for more systematic and rigorous hypothesis testing. The theoretical framework was developed and used in the examination of the variables and relationships investigated.¹

Exploratory research is descriptive in nature. According to Best, the purpose of descriptive research is to attempt to discover meaning through the description and interpretation of "what is." Description is frequently combined with comparison and contrast in examining research problems, which may involve classification, measurement, analysis, or interpretation.² This study compared the management styles and strategies of department chairmen at the positive and negative ends of a growth continuum.

Field study methods were used to investigate the research problems identified in the study. This method of gathering research data has been described as being "strong in realism, significance, strength of variables, theory orientation, and heuristic quality."³ Field studies,
however, also suffer from a number of significant weaknesses. Among them are the ex post facto character of the research, the number of variables involved, the lack of precision in the measurement of field variables, and often the practical limitations of cost, feasibility, and time.

In order to compare conditions of positive and negative growth (decline), it was desirable to find a setting where as many variables as possible were initially controlled. A large, midwestern university was chosen because of its size and the diversity of its subunits (colleges and departments). The level of analysis chosen for the study was the department.

As subunits of the larger university, departments share elements of the university environment such as the basic university structure, policies, and regulations; the presidential management philosophy; and the university budgeting and funding procedures. As individual academic subunits, departments also respond to different environments which include the colleges where they are located and the outside environment. The outside environment provides them with inputs such as interested students and research contracts, and absorbs outputs such as graduates and ideas. Thus, some departments could be experiencing enrollment increases while others experienced decreases in enrollment.

The focus of this study was the examination of the relationship between the department chairpersons and the task environment elements outside the university. Even though department chairs are constrained in decision-making by other decisions made at both the college and university levels, they are able to make significant environmental decisions due to the nature of educational organizations.
Weick described educational organizations as "loosely-coupled systems," indicating that "any one element can adjust to and modify a local unique contingency without affecting the whole system." He further suggested that "these local adaptations may be swift, economical, and substantial." If the intuitive appeal of this argument is accepted, it follows that within a large university, chairpersons in charge of various departments would have considerable decision-making latitude concerning departmental affairs.

Constraints, or fixed conditions such as the current structure of the college and the university, prior decisions or goals, and the leadership styles, values, and power of the dean or the president limit the decision choices available to the department chair. However, the chairperson, in the role of primary boundary-spanner for the department, operates with a high degree of autonomy and freedom in a loosely-coupled system. In view of Weick's argument, the following assumptions were made in conducting the study:

1. Departments within a large university operate as "loosely coupled systems" in which any single element is able to adapt to local contingencies without affecting the entire system.

2. Department Chairpersons at large state universities have considerable decision-making latitude concerning departmental affairs.

3. As subunits of the same university organization, many of the constraints upon department chairpersons with respect to the structure and policies of the parent organization were assumed to be similar.

Both the state of research and the nature of organizations limited the research. The study was also subject to a number of limitations:
1. The state of theory and research in this area required that studies be exploratory and descriptive, rather than involving the testing of hypotheses.

2. The departments were selected on the basis of specific criteria and were from the same institution, and therefore the results cannot be generalized to other departments or institutions.

3. The study of university departments is complicated by the problems inherent in the examination of social organizations and the people in them such as the ex post facto character of the research, the number of variables involved, and the risk of improper interpretation.

4. The practical necessity of limiting the breadth of study and the number of organizational variables which could be examined increased the possibility that potentially important variables such as the leadership style of the dean or the level of commitment of the department chairman were not included in the study.

SAMPLE

In conducting the study, eight departments were identified from the main campus of a large state university. Four of the departments had experienced large course enrollment increases in at least five of six autumn quarters between 1972 and 1977. A comparison group was identified of four departments which had experienced large enrollment decreases during the same period. The departments selected met the following criteria, designed to maximize differences in the environmental situation of the subunits:

1. Professional schools were excluded on the basis that their enrollment concerns often differ from the rest of the University.

2. Departments with enrollments consistently below fifty students were excluded.
3. Department chairmen had to have served in that capacity during at least three years during the period 1972-1977.

4. Departments experiencing reorganizations or other major changes which could adversely affect the study were excluded.

Eight faculty members from each department were included in the study using a stratified random sample of tenured and non-tenured faculty. Where this was not possible, the population of non-tenured faculty was included and tenured faculty were randomly selected to complete the sample.

PROCEDURE

Background data were gathered for the eight academic departments included in the study, and examined for changes in budget or personnel. Standardized, open-ended interviews were held with each department chairman. In addition to the interviews, department chairmen were asked to complete a questionnaire and three pencil and paper instruments. A sample of eight faculty members from each of these departments was also personally contacted by the researcher and asked to complete two pencil and paper instruments. The purpose of the first instrument was to assess satisfaction levels among the faculty, and the second was used to examine leader behavior as a moderating variable. Data were tabulated and recorded, and comparisons were made between the growth and decline groups. The results were discussed and the conclusions drawn within the theoretical framework.

Written permission for the study was obtained from each department chairman in accordance with procedures of the Behavioral and Social Sciences Human Subjects Review Committee. The anonymity of the
participating departments was assured. Participation of faculty members was voluntary, and they were made aware that the consent of their department chairman had been obtained as a participant in the study. Each department chairman was personally interviewed by the researcher, and each faculty member involved in the study was personally contacted, with two exceptions. Faculty members were also assured that their individual responses would not be reported.

INSTRUMENTATION

Khandwalla Questionnaire

This questionnaire was developed and carefully pre-tested in an effort to measure a number of situational, strategic, structural, and performance variables of both manufacturing and service firms for a research study which began in 1972. Operational measures were developed for demographic, environmental, strategic, technological, structural, control, and performance variables, although all of these sections were not included in this study. Most variables were measured by multi-scale items with the items scattered throughout the questionnaire. Some items on the seven point Likert type scales were reversed for aggregating responses.6

Reliability and Validity

Reliability was measured in multi-item variables by Nunnally's formula:

\[ r_{kk} = \text{reproducibility of a multi-item measure} \]

\[ r = \text{number of items in the measure} \]

\[ r_{ij} = \text{the average correlation among the items} \]
Nunnally considers reliabilities of .50 to .60 to be quite adequate in the early stages of research, and Khandwalla reported correlations ranging from .45 to .85. In 60 of the 103 firms studied by Khandwalla, two senior executives completed the questionnaire independently, and the correlations between their responses was presented as evidence for interrater reliability. These correlations ranged from .11 to .98.8

The degree of correlation between two raters on questionnaire items was also seen as evidence of validity. High agreement, in the absence of ambiguities in the questions, increased confidence in the validity of the instrument. Khandwalla also pointed out that several of his results were consistent with previously established findings of researchers who had used different samples and different data gathering techniques. Finally, he reported predictive validity in that the relationships found were those predicted.9

Portions of Khandwalla's questionnaire were used in the study, with minor wording adaptations. In rare instances, items had to be deleted. The researcher pre-tested the adapted questionnaire with two subjects.

Budner Intolerance of Ambiguity Scale

Budner defined intolerance of ambiguity as "the tendency to perceive (i.e. interpret) ambiguous situations as sources of threat," and tolerance of ambiguity as "the tendency to perceive ambiguous situations as desirable." Budner administered three separate pre-tests in developing his scale, using an initial pool of 33 items. Only items with a Pearson correlation of .35 or higher were included in the final scale, which
was presented in seven point Likert form. Reliability and Validity

Reliabilities on sixteen different samples computed by Cronbach's alpha formula ranged from .43 to .62. A test-retest study on the 17th sample of fifteen students over a two to four week period yielded a correlation of .85. According to Budner, the instrument is seen as having acceptable reliability considering its probable multidimensionality.

Budner's scale has been correlated with a variety of different instruments. Neither the Edward's Scale of Social Desirability nor a measure of "agreement response" correlated significantly with the Budner instrument. The validity of the scale has also been supported in other studies involving interjudge agreements on ratings of subjects intolerance of ambiguity.

Myers-Briggs Type Indicator

This instrument, developed by Isabel Briggs Myers and Katherine C. Briggs, was published by the Educational Testing Service in 1962. It was created in an attempt to implement Carl Jung's theory of type. Jung believed that behavior differences were not due to chance occurrences, but to basic differences in individual preferences for using perception and judgment. Myers described two contrasting ways of perceiving as sensing (direct awareness through the five senses), and intuition (indirect perception by way of the unconscious, with a focus on inferred meanings and relationships). Contrasting ways of judging were seen as the use of thinking (logical, impersonal processes), and feeling
(importance of personal, subjective values). Although every individual had a capacity for all four functions, preferences were developed at an early age between the basic functions. The discovery of dominant functions was complicated by the notion that there were also contrasting preferences for orientations to life, which were completely independent on the SN or TF preferences. Introverted individuals had a preference for the inner world of ideas, while extroverts were directed toward the outer world of people and things.\textsuperscript{15}

A final set of contrasting preferences concerned the way in which an individual dealt with his environment. Although all people used both judgmental and perceptive attitudes, they also tended to develop preferences in this realm. Some people preferred a judging attitude, characterized by a desire to plan and control events, while others preferred a perceptive attitude, a more wait and see approach.\textsuperscript{16}

The Myers-Briggs Type Indicator is a self-administered instrument of 166 forced-choice items. The numerical scores are transformed into letter preferences of EI, SN, TF, and JP, and basic descriptions of each type are presented.\textsuperscript{17} The instrument has been used in numerous research studies, including many studies of managerial research.

Reliability and Validity

Gerald A. Mendelsohn, in a critique of the Myers-Briggs Type Indicator, reported that the reliability measures of this instrument resembled those of similar self-report inventories, with the T-F scale appearing less stable than the other scales. He also reported that no significant interaction of the scales was found in an analysis of variance investigation.\textsuperscript{18}
Spearman-Brown split-half coefficients from data of groups representing a wide range of age, intellectual ability, and socio-economic status produced values of .75 or greater with two exceptions. The first exception was with under-achieving eighth graders, and the second with non-prep twelfth graders, both on the TF scale. 19

Attempts were also made to establish validity by comparing Myers-Briggs scores with scores on other instruments. One comparison was made with the Gray-Wheelwright Psychological Type Questionnaire, an independently developed instrument which also identified Jungian types. On corresponding scales of EI, SN, and TF (there was no JP scale in the Gray-Wheelwright), correlations were .79, .58, and .60 respectively. Correlations were also reported with the Strong Vocational Interest Blank, the Edwards Personal Preference Schedule, and other test and non-test variables. 20

It was also reported that in a number of studies involving many different occupational and academic groups, scores have been related to a variety of variables including achievement, values, needs, aptitudes, work habits, and vocational and aesthetic preferences. These studies have been broadly supportive of the construct validity of the Myers-Briggs Indicator Scales. 21

In a study of organizational change agents, Slocum used an abridged version of the Myers-Briggs, which measured only the subject's sensing-intuition mode of information gathering, and the thinking-feeling mode of information evaluation. The shorter form was used in this study. In its abridged form, Slocum reported the internal reliability using coefficient alpha as .83 for the sensing-intuition scale, and .82 for
the thinking-feeling scale.\textsuperscript{22}

**Harrison Scale**

This scale was developed to measure the power, role, task, and person orientations of organizational decision-makers as described by Harrison. The self-administered scale of fifteen items identified the preferred organizational orientation of both the individual and the organization, although the organizational responses were not included in this study. Items related to different characteristics of organizations such as cooperation, control, and task assignments, and respondents were asked to rank order statements from most to least agreement. For every characteristic, one statement referred to each of the four orientations, and scores were obtained by summing the ranks of corresponding questions. The lowest total score indicated whether the power, role, task, or person orientation was dominant.\textsuperscript{23}

**Reliability and Validity**

Ford reported Cronbach Alpha reliability for the four orientation scales as: power orientation, .81; role orientation, .60, task orientation, .68, and person orientation, .83. In a study of 104 managers which examined the relationship among their values, predispositions toward structure, and structuring behavior, he raised a question concerning the validity of the "task orientation" variable. Ford hypothesized significant differences related to value differences in the manager's attitudes toward formalization and hierarchy of authority, initiating structure, and consideration. He also predicted the order of the power, role, task, and person orientations separately for each hypothesis.\textsuperscript{24}
Although the data generally supported Ford's theory, the predicted order of the Harrison Scale items were not supported. Upon examination, he discovered that when task orientation was not considered, the data more closely conformed to his prediction. In discussing his findings, Ford suggested that Harrison's four orientations seemed to specify both preferred outcomes and the means to achieve them. His task orientation, however, did not specify how the task might be achieved, except that formal structure could be ignored if necessary. Since managers might differ widely in their approach to completing tasks, Ford suggested that the power, role, and person orientations be seen as the preferred methods for task accomplishment, depending upon the individual's secondary scores.²⁵

Leader Behavior Description Questionnaire

A sample of faculty members from each department studied was asked to complete the forty item LBDQ, an instrument designed to describe the leader behavior of designated leaders. The instrument presented brief statements of leader behaviors, which respondents were asked to rate on a five point scale from "always" to "never". It was published in 1957 as one project of the Ohio State Leadership Studies.²⁶

The instrument measured initiating structure and consideration as fundamental dimensions of leader behavior. Halpin and Winer developed these dimensions through factor analysis of the results of a study using an adaptation of the instrument with 300 Air Force crew members and 52 commanders. Initiating structure referred to the behavior of the leader in organizing and defining the relationship between himself and his group members. Leader behaviors characterized by respect, trust,
and warmth in relation to group members referred to leader consideration. Each dimension was measured by adding the scores to fifteen items. Ten items were not scored at all.27

Reliability and Validity

Robert Dipboyle, in his review of the instrument, reported that many research studies have added to the data concerning the reliability and validity of this scale since 1957. His summary of these studies revealed that both initiating structure and consideration had high internal consistency coefficients.28

Dipboyle commented on two types of validity. The instrument appeared to have face validity, in that it contained straightforward items which seemed to reflect common sense descriptions of leader behavior. In addition, he reported low to moderate positive correlations between LBDQ scores and indicators of job satisfaction and work group performance.29

Criticisms of the instrument were also reported by Dipboyle. The initiating structure and consideration scales were not independent, but positively correlated in most situations, which raised questions of response bias. Reported defects also included the confounding of authoritative and punitive leadership with the initiating structure scale, and the fact that the instrument was limited to only two leadership styles.30

Satisfaction Scale

The scale was developed by McNaul in an unpublished study of mental health workers. Four aspects of job satisfaction were measured in the instrument: extrinsic satisfaction, intrinsic satisfaction, job autonomy, and job pleasantness. The scale consisted of twenty-one brief statements concerning job satisfaction, and respondents were asked to rate each item
on the degree to which it applied to their job on a seven point Likert form from "completely" to "not at all". Scoring was done by summing coded items: four extrinsic satisfaction; eight intrinsic satisfaction; four job autonomy; and five job pleasantness. Lower scores indicated a higher degree of satisfaction.

Reliability and Validity

Reliability and validity information for this instrument was presented in the unpublished study by McNaul. However, this material became unavailable to the researcher.

Interview Data

Standardized, open-ended interview questions were developed to gather information concerning perceptions of the department chairmen about their goals, the strategies they used to reach these goals, and the constraints they faced which may have affected their ability to accomplish their desired outcomes. In order to establish a frame of reference for comparison of strategies across departments, a number of detailed questions were asked concerning goals and strategies in the areas of strategic choice defined by Galbraith as clients, products, technology, and location. Some questions were broken into sub-questions in an effort to focus upon different aspects of the larger question. The interview questions were pre-tested on two subjects, resulting in minor wording changes.

The interview data provide additional information to substantiate the answers to the questionnaire items concerning goal areas, environmental perceptions, and outcomes. Strategies were categorized and recorded using Galbraith's definition of independent strategies,
cooperative strategies, and strategic maneuvering. The independent strategies were further divided into those primarily related to attracting or maintaining students, curriculum and programs, and faculty (including research and service).

Reliability and Validity

The evaluation of the interview data was made by reviewing the transcriptions of the taped interviews and recording strategy data on four different occasions at least six months apart. Although no reliability coefficient was figured, the data reported for the study consisted of the comparison of the four sets of records.

In most areas the questionnaire results were consistent with the results obtained by using the other instruments used to gather data. One exception was the evaluation of goal areas important to the department chairman. However, on face value it would appear that the interview data was more accurate than the questionnaire data, because of the wording of the questionnaire items.

DATA ANALYSIS

Due to the nature of the research and the small sample size, the data analysis procedures were more qualitative than quantitative. Data were tabulated by coded groups of growth and decline, with means and standard deviations reported. Graphs were prepared to illustrate responses for comparisons between growth and decline groups and for comparisons with each group. Both individual and group scores were discussed where appropriate. Even though sample sizes were small, one way
ANOVA's were used to compare the group means. The data were presented in relation to the theoretical model and previous research.
Chapter IV
Footnotes


4 Ibid., p. 408.


8 Ibid., p. 658.

9 Ibid., p. 658.


12 Budner, pp. 29-50.


15 Myers, pp. 51-57.

16 Ibid., p. 58.

17 Ibid., pp. 7-10.

Ibid., p. 147.

Ibid., p. 147.

Ibid., p. 147.


Ibid., pp. 14-19.

Andrew W. Halpin, Manual for the Leader Behavior Description Questionnaire, Bureau of Business Research (Columbus, Ohio: The Ohio State University, 1957), p. 27.

Ibid., p. 1.


Ibid., p. 1174.

Ibid., p. 1174.
Chapter V

Presentation and Analysis of Data

The purpose of this chapter is to present the analysis of the data collected to seek answers to questions proposed in the study. A summary of the interviews is presented in the first part of the chapter. This includes an overview of the chairman's description of his department, to the extent that the department can be described without jeopardizing the anonymity of the chairman, and a brief summary discussion of interview data trends. Department chairmen provided information concerning the state of the department, their goals and strategies, and their assessment of the attainment of desired outcomes. The strategies used by the chairmen will be examined in greater detail later in the chapter.

In the second part of the chapter, each research question has been re-stated, followed by the presentation of findings from the instruments used in addition to the interview data. Comparisons were made between the growth and decline group chairmen, and the differences within each group were discussed.

DEPARTMENTAL INTERVIEWS

The growth departments were labelled Growth 1 (G1) through Growth 4 (G4) in the data analysis, and the decline groups were similarly designated. These labels were used consistently throughout
the study.

The department chairmen responded to a lengthy series of interview questions concerning their departmental operation. Most of the interviews were approximately two hours in length. Although there were individual differences in the type and depth of information provided the interviewer, the chairmen in general were candid in discussing departmental policies and problems. In the brief descriptions of the departments, issues and quotes have been selected to provide insights into the departmental situation and the primary concerns of the chairmen. Questionnaire instruments provided additional information for making group and individual comparisons.

Department G1

This department had a long and distinguished history within the university. It was a large department with a large undergraduate service component. Although the department experienced the smallest percentage of increase in course enrollment of the growth departments, its growth had been steady. The department faculty were heavily involved in research, and jobs were generally available for graduates. The chairman described the major departmental goal as striving for excellence as a department and helping individual students and faculty achieve their potential. The goals of the department had been stable, but there had been frequent re-examination of the implementation. Because of the department taught "basics" to undergraduates, the program had not changed significantly in recent years, although the chairman was actively involved in a national association concerned with program development. The department received funding from both the
University and outside research sources, but the University allocation had decreased while costs for staff and equipment continued to rise. Although the department had lost faculty positions, the chairman reported that, "We have had some increases in outside funding—we are making do." A major constraint, aside from the decreasing budget, was that the chairman was no longer able to make decisions and take action without obtaining detailed approval from higher levels. In describing the faculty role in departmental decisions, he noted that the department members could agree "when they tried", but they preferred to do what they did best if the decision was not crucial. Overall, the chairman reported that the department was progressing well.

Department G2

Compared to department G1, department G2 was relatively new and much smaller. However, the department had exceeded its five-year goal for enrollment growth. The growth was mainly attributed to the creation of a program which met an environmental need, and the tendency for students to seek majors with excellent employment opportunities. The University was the primary funding source for this department, although a number of outside sources were also available. The greatest problem the department faced was the lack of funds, which prevented the addition of needed faculty positions. More and better students were coming into the program, even though requirements had been stiffened and more courses were being offered for three credits rather than five. The department had "always been strong in research," and the chairman was involved in efforts to set up regional research projects. The program was also described as "industry oriented". Department members held
ill discussions with an industry and alumni advisory committee. In general, the department chairman described the department as "a good department with a good reputation." The faculty members were satisfied with what they had to offer.

Department G3

This department was large and rapidly growing, with a number of majors and a large service component. In the chairman's view, the enrollment growth was due to a general recognition of the importance of the discipline, and an excellent job market. Funding sources included the University and "a number of other sources." The chairman described the primary commitment of the department faculty as "teaching students", which left little time to see research funds, even though that, too, was a department priority. Because it is difficult to retain large numbers of graduate students when jobs are plentiful, the goal of having each faculty member generate a substantial amount of research support was seen as particularly challenging. A major problem faced by the department was inadequate University funding for staff, equipment, and space. Another problem was described as the lack of cooperation the department received in its efforts to develop cooperative or joint programs with other disciplines. The department worked closely with local industry and generated large evening and co-op programs. The chairman described it as a "very good department."

Department G4

This moderate size department was also a comparatively new one. Their enrollment growth was attributed to the ability of the department to meet environmental needs and to provide the kinds of skills and
knowledge sought in industry, something many traditional departments of its kind had not done. The chairman also attributed the enrollment growth to "our own efforts to promote a program within the University and the state." The University was the only source of funding for this department. However, the chairman reported that, "both the dean and the administration have been supportive in obtaining specialized faculty." The department had experienced such rapid increases in enrollment that the limited number of faculty members sought mechanisms to screen students in order to return to more manageable class sizes. Program changes had allowed more flexibility in course selection in recent years, and the job market and salaries had been excellent for students. Because of the excellent job market, it had also become increasingly difficult to retain faculty. The department faculty had not been heavily involved in research, and the department had received pressure from the administration to increase its activity in this area. The chairman reported that the department had gained a reputation and was respected for what it was doing, and he was pleased with their progress.

Department D1

This department was comparatively small, and was technically oriented. Cutbacks in government funding, negative publicity toward the discipline, and a poor job outlook were mentioned as factors contributing to the enrollment decline, even though the employment outlook had since improved. The decline in enrollment led to overstaffing in the department, which was being rectified through attrition and transfer. In addition, the faculty research loads were described as being "probably higher than ever before." Low enrollment was seen as the department's
greatest problem, because it contributed to a higher cost per student credit hour. The specialized nature of the field also limited departmental recruitment possibilities. Funding sources for the department included the University, the federal government, and industry. The chairman described his major constraints as an extremely tight budget, coupled with inflation and increasingly obsolete equipment. Although students had been provided with additional program options, the chairman explained that, "we do not have much flexibility for change." Severe cutbacks of supplies, phone usage, and travel had already occurred. Although the chairman noted that the department had a good reputation in its specialty fields, he was concerned that the faculty might not be able to maintain the high levels of research funding.

Department D2

This large department had both majors and a large service component. During the past decade, enrollment had declined across the nation in this discipline, due primarily to shifts in public opinion and the growing interest in more technical, job related fields. The University was the major funding source, and few outside grants were available. However, the administration had been pressuring faculty to increase research, and had provided some internal funding. The department had changed its curriculum and had moved to five credit courses, "because most of the University has gone to five credit courses and we were forced to do it." Program changes, and in particular the development of interdisciplinary programs, were seen as extremely difficult. Departments were protecting their territory by objecting to proposed new courses in other disciplines. The chairman reported that, "it has gotten vicious in the last three or four
years, when budgets have been so closely tied to enrollment." He also thought it unfortunate that, "The chairman is necessarily placed in an adversary role or relationship with his non-tenured faculty." Overall, the chairman believed the department was healthy, and highly regarded both within and outside the University.

Department D3

Another large department which had declined in course enrollment was department D3. Decline in this discipline had also been a national phenomenon, affected by public opinion and a poor employment outlook. The major source of funding for the department was the University, although some research funding was available. The major problem described by the chairman was the preservation of the internal unity of the department. Since all of the non-tenured faculty members in this department could not be retained, the tenured faculty members were faced in some difficult decisions. In the past, tenure decisions had been made under a "very loose system." Under pressure from the chairman and the administration, rules and procedures were developed by the faculty, and followed despite some personal heartaches. Disagreements had also arisen concerning the establishment of required courses for non-majors, and for majors. The faculty had been able to decide upon "certain elements of diversity" to be built into the major. However, there was no agreement upon specific courses for non-majors—"We cannot agree on the content, cannot agree on the time, cannot agree on the type." From another perspective, though, the chairman had also seen a positive side to the enrollment decline, as reflected in the statement, "I think, in general, that the crisis of declining
enrollment has generated real creativity, real effort to see if we
cannot do something about it." The chairman also noted the difficulty
in accomplishing joint ventures, and observed that his own department
was withdrawing more within itself. Again, the expectations of
faculty for publication and research were very high. The chairman
described the department as "democratically run," and believed that his
success with the faculty was a result of consulting them on all
matters. Overall, the department was healthy, well-staffed with
respect to age, and highly regarded within the University.

Department D4

This department had a large service component, and a smaller
number of majors. Among the factors which were mentioned as contributing
to the decline in enrollment were a change in the academic climate, and
the rising popularity of job related majors. The University provided
nearly all of the funds for this department, since little outside
funding was available. The chairman reported that he was behind in his
timetable for accomplishing departmental goals, partly due to "forces
very much outside his control." The department degree program had been
clarified and various tracks offered, but the chairman described the
process as a lengthy one—"Operationally that means getting faculty
together and then after three years a set of recommendations is stated
and acceptable." The chairman gathered information concerning the
program and its graduates, "because we are constantly being asked to
justify our program." He described enrollment as an important constraint,
especially in upper level courses. "We are often called upon to
explain why a certain course has not brought in more students."
Another constraint was described as "the tendency for faculty to get set in their ways." During his tenure as chairman, he described the changes in his role as "an increase in the managerial aspects of the chairman's job. Although the department was described as having "low visibility" within the University, the quality of faculty and program continued to grow, and the chairman reported that "We have a visibility on the national level."

Summary

The interview data revealed both similarities and differences between the growth and decline departments. A number of concerns were mentioned by nearly all departments, regardless of their enrollment picture. The lack of adequate funding from the University was a common concern, along with the need for additional faculty positions. Another frequently discussed area of concern was the lack of cooperation between departments which prevented the conservation of scarce resources through cooperative courses or programs. There was also discussion of increased activity on the part of "the administration," particularly in personnel matters and in the added pressure placed upon faculty members to increase their research efforts. Finally, all of the chairmen described their departments as successful, respected, and basically healthy.

Other discussion trends surfaced within the groups. In general, the growth departments concerned themselves with growth issues such as the need for additional faculty, equipment, and space. Some departments tried to limit growth when additional resources became unavailable. Growth chairmen often discussed their relationship to the environment outside the University. Meetings with industry and alumni were frequently
mentioned, and there were conscious efforts to provide students with the knowledge and skills needed in industry. Little time was spent discussing value conflicts among the faculty, and it seemed that, in truth, the faculty preferred to do "what they do best." The chairmen spoke of favorable public attitudes and excellent job markets, and as a group they appeared to be satisfied with the progress of their departments.

The decline group chairmen found themselves facing a more negative environment. They described poor or fair employment outlooks, unfavorable public opinion, competition for outside funding, and often "limited flexibility". They also lacked funds for modern equipment or faculty with particular skills, but were less optimistic about obtaining them. Their problems of overstaffing often resulted in tough faculty decisions, or the feeling of "an adversary relationship between the chairman and the non-tenured faculty." They also reported great pressure for increased research, with fewer graduate students available to assist them. Program or curriculum changes in response to enrollment declines often resulted in value conflicts among faculty, or territorial disputes with other departments. There was more discussion overall of problems, constraints, conflicts, and justification. However, those departments which were able to come to a consensus on value issues usually felt that their programs had been strengthened as a result.
RESEARCH QUESTIONS

In addition to the interview data, a number of brief questionnaires and paper and pencil instruments were administered to the department chairmen. A sample of eight faculty members from each department also completed two instruments. Comparisons of the growth and decline groups using these data and the strategy data from the interviews are reported below. Differences within groups are also discussed.

Research Question 1: Are there differences between department chairmen with positive and negative enrollment in their perceptions of elements in their task environment?

Subjects were asked to rank opposite descriptions of environmental conditions on a seven point scale. Items 2, 4, 5, 6, 8, 9, and 10 were reversed for scoring. In Table 1 mean scores of the environmental variables are presented for the growth and decline groups. Figure 1 illustrates the group differences in ratings of these variables. There were no differences in the growth and decline group mean scores for the degree of heterogeneity and dynamism (moderately high), or unpredictability and restrictiveness (average). The growth subjects as a group rated the degree of risk, fluctuation, and stress in the environment as moderately low, and average or moderately high degrees were reported by the decline group. The growth subjects as a group also rated the degree of environmental dominance as average, whereas the decline group reported a moderately high degree of dominance in their environment.
## TABLE 1

**MEAN SCORES OF ENVIRONMENTAL VARIABLES FOR GROWTH AND DECLINE GROUPS**

<table>
<thead>
<tr>
<th>Environmental Variables</th>
<th>Growth</th>
<th>Groups</th>
<th>Decline</th>
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</thead>
<tbody>
<tr>
<td>Heterogeneity</td>
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<tr>
<td>Dynamism</td>
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</tr>
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<td>Unpredictability</td>
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<td></td>
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<td></td>
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</tr>
<tr>
<td>Fluctuation</td>
<td>3</td>
<td></td>
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<td>Stress</td>
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<td></td>
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<tr>
<td>Technical Complexity</td>
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<td></td>
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<tr>
<td>Domination</td>
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<td></td>
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</tr>
<tr>
<td>Restrictiveness</td>
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</tr>
</tbody>
</table>

* 1 - very low degree; 7 - very high degree
FIGURE 1: MEAN SCORES OF ENVIRONMENTAL VARIABLES FOR GROWTH AND DECLINE GROUPS

Key

HET - Heterogeneity
DYN - Dynamism
RSK - Risk
UNP - Unpredictability
EXP - Rate of Expansion
FLC - Fluctuation
STR - Stress
TCO - Technical Complexity
DOM - Domination
RES - Restrictiveness
The greatest differences between groups were found in the rate of expansion, where the growth group described a high rate of expansion compared with an average degree for the decline group, and in the degree of technical complexity. The growth group reported a very high degree of technical complexity, with the decline group reporting a moderately low degree. Overall, the growth group reported a higher degree of expansion and technical complexity, and the decline group described their environment as having a higher degree of risk, fluctuation, stress, and domination.

The raw score values of questionnaire items measuring environmental variables for the four individual subjects in the growth group and the four subjects in the decline group are presented in Table 2. The scores for the individual growth subjects are illustrated in Figure 2. Individual growth subjects are referred to as G1 (growth subject one), G2, G3, and G4, respectively. Decline subjects are D1, D2, D3, and D4. These designations have been used throughout the study.

All growth subjects except G1 rated their environments from moderately high to extremely high in heterogeneity, dynamism, rate of expansion, and technical complexity. Subject G1 reported an average rating for all environmental variables except technical complexity (extremely high), and restrictiveness (high). All growth subjects described the degree of risk in their environment as average or below average. The degree of stress in the environment was also described as average or below average by the growth subjects, with subject G2 reporting extremely low stress. The greatest response variations among growth subjects were found in descriptions of the degree of
TABLE 2

*RAW SCORE VALUES OF ENVIRONMENTAL VARIABLES
FOR GROWTH AND DECLINE SUBJECTS

<table>
<thead>
<tr>
<th>Environmental Variables</th>
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<th>Subjects</th>
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<tr>
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<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Dynamism</td>
<td>4   5   6</td>
<td>6</td>
<td>5</td>
</tr>
<tr>
<td>Risk</td>
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<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Unpredictability</td>
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<td>4</td>
<td>5</td>
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<td>Expansion</td>
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<td>7</td>
<td>4</td>
</tr>
<tr>
<td>Fluctuation</td>
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<td>6</td>
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<td>Stress</td>
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<td>5</td>
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<tr>
<td>Tech. Complexity</td>
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<td>7</td>
</tr>
<tr>
<td>Domination</td>
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<tr>
<td>Restrictiveness</td>
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<td>4</td>
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</table>

*1 - very low degree; 7 - very high degree
FIGURE 2: SCORES OF ENVIRONMENTAL VARIABLES FOR GROWTH SUBJECTS

FIGURE 3: SCORES OF ENVIRONMENTAL VARIABLES FOR DECLINE SUBJECTS
environmental fluctuation and in the degree of restrictiveness. Subject G4 reported a moderately high degree of fluctuation, G1 an average degree, and G2 and G3 reported low to extremely low fluctuation. A high degree of restrictiveness was reported by subject G1, although the responses were average or below for the three remaining growth subjects.

Responses to environmental items were highly varied by individuals in the decline group, as illustrated in Figure 3. Subject D1 reported an extremely high degree of technical complexity, and subject D2 reported the rate of expansion as extremely low, but the ratings tended to be less extreme than those of growth individuals. All decline subjects rated the degree of heterogeneity from average to high. All items were rated as average or above average by subject D1. Subject D2 rated all environmental variables as average or below average with the exception of the degree of heterogeneity (moderately high), and the degree of restrictiveness (very high). Responses from subject D3 were varied, rating the degree of dynamism, fluctuation, and domination above average, and all other variables average or below average. Subject D4 rated the environment as above average in the degree of heterogeneity, dynamism, rate of expansion, and fluctuation, with the remaining variables rated as average or below.

With the exception of subject G1, the responses of individual growth subjects generally described their respective environments as high in expansion and technical complexity, and average or below average in risk and stress. No pattern was evident in the responses of the decline subjects although the responses were less extreme than those within the growth group. Comparison of the mean group scores
indicated that both groups rated heterogeneity and dynamism moderately high. However, the growth group described a high degree of environmental change due to the rate of expansion and technical complexity. The decline group responses indicated a comparatively higher degree of risk, stress, fluctuation, and domination in the environment, which would suggest perceptions of greater environmental hostility within the decline group.

In response to the first research question, some differences were found between the growth and decline group chairmen in their perceptions of environmental variables, with the decline group describing a more hostile environment. Within the growth group, there were more similarities than differences in environmental perceptions. Great response variations were found within the decline group, perhaps indicating a greater degree of environmental uncertainty.

Research Question 2: Do department chairmen with positive and negative enrollment growth differ in their perceptions of competitive pressure within the task environment?

Subjects were asked to respond to six questionnaire items concerning the degree of perceived competition with departments in their field at other institutions. A seven point scale was used with one indicating negligible competition and seven indicating extremely intense competition. Mean scores for the growth decline are presented in Table 3 and illustrated in Figure 4.

The decline group reported greater competitive pressure than the growth group in every area except cost to students, and the groups were identical in their descriptions of the degree of competitive pressure
for faculty. The greatest difference between groups was found in the reported competitive pressure in the area of program quality, where the decline group perceived a high degree of competition, and the growth group perceived a moderately low degree. Another area of difference was in the variety of programs, where the growth group perceived an average degree of pressure and the decline group described the competitive pressure as low.

The raw score data from the questionnaire items measuring the perceived degree of competitive pressure in the environment of each of the eight subjects are presented in Table 4 and in Figures 5 and 6. Many individual differences were found among subjects in the growth group in their responses to questions of competitive pressure. A high degree of competitive pressure for students, faculty, research dollars, and program quality was reported by subject G1, with lower pressure in program variety and student costs. Subject G2 reported below average competitive pressure in all areas except research dollars and student costs, which were moderately high. Moderate to high pressure in the areas of students, faculty, and research dollars were reported by subject G3, but this subject also rated as negligible the competition in quality and variety of programs. Subject G4 reported moderately low competitive pressure in all areas except student costs, where an average score was noted.

The individual chairmen in the decline group also varied greatly in the degree of competitive pressure they reported in their environment. Subject D1 reported a lower-than-average degree of competitive pressure for student costs and rated all other categories average or higher.
TABLE 3

*MEAN SCORES OF PERCEIVED COMPETITIVE PRESSURE VARIABLES FOR GROWTH AND DECLINE GROUPS

<table>
<thead>
<tr>
<th>ITEMS</th>
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<th>DECLINE M</th>
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<td>5</td>
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<td></td>
</tr>
<tr>
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<td></td>
</tr>
<tr>
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<td></td>
<td></td>
</tr>
<tr>
<td>Costs</td>
<td>4</td>
<td>3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* 1 - negligible competition 7 - extremely intense competition
FIGURE 4: MEAN SCORES OF COMPETITIVE PRESSURE VARIABLES FOR GROWTH AND DECLINE GROUPS

Key

STU - Students
RES - Research Dollars
FAC - Faculty
QUA - Quality of Programs
VAR - Variety of Programs
COS - Student Costs
TABLE 4
*RAW SCORE VALUES FOR PERCEIVED COMPETITIVE PRESSURE VARIABLES FOR GROWTH AND DECLINE SUBJECTS

<table>
<thead>
<tr>
<th>ITEMS</th>
<th>GROWTH</th>
<th>DECLINE</th>
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<td>1   2   3   4</td>
</tr>
<tr>
<td>Students</td>
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<tr>
<td>Research</td>
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<td>Faculty</td>
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<td>4   4   6   6</td>
</tr>
<tr>
<td>Quality</td>
<td>6   2   1   3</td>
<td>6   7   4   6</td>
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<tr>
<td>Variety</td>
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<td>4   3   4   5</td>
</tr>
<tr>
<td>Costs</td>
<td>4   5   4   4</td>
<td>2   1   5   4</td>
</tr>
</tbody>
</table>

*1 - Negligible Competition  7 - Extremely Intense Competition
FIGURE 5: SCORES OF COMPETITIVE PRESSURE VARIABLES FOR GROWTH SUBJECTS

FIGURE 6: SCORES OF COMPETITIVE PRESSURE VARIABLES FOR DECLINE SUBJECTS
Subject D2 reported below average competitive pressure for research dollars, variety of programs, and student costs. With these exceptions, all chairmen reported average or greater-than-average pressure in all areas. Subjects D1 and D2 were highly variable in their responses, citing high or very high competitive pressure in two areas, and moderately low to very low competitive pressure in one or two others. An overall response range from average to high was reported by subjects D3 and D4.

In general, the decline group reported a greater degree of competitive pressure than the growth group, especially with regard to the quality and variety of programs. This would support the contention that departments in fields where enrollment is declining would be more concerned with their competition. However, there was great response variation within both the growth group and the decline group.

The research findings in response to the second research question indicate that, in general, the decline group chairmen reported a higher degree of competitive pressure in the environment than the growth group chairmen, particularly in relation to the quality and variety of programs. Individual responses varied greatly within both groups, and produced no response patterns.

Research Question 3: Do the performance aspirations of department chairmen with positive enrollment growth differ from those with negative enrollment growth?

Subjects were asked to rate the importance of five long-term goal areas to their department. A seven point scale was used, with response choices ranging from moderately important (one) to extremely important (seven).
Table 5 illustrates the group means for the performance aspiration questions. The means for the growth and decline groups were identical for the questions regarding budget levels, faculty satisfaction, departmental strength, and public image. Figure 7 illustrates the slightly higher concern of the growth group subjects for "achieving a high rate of growth in enrollment."

The raw score values of the goal area variables for individual subjects in the growth and decline groups are presented in Table 6, and pictured in Figures 8 and 9. Subject G1 rated all goal areas as extremely important. All of the growth subjects rated "maintaining budget levels" and "maintaining high faculty satisfaction and commitment" as highly or extremely important, and all of them rated "maintaining strength as a department within the university" as highly or extremely important. The greatest differences were found in "achieving a high rate of growth in enrollment", where responses ranged from extremely important (G1) and highly important (G3) to quite important (G4) and only moderately important (G2). Responses also varied for the question of "achieving or maintaining an excellent public image, where three subjects responded highly or extremely important, and one (G4) rated the question as only quite important.

The response of the decline subjects to the set of goal area questions nearly paralleled those of the growth group. All subjects in the decline group rated "maintaining budget levels", maintaining high faculty satisfaction and commitment", and "maintaining strength as a department within the university" as highly or extremely important. Similarly, the greatest differences were reported for "achieving a high
TABLE 5

*MEAN SCORES OF GOAL AREA VARIABLES FOR GROWTH AND DECLINE SUBJECTS

<table>
<thead>
<tr>
<th>ITEMS</th>
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<td>7</td>
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<td>Department Strength</td>
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<tr>
<td>Public Image</td>
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</tr>
</tbody>
</table>

*1 - Moderately Important    7 - Extremely Important
Figure 7: Mean scores of goal area variables for growth and decline groups

Key

BUD - Maintaining Budget Levels
ENR - Enrollment Growth
FAC - Faculty Satisfaction
STR - Maintaining Strength as a Department
IMA - Public Image
TABLE 6
*RAW SCORE VALUES OF GOAL AREA VARIABLES FOR GROWTH AND DECLINE SUBJECTS

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<td>7</td>
<td>7</td>
<td>7</td>
<td>7</td>
<td>7</td>
<td>6</td>
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<tr>
<td>Department Strength</td>
<td>7</td>
<td>7</td>
<td>7</td>
<td>6</td>
<td>7</td>
<td>7</td>
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<tr>
<td>Public Image</td>
<td>7</td>
<td>6</td>
<td>7</td>
<td>3</td>
<td>4</td>
<td>7</td>
<td>7</td>
<td>7</td>
</tr>
</tbody>
</table>

* 1 - Moderately Important  7 - Extremely Important
FIGURE 8: SCORES OF GOAL AREA VARIABLES FOR GROWTH SUBJECTS

FIGURE 9: SCORES OF GOAL AREA VARIABLES FOR DECLINE SUBJECTS
rate of growth in enrollment", with three subjects rating the question from only moderately to quite important (D4, D3, and D4), and subject D2 rating enrollment above average in importance. Response patterns continued with the question "achieving or maintaining an excellent public image", where three subjects responded highly or extremely important, and the fourth (D1) responded with an average rating.

The results for this question were interesting because both the growth and decline groups rated "achieving a high rate of growth in enrollment" lower than all other goal areas. Subjects G4 and D1 also rated "achieving or maintaining an excellent public image" lower than their colleagues. However, the interview data revealed that both departments had been successful in creating a favorable public image either nationally (D1) or locally (G4).

The questionnaire data revealed nearly identical profiles in responses to the importance of goal area variables, indicating very little difference between the growth and decline groups in response to the third research question. However, the similarity in goals did not result in a similarity in emphasis. This inconsistency in the findings will be discussed in Chapter 6.

Research Question 4: Do department chairmen in situations of positive or negative enrollment growth differ in their tolerance of ambiguity as measured by the Budner Intolerance of Ambiguity Scale?

Since only three of the four growth group subjects agreed to participate in this part of the study, results are reported for subjects G2, G3, and G4. A higher score for this instrument indicated a greater intolerance of ambiguity, and a lower score a greater tolerance
of ambiguous situations.

Group means and standard deviations for the Budner Scale scores are presented in Table 7. The mean score indicates that chairmen in the decline group were more tolerant of ambiguity than those in the growth group, and the standard deviations indicate that there was less variability in the scores of the decline group than in those of the growth group.

Thus, in response to the fourth research question, differences were found between the growth and decline group chairmen in their tolerance of ambiguity. The decline group chairmen were found to be more tolerant of ambiguity than the growth chairmen, and therefore theoretically well-equipped to respond to the increasing ambiguity of the environments in which they functioned.

Research Question 5: Are there differences in the cognitive orientations of department chairmen with positive and negative enrollment growth as measured by an abridged form of the Myers-Briggs Type Indicator?

Table 8 illustrates the Myers-Briggs Types of individual subjects in the growth and decline groups. Since the abridged form of the instrument used in the study measured only the sensing-intuition mode of information gathering and the thinking-feeling mode of information evaluation, only those results were reported.

The seven subjects who completed this instrument (excluding Gl) were all dominant in the intuition rather than the sensing mode. The subjects were equally divided with regard to the thinking-feeling dimension, and no group patterns were evident. Therefore, the answer to research question five is that no differences exist between the
### TABLE 7
MEANS AND STANDARD DEVIATIONS OF BUDNER INTOLERANCE OF AMBIGUITY SCALE FOR GROWTH AND DECLINE GROUPS

<table>
<thead>
<tr>
<th>GROUP</th>
<th>N</th>
<th>M</th>
<th>S.D.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Growth</td>
<td>3</td>
<td>48.67</td>
<td>10.97</td>
</tr>
<tr>
<td>Decline</td>
<td>4</td>
<td>40.50</td>
<td>7.72</td>
</tr>
</tbody>
</table>
cognitive orientations of department chairmen with positive and negative enrollment growth as measured by the abridged version of the Myers-Briggs Type Indicator.

Research Question 6: **Do department chairmen with positive enrollment growth differ from those with negative enrollment growth in their motivational orientation as measured by the Harrison Scale?**

The Harrison Scale provided sub-scale scores for power, role, task, and person. Subjects rank-ordered fifteen statements from most to least agreement. Scores were obtained by summing the ranks, with lower scores indicating greater dominance. Scores are reported for seven of the eight subjects (excluding G1).

All of the subjects in both the growth and decline groups reported a dominant task orientation. However, in view of Ford's criticism of the Harrison Scale which questioned the validity of the task orientation sub-scale, data were also examined omitting this subscale. The dominant orientation of the three growth subjects became the person orientation when "task" was omitted. The dominant orientation of three of the four decline subjects (D1, D2, and D4) became the role orientation.

The three individuals in the growth group from whom data was collected demonstrated identical profiles of task, person, role, and power preferences. In the decline group, subject D3 was identical to the growth group subjects. The three remaining decline group subjects (D1, D2, and D4), all demonstrated profiles of task, role, person, and power.
TABLE 8
MYERS-BRIGGS TYPES* FOR
GROWTH AND DECLINE SUBJECTS

<table>
<thead>
<tr>
<th>MYERS-BRIGGS TYPE</th>
</tr>
</thead>
<tbody>
<tr>
<td>GROWTH</td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>2</td>
</tr>
<tr>
<td>3</td>
</tr>
<tr>
<td>4</td>
</tr>
<tr>
<td>DECLINE</td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>2</td>
</tr>
<tr>
<td>3</td>
</tr>
<tr>
<td>4</td>
</tr>
</tbody>
</table>

*Scales: N.S. = Intuition-Sensing; T.F. = Thinking-Feeling


<table>
<thead>
<tr>
<th>SUB-SCALES</th>
<th>POWER</th>
<th></th>
<th>ROLE</th>
<th></th>
<th>TASK</th>
<th></th>
<th>PERSON</th>
<th></th>
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</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>M</td>
<td>S.D.</td>
<td>M</td>
<td>S.D.</td>
<td>M</td>
<td>S.D.</td>
<td>M</td>
</tr>
<tr>
<td>Growth</td>
<td>3</td>
<td>54.33</td>
<td>2.52</td>
<td>40.00</td>
<td>4.00</td>
<td>24.33</td>
<td>3.06</td>
<td>31.33</td>
</tr>
<tr>
<td>Decline</td>
<td>4</td>
<td>53.25</td>
<td>6.95</td>
<td>35.50</td>
<td>3.32</td>
<td>24.00</td>
<td>5.03</td>
<td>37.25</td>
</tr>
</tbody>
</table>
The means and standard deviations for each of the sub-scales for the growth and decline groups are presented in Table 9. The mean scores indicate that for the decline group as a whole, the sub-scales for role and person were very similar. The standard deviation for the power sub-scale is nearly three times as large for the decline group as for the growth group, indicating greater dispersion among the scores.

Both growth and decline subjects reported dominance in the task sub-scale of the Harrison Scale, indicating no difference between the groups in response to research question six. However, in view of Ford's criticism of the task sub-scale of the instrument, secondary preferences were examined. It was found that, with the exception of subject D3, the secondary dominance of the decline group was the role orientation, and the secondary preference of the growth group was the person orientation.

Research Question 7: What differences exist between department chairmen with positive enrollment growth and those with negative enrollment growth in relation to their management style?

Questionnaire items were grouped to form individual profiles of the five style dimensions identified by Khandwalla. The questionnaire items used in the profile descriptions were taken from a combination of the four sections of the questionnaire labelled 4A-4D, which concerned personal style, decision-making mode (adaptive, entrepreneurial, planning), democratic decision-making (program, budget allocation, policy), and methods for instituting change. In order to simplify the description, sections of the questionnaire in the Appendix have been labelled 4A, 4B, 4C, and 4D, and specific items have been referred to as
Scores for the following items were reversed: 4A1, 4A3, 4A6, 4A9, 4A10, 4A11, 4B1, and 4D1. The classification system was used by Khandwalla in his study of Canadian firms and service organizations, although the number of items used in each category was reduced because a few of the items could not be appropriately adapted to an educational setting. Style variables were created in the following categories:

1. Risk-taking—Mean score for items 4A6, 4A9, 4A10, 4B1, and 4B2.
2. Optimization—Mean score for items 4A1, 4A5, 4B3, and 4D3.
3. Participation—Mean score for items 4A3, 4C1, 4C2, 4C3, 4D4, and 4D6.
4. Flexibility—Mean score for items 4A2, 4A4, 4A7, 4A8, and 4A11.
5. Coercion—Mean score for items 4A1, 4A2, 4A5, and 4A7.

Items were scored on a seven point scale from very low (1) to very high (7). The dimensions were presented by Khandwalla as paired opposites of management style elements which were identified through earlier research. The first dimension, conservatism vs. risk-taking, described the degree of cautiousness or daring preferred by the organizational decision-maker. The satisficing or seat-of-the-pants mode was paired with optimizing or planning, and described the degree to which an organizational decision-maker was oriented toward decision-making using experience and common sense, or held a preference for careful investigation and long-term planning. The third dimension, flexibility, described the degree to which the decision-maker preferred
a mechanistic style with highly structured channels of communication, or an organic, flexible style, where decisions were more often made by using situational expertise. Participation referred to a preference for individual decision-making as opposed to a team management, employee oriented approach. The fifth dimension, coercion, described the degree to which non-coercive values and behavior or authoritarian values and force were used to institute organizational change.

Group style profiles for the growth and decline groups are presented in Table 10, and illustrated in Figure 10. The groups were identical in the preferred degree of optimization and participation. The growth group profile scores were higher than the profile for the decline group in risk-taking and flexibility. For the risk-taking dimension, the growth group indicated an average preference, while the decline group was moderately conservative. The growth group profile was high in flexibility, and the decline group moderately high. For the coercion dimension, the decline group was higher, recording a moderately low preference in comparison with the low preference reported by the growth group.

Style dimension profiles for individual subjects in growth and decline are presented in Table 11. Profiles for individual subjects are also illustrated in Figures 11 and 12. Subjects in the growth group have a moderately high to extremely high preference for the participative style, and the flexible style. Growth group individuals also describe their style as moderately low (G4) or low (G1, G2, and G3) in coercion. The response of growth subjects to questions concerning optimization or planning demonstrate their preferences for an average (G3) or moderately
TABLE 10

MEAN SCORES OF STYLE DIMENSIONS FOR GROWTH AND DECLINE GROUPS

<table>
<thead>
<tr>
<th>STYLE DIMENSIONS</th>
<th>GROWTH</th>
<th>DECLINE</th>
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</thead>
<tbody>
<tr>
<td>Risk-Taking</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Optimization</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Participation</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Flexibility</td>
<td>6</td>
<td>5</td>
</tr>
<tr>
<td>Coercion</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

1 - very low 7 - very high
FIGURE 10: MEAN SCORES OF STYLE PROFILE CATEGORIES FOR GROWTH AND DECLINE GROUPS

Key

RSK = Risk-Taking
OPT = Optimization
PRT = Participation
FLX = Flexibility
COR = Coercion
high degree of planning. The greatest variation in response was found on the dimension of risk-taking, where the responses ranged from a conservative preference (G2) to a moderately high preference (G3).

Individual subjects in the decline group followed a similar pattern, with moderately high preferences for flexibility, and a moderately high (D1) to high degree of participation. Decline group subjects also preferred a moderate degree (D2) to a moderately high degree (D1, D3, and D4) of optimization or planning. Individuals in the decline group preferred an average degree of risk-taking (D1 and D4) to a moderately conservative (D3) or conservative (D2) risk-taking style. The greatest response variation for individual decline subjects was in the degree of coercion, with subject D1 reporting an average degree, D3 and D4 a moderately low degree, and subject D2 describing a style very low in coercion.

Based upon the profile dimensions developed by Khandwalla, he described seven management styles labelled risk-taking organic, conservative organic, professional, quasi-professional, anti-professional, golden mean, and conservative laissez-faire. The professional style was described as "high on optimization and participation; low on coercion; moderately organic and risk taking. The professional style most closely described the style of both the growth and decline groups, even though some variation was noted. In view of these results, it was concluded that no differences exist between department chairmen with positive and negative enrollment growth in relation to their management style.
### TABLE 11

*STYLE DIMENSION SCORES FOR GROWTH AND DECLINE SUBJECTS*

<table>
<thead>
<tr>
<th>STYLE DIMENSIONS</th>
<th>GROWTH</th>
<th></th>
<th></th>
<th></th>
<th>DECLINE</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
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<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Risk-Taking</td>
<td>4</td>
<td>2</td>
<td>5</td>
<td>3</td>
<td>4</td>
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<td>3</td>
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<td></td>
</tr>
<tr>
<td>Optimization</td>
<td>5</td>
<td>5</td>
<td>4</td>
<td>5</td>
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<tr>
<td>Participation</td>
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<tr>
<td>Flexibility</td>
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<td>7</td>
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<td>5</td>
<td></td>
</tr>
<tr>
<td>Coercion</td>
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<td>3</td>
<td>4</td>
<td>1</td>
<td>3</td>
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<td></td>
</tr>
</tbody>
</table>

1 = very low 7 = very high
FIGURE 11: SCORES OF STYLE PROFILE CATEGORIES FOR GROWTH SUBJECTS

FIGURE 12: SCORES OF STYLE PROFILE CATEGORIES FOR DECLINE SUBJECTS.
Research Question 8: Do department chairmen with positive enrollment growth differ from those with negative enrollment growth in their use of independent strategies, cooperative strategies, or strategic maneuvering?

Responses to interview questions were grouped into categories of independent strategies, cooperative strategies, and strategic maneuvering. The independent strategies were further divided into those pertaining primarily to student enrollment, to curriculum and program, or to faculty, including research, service, and relationships to other parts of the University. Examples of student strategies included such decisions as offering convenient class hours, the availability of scholarships or assistantships, the reputation of the department, and advertising. Among the program strategies mentioned were changed in program requirements, grading, class size, credit hours per course, the number of laboratory courses required, the relevance of the curriculum to industry needs, and the use of television courses or programmed instruction. Strategies relating to faculty encompassed such decisions as the amount of pressure put on faculty for research, providing faculty speakers for community and other groups, providing conferences and workshops for industry and consumers, the involvement of faculty with campus committees or professional groups, and the maintenance of favorable relationships with the dean's office.

Cooperative strategies have been defined by Galbraith as "ways that the organization implicitly or explicitly cooperates with other elements in its environment." Examples of cooperative strategies used by
department chairmen were the offering of cooperative degree programs with other departments, the development of cooperative research programs, joint faculty appointments, the development of degree programs with industry to meet industrial needs, and cooperative programs with local agencies.

An additional response available to organizational decision-makers was to attempt to change or alter the task environment elements, rather than responding to a given task environment. Galbraith described this form of environmental interaction as strategic maneuvering. Although the freedom to make decisions concerning new clients or programs was sometimes limited, this strategy option was used creatively to increase resources. Examples of strategic maneuvering by the departments examined in the study included such decisions as the development of programs in unconventional areas, the special screening of students to gain admittance into a program, the building of new graduate specialty areas, the re-structuring of a scholarship program, and efforts to purchase special equipment that would be controlled by the department.

A profile was developed for each department based upon the number of strategies mentioned by the department chairman in each strategy category during the interview. The strategy categories were recorded from the greatest to the smallest number mentioned. Table 12 illustrates the strategy profile for the department chairmen in growth and decline. The number of strategies in a given area offered no indication of the significance or success of these strategies. It does, however, provide some indication of the amount of decision-making
### TABLE 12

**STRATEGY PROFILES OF DEPARTMENT CHAIRMEN WITH GROWING AND DECLINING ENROLLMENTS**

<table>
<thead>
<tr>
<th>DEPARTMENT</th>
<th>STRATEGIES MENTIONED DURING THE INTERVIEW</th>
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<tbody>
<tr>
<td></td>
<td>GROWTH</td>
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<tr>
<td>1</td>
<td>I. Faculty (6)</td>
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<tr>
<td></td>
<td>I. Students (5)</td>
</tr>
<tr>
<td></td>
<td>I. Program (4)</td>
</tr>
<tr>
<td></td>
<td>Co-op (3)</td>
</tr>
<tr>
<td></td>
<td>SM (0)</td>
</tr>
<tr>
<td>2</td>
<td>I. Faculty (6)</td>
</tr>
<tr>
<td></td>
<td>I. Program (6)</td>
</tr>
<tr>
<td></td>
<td>I. Students (5)</td>
</tr>
<tr>
<td></td>
<td>Co-op (6)</td>
</tr>
<tr>
<td></td>
<td>SM (2)</td>
</tr>
<tr>
<td>3</td>
<td>I. Faculty (6)</td>
</tr>
<tr>
<td></td>
<td>I. Students (5)</td>
</tr>
<tr>
<td></td>
<td>I. Program (4)</td>
</tr>
<tr>
<td></td>
<td>Co-op (4)</td>
</tr>
<tr>
<td></td>
<td>SM (1)</td>
</tr>
<tr>
<td>4</td>
<td>I. Faculty (8)</td>
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<td>I. Students (5)</td>
</tr>
<tr>
<td></td>
<td>I. Program (3)</td>
</tr>
<tr>
<td></td>
<td>Co-op (5)</td>
</tr>
<tr>
<td></td>
<td>SM (2)</td>
</tr>
</tbody>
</table>

**I = Independent**
activity focused upon a particular area. Since some strategies such as program changes and the pressure placed upon faculty to obtain research dollars were mentioned by nearly all department chairmen, increased numbers of strategies for a particular area usually included deliberate attempts at change or creativity.

The strategy area with the most decisions for the four growth subjects was that of independent strategies concerning faculty. As noted above, these strategies often concerned a research emphasis, involvement by faculty within the University, and personnel matters. Strategies concerning students were second by three of the four, and program strategies third. In department G2, the chairmen reported an equal number of faculty and program strategies. Overall, the growth department chairmen mentioned more cooperative strategies and more strategic maneuvering than the decline chairmen, although the actual numbers were small in both groups.

The decline group chairmen, with the exception of subject D1, mentioned independent strategies related to the students most often, followed by program strategies, and faculty strategies. Only subject D1 mentioned faculty independent strategies most frequently within the decline group.

Within the growth group the profiles were identical with the exception of department G2. In this department the chairman mentioned an equal number of faculty and program strategies, followed by student strategies. The only growth subject who reported no attempts at strategic maneuvering was G1.
Responses were also similar within the decline group. Only subject D1 provided a different profile from the decline subjects, and that profile matched the growth group preferences. In two cases, however, the responses revealed an equal number of strategies mentioned in two areas. On decline group chairman also did not mention any attempts at strategic maneuvering, subject D2.

The answer to research question eight, then, is that some differences appear to exist between department chairmen with positive and negative enrollment growth in their use of independent strategies, cooperative strategies, and strategic maneuvering. These differences were not large. In some respects, though, the differences found were not predicted. The decline group, in general, did mention more independent strategies related to students than the growth group. However, the greater number of strategies which were cooperative in nature, and therefore more costly with respect to the loss of autonomy by the department, were used more often by growth group rather than decline group subjects. The growth group subjects also made more attempts to control the environment through strategic maneuvering than the decline group subjects.

Research Question 9: Do differences exist between department chairman with positive and negative enrollment growth in their ability to maintain levels of faculty positions, research dollars, or University allocations as measured by official University documents?

Quantitative figures are reported from University documents from the years 1972 through 1976. In order to establish trends, figures for the period 1972 and 1973 were averaged, and compared with average figures for
the period 1975 and 1976. Percentage of change was computed from the differences between the period from which data were collected. Table 13 reported the percentage of change in both the number of positions and the full-time equivalency for faculty and special appointments. Specials were included in an effort to determine whether departments which lost regular faculty positions would attempt to increase part-time or non-tenure track special staff to meet their needs. Only department G3 was successful in gaining faculty positions or FTE's from 1972 through 1976. The remaining growth departments lost faculty FTE's by less than ten percent, however. Department G3 also lost faculty FTE's by less than ten percent, but the remaining decline group departments lost faculty FTE's by between ten and twenty percent.

All of the growth group departments except G1 (-9 percent) made substantial gains in the number of special FTE's. Department D4 increased special FTE's by five percent during this period, but subjects D2 and D3 decreased in special FTE's by eleven percent and twenty-five percent respectively. Department D1 had no personnel in the "Specials" category. Overall, the greatest personnel gains during this period were made by the growth departments.

Table 14 illustrates the percentage of change in the number of research projects through the University research foundation, and the change in the research expenditures for the period 1972 through 1976. All of the growth departments except G4 (where no research expenditures were made) increased their research expenditures during this period. Increases ranged from 19 percent to 28 percent. In the decline group, departments D1 and D3 increased their research expenditures substantially.
### Table 13

Percentage of change in number and full time equivalency by type of teaching personnel for growth and decline departments between the two-year periods of 1972-73 and 1975-76.

<table>
<thead>
<tr>
<th>Department</th>
<th>% Change in Faculty Head Count</th>
<th>% Change in Faculty FTE</th>
<th>% Change in Specials Head Count</th>
<th>% Change in Specials FTE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>GROWTH</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>-.07</td>
<td>-.07</td>
<td>-.07</td>
<td>-.09</td>
</tr>
<tr>
<td>2</td>
<td>-.04</td>
<td>-.02</td>
<td>+.66</td>
<td>+.83</td>
</tr>
<tr>
<td>3</td>
<td>+.18</td>
<td>+.33</td>
<td>+.66</td>
<td>+.66</td>
</tr>
<tr>
<td>4</td>
<td>-.05</td>
<td>-.05</td>
<td>+.78</td>
<td>+1.05</td>
</tr>
<tr>
<td><strong>DECLINE</strong></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>-.08</td>
<td>-.13</td>
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<td>2</td>
<td>-.13</td>
<td>-.13</td>
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<td>-.11</td>
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<tr>
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<td>-.03</td>
<td>-.03</td>
<td>-.31</td>
<td>-.25</td>
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<tr>
<td>4</td>
<td>-.17</td>
<td>-.18</td>
<td>-.00</td>
<td>+.05</td>
</tr>
</tbody>
</table>

*FTE - Full Time Equivalent, the total percentages assigned for payments for personnel in a given category. One payment at 50 percent is .50 FTE.

**Specials appointments - Other persons employed for the purpose of instructing students.
Department D1 reported a 63 percent increase, while D3 reported a 1602 percent increase. Departments D2 and D4 reported substantial decreases in research expenditures of 86 percent and 100 percent. In general, the growth departments made moderate gains in research expenditures while the decline group was split between substantial gains (D1 and D3) and substantial losses (D2 and D4).

The percentage of change in the total University budget allocation for the growth and decline departments are indicated in Table 15. Although all departments increased the dollar amounts budgeted due to inflation, not all departments received the same percentage of change. Percentages among the growth departments ranged from 16 percent to 35 percent, whereas the range for the decline departments was from 9 percent to 26 percent. Within the growth group, department G4 received the highest percentage increase and department G1 the lowest.

Decline department D1 received only a 9 percent increase in budget allocation during the period from 1972 through 1976, although the other decline departments made increases comparable to growth departments during that period. As expected, however, the greatest gains in University budget allocations were made by growth group departments.

When all quantitative outcome categories are examined the differences become more marked. Among the growth departments, G1 gained in budget and research resources, but decreased slightly in personnel. Departments G2 and G3 increased their budget allocations, research expenditures, and special FTE's, although only G3 increased faculty FTE's. Although department G4 had no research money, and declined slightly in faculty FTE's, this department made the most
<table>
<thead>
<tr>
<th>DEPARTMENT</th>
<th>% CHANGE IN # RESEARCH CONTRACTS</th>
<th>% CHANGE IN RESEARCH EXPENDITURES</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>GROWTH</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>+.23</td>
<td>+.24</td>
</tr>
<tr>
<td>2</td>
<td>+.57</td>
<td>+.28</td>
</tr>
<tr>
<td>3</td>
<td>-.13</td>
<td>+.19</td>
</tr>
<tr>
<td>4</td>
<td>No Projects</td>
<td>No expenditures</td>
</tr>
<tr>
<td><strong>DECLINE</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>+.02</td>
<td>+.63</td>
</tr>
<tr>
<td>2</td>
<td>- 0 -</td>
<td>-.86</td>
</tr>
<tr>
<td>3</td>
<td>+2.66</td>
<td>+16.02</td>
</tr>
<tr>
<td>4</td>
<td>-.50</td>
<td>-1.00</td>
</tr>
</tbody>
</table>
### Table 15

**Percentage of Change in the Total University Current Budget Allocations for Growth and Decline Departments**

*Between the Two-Year Periods 1972-73 and 1975-76*

<table>
<thead>
<tr>
<th>Department</th>
<th>Percentage of Change in Budget Allocation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Growth</strong></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>+.16</td>
</tr>
<tr>
<td>2</td>
<td>+.22</td>
</tr>
<tr>
<td>3</td>
<td>+.31</td>
</tr>
<tr>
<td>4</td>
<td>+.35</td>
</tr>
<tr>
<td><strong>Decline</strong></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>+.09</td>
</tr>
<tr>
<td>2</td>
<td>+.22</td>
</tr>
<tr>
<td>3</td>
<td>+.26</td>
</tr>
<tr>
<td>4</td>
<td>+.19</td>
</tr>
</tbody>
</table>
substantial increases in both budget allocations and special FTE's.

Within the decline group, department D1 received the greatest loss in budget allocation of any department, lost faculty, and had no specials. However, the department increased its research expenditures by 63 percent during this period. Department D3 suffered in the loss of special FTE's by 25 percent, but received the highest budget allocation of any decline department and made greater gains in research expenditures (+1602 percent) than any of the other departments in growth or decline. Department D2 lost with faculty and special FTE's, and decreased in research expenditures by 86 percent, but was able to increase its university budget allocation by 22 percent. Finally, department D4 decreased in faculty FTE's, suffered a 100 percent decrease in research dollars, and made only a 5 percent increase in special FTE's. This department received only a 19 percent increase in the university budget allocation from 1972 through 1976.

Overall, the growth departments were able to increase their resources from both the university and from research projects. The decline departments tended to receive lower budget allocations from the university, which put increased pressure on them to either search for dollars through research projects, or work to increase the university allocations they received. Thus, in response to research question nine, differences do exist between department chairmen with positive and negative enrollment growth in their ability to maintain levels of faculty positions and university allocations. However, the two decline departments which were able to increase their research expenditures, did so in amounts which exceeded the growth department gains.
Research Question 10: Do faculty members in departments with positive enrollment growth describe the leadership behavior of their chairmen differently than faculty members in departments of negative enrollment growth as measured by the Leader Behavior Description Questionnaire?

A sample of eight faculty members from each of the eight departments used in the study was asked to complete the Leadership Behavior Description Questionnaire (LBDQ). This instrument provides group ratings from faculty members in each department for the degree of consideration and initiating structure demonstrated by the department chairmen toward their faculty. This instrument was included to provide information from a source other than the department chairman, and to examine the possible effects of the chairman's leadership style as a moderating variable between performance aspiration and performance outcomes.

Usable responses were obtained from a minimum of five faculty members in each department. Consideration and initiating structure scores for individual faculty members were averaged to obtain the chairman's consideration and initiating structure index score. Individual faculty scores for growth and decline group faculty were then combined and averaged to form mean scores for group consideration and initiating structure.

In Table 16 the means and standard deviations for the total number of faculty members in the growth group and the decline group are presented. The mean scores for consideration in the growth group and the decline group were very similar, although the decline group standard deviation was larger than the growth group. This, however, may have been affected by the great variability in the consideration scores.
### TABLE 16
MEANS AND STANDARD DEVIATIONS OF FACULTY GROUP SCORES OF THE LEADERSHIP BEHAVIOR DESCRIPTION QUESTIONNAIRE FOR GROWTH AND DECLINE GROUPS

<table>
<thead>
<tr>
<th>GROUP</th>
<th>N</th>
<th>CONSIDERATION</th>
<th>INITIATING STRUCTURE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>M</td>
<td>S.D.</td>
</tr>
<tr>
<td>Growth</td>
<td>29</td>
<td>40.37</td>
<td>8.57</td>
</tr>
<tr>
<td>Decline</td>
<td>25</td>
<td>39.64</td>
<td>11.59</td>
</tr>
</tbody>
</table>
of subject D4. The group means for initiating structure were almost identical, although there was greater variability in the growth group scores.

The means and standard deviations of scores of the Leadership Behavior Description Questionnaire (LBDQ) for faculty samples within the departments of growth and decline subjects are presented in Table 17. Faculty of subjects in the growth and decline subjects are presented in Table 17. Faculty of subjects in the growth group reported similar consideration scores, although the variability of scores for subjects G1, G2, and G3 was more than twice as great as the variability in the scores of faculty from department G4. Initiating structure scores were higher for subjects G2 and G4 than for subjects G1 and G3. However, the standard deviations indicated greater dispersion among faculty scores in department G2.

Faculty members in departments of decline subjects presented a wider range of scores for consideration than those in the growth departments. The standard deviation for Subject D4 was more than five times the standard deviation for D3, indicating a very high degree of variability among the individual faculty consideration scores for subject D4. Faculty reported initiating structure scores in the decline departments conformed more closely to scores of subjects in the growth departments. Faculty of subject D4 reported the lowest score for both consideration and initiating structure, although the variability in the initiating structure score for this subject was similar to the other decline subjects.
<table>
<thead>
<tr>
<th>DEPARTMENTS</th>
<th>CONSIDERATION</th>
<th>INITIATING STRUCTURE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>M</td>
</tr>
<tr>
<td>GROWTH</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>6</td>
<td>41.</td>
</tr>
<tr>
<td>2</td>
<td>8</td>
<td>44.</td>
</tr>
<tr>
<td>3</td>
<td>7</td>
<td>35.</td>
</tr>
<tr>
<td>4</td>
<td>8</td>
<td>42.</td>
</tr>
<tr>
<td>DECLINE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>5</td>
<td>41.</td>
</tr>
<tr>
<td>2</td>
<td>7</td>
<td>42.</td>
</tr>
<tr>
<td>3</td>
<td>7</td>
<td>47.</td>
</tr>
<tr>
<td>4</td>
<td>6</td>
<td>27.</td>
</tr>
</tbody>
</table>
In response to the research question, it was concluded that, in general, the chairmen of the growth groups were similar to those in the decline group in their leadership style as measured by the Leader Behavior Description Questionnaire. This was true for both the consideration and initiating structure sub-scales of the instrument.

Research Question 11: Are there differences in extrinsic job satisfaction, job autonomy, or job pleasantness between faculties of department chairmen with positive and those with negative enrollment growth?

The eight faculty members from each department who were contacted and asked to complete the LBDQ were also asked to complete a 21-item satisfaction instrument. The responses provided a qualitative outcomes measure to compliment the quantitative data of budget allocations, personnel, and research expenditures. A seven point scale was used with responses ranging from completely (one) to not at all (seven). Items were scored by summing coded questions for each category. Sub-scale scores were reported for extrinsic satisfaction, intrinsic satisfaction, job autonomy, and job pleasantness, with a lower score indicating a greater degree of satisfaction.

Sub-scale means and standard deviations for the total number of faculty members within the growth and decline groups are presented in Table 18. The group means for faculty in the growth and decline departments produced an identical ordering of sub-scales. Job autonomy was the most satisfying aspect of their work, followed by extrinsic satisfaction, job pleasantness, and intrinsic satisfaction. Standard deviations for total faculty in the growth and decline groups indicated that the greatest difference in the amount of variability was found in
extrinsic satisfaction, with the decline faculty responses more variable than the growth faculty.

Table 19 illustrates the means and standard deviations of sub-scale scores of the satisfaction instrument for samples of faculty members within the departments of growth and decline subjects. Faculty members in all of the growth departments were most satisfied with their degree of job autonomy. Since faculty members in large research institutions are generally considered to have a great deal of autonomy when compared to people in most other fields, this result was not unusual. Faculty in departments G1 and G4 reported extrinsic satisfaction as the second most satisfying aspect of their positions. Faculty in department G2 reported identical scores for extrinsic satisfaction and job pleasantness. Department G3 faculty reported a slightly higher score for job pleasantness. Faculty in all growth departments ranked intrinsic job satisfaction lowest among the four subscales. Standard deviations revealed that ratings by faculty in departments G1 and G2 were less variable in all sub-categories than faculty satisfaction ratings in departments G3 and G4.

Faculty ratings in decline departments were the same as faculty ratings in growth departments in reporting most satisfaction with the degree of job autonomy and least satisfaction with the degree of intrinsic job satisfaction in their positions, although in two faculties, D2 and D4, the scores were equal to those in other categories. Faculty in decline departments also rated extrinsic satisfaction as the second most satisfying aspect of their work, and job pleasantness, third although the extrinsic satisfaction and job pleasantness scores were equal for
<table>
<thead>
<tr>
<th>Sub-Scales</th>
<th>SE*</th>
<th>SI</th>
<th>SA</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>GROUP</td>
<td>N</td>
<td>M</td>
<td>S.D.</td>
<td>M</td>
</tr>
<tr>
<td>GROWTH</td>
<td>29</td>
<td>12.21</td>
<td>4.45</td>
<td>16.79</td>
</tr>
<tr>
<td>DECLINE</td>
<td>26</td>
<td>13.38</td>
<td>5.93</td>
<td>17.62</td>
</tr>
</tbody>
</table>

*SE = Extrinsic satisfaction, SI = Intrinsic Satisfaction, SA = Job Autonomy, SP = Job Pleasantness
TABLE 19
MEANS AND STANDARD DEVIATIONS OF SATISFACTION SUB-SCALE
SCORES FOR SAMPLES OF FACULTY MEMBERS IN DEPARTMENTS
OF INDIVIDUAL GROWTH AND DECLINE SUBJECTS

<table>
<thead>
<tr>
<th>DEPARTMENT</th>
<th>N</th>
<th>SE*</th>
<th>S.D.</th>
<th>SI*</th>
<th>S.D.</th>
<th>SA*</th>
<th>S.D.</th>
<th>SP*</th>
<th>S.D.</th>
</tr>
</thead>
<tbody>
<tr>
<td>GROWTH</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>6</td>
<td>11</td>
<td>3.29</td>
<td>16</td>
<td>3.56</td>
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<td>6.00</td>
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<td>4.75</td>
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<td>8.26</td>
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<td>4.42</td>
<td>18</td>
<td>7.76</td>
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<tr>
<td>DECLINE</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>1</td>
<td>5</td>
<td>16</td>
<td>7.02</td>
<td>17</td>
<td>5.41</td>
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<td>2.30</td>
<td>16</td>
<td>6.91</td>
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<td>7</td>
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<td>19</td>
<td>5.93</td>
<td>12</td>
<td>4.39</td>
<td>19</td>
<td>8.59</td>
</tr>
</tbody>
</table>

*SE = Extrinsic satisfaction, SI = Intrinsic Satisfaction,
SA = Job Autonomy, SP = Job Pleasantness
subject Dl. Examination of the standard deviations indicated that variability of faculty scores was greater for the decline group, although no clear patterns emerged among the decline group faculties. The actual scores of the decline group faculties exceeded those of the growth faculty in each category, indicating lower general satisfaction levels within declining group faculties.

Thus, in response to research question eleven, the mean satisfaction sub-scale scores of the faculty members in growth and decline groups indicated an identical ranking of job autonomy, extrinsic satisfaction, job pleasantness, and intrinsic satisfaction. However, the higher scores of the decline group faculty suggested lower satisfaction levels for all sub-scales.

Research Results

Because this study was exploratory and provided an in-depth examination of a small group of departments, the research results are tentative and must be considered with caution. The relationships and trends described in this chapter do not involve tests of statistical significance, but provide insights into possible areas for additional investigation. Keeping this in mind, groups means were compared using a one-way analysis of variance. In each case relationships are not significant at the <.05 level. However, the small sample size and non random nature of the sample make such tests questionable and not appropriate with a research design which emphasizes the description of relationships in terms of statistical significance.
This study was undertaken to identify similarities and differences between administrators experiencing growing and declining enrollments in the following areas:

a. Perceptions of the task environment
b. Perceived problems in relation to the task environment
c. Preferred outcomes or goals
d. Personal modes of processing information
e. Preferred management style
f. Preferred strategies for dealing with problems
g. Actual outcomes in relation to preferred outcomes

In addition, the leadership style of the department chairman was examined as a moderating variable. In this chapter, a discussion of the findings in each of these areas is presented.

Perceptions of the Task Environment

The profile trends showed that the growth group subjects described a higher degree of expansion and technical complexity in their environments. This trend seems to support the rapid growth in technological and "job related" majors such as computer science or accounting being chosen by students in response to current job market predictions and realities. The decline group described their environments as higher in risk, fluctuation, stress, and domination. This finding supports the predictions of Trow,1
Chait, and others that an environment with declining resources provides a situation of greater stress, and one with limited options for administrators, as reflected in the perceptions of greater domination.

The agreement between the two groups of chairmen on the degree of heterogeneity, dynamism, unpredictability, and restrictiveness may reflect their perceptions of the administrative environment of the institution, or the nature of higher education. Department chairmen in a research institution are likely to view their respective fields as moderately high in the degree of dynamism and heterogeneity because of their emphasis on research. Research competition and the availability of research dollars may also provide some perceptions of unpredictability and restrictiveness.

The great variation of scores for environmental variables by individuals within the decline group may also serve as an indication of the increased perception of environmental uncertainty of the decline group chairmen. Even though individual responses showed less extreme fluctuation, there was much less agreement on the descriptors of the environments they faced. In addition, there is likely to be a "buffering" effect on perceptions of department chairs in a large state university, since the larger organization is able to provide a basic level of resources whether the department is in a state of growth or decline with respect to enrollment.

Perceived Problems in Relation to the Task Environment

There were also some trends evident in the data for competitive pressure. The reports of a higher degree of competitive pressure in the decline group in nearly all areas would support the notion that an environment with declining resources is a more difficult one to administer.
Interestingly, the largest differences between the two groups in competitive pressure were in the quality and variety of programs. This may reflect an awareness on the part of the decline chairmen that the pool of available students is likely to use these factors as criteria for choosing their institution for a particular major.

Both groups reported a moderately high degree of competition for faculty, although their reasons for choosing this response were probably different. The descriptions of a high degree of technical complexity by the growth group chairmen are likely to reflect the difficulty in obtaining quality faculty members in some technical areas, particularly where there is competition from industry. A major problem for the decline group chairmen, however, is the necessity to hire a faculty member to fill a particular "slot," whether it be for a generalist who is able to teach a variety of course topics, or a sub-specialty replacement for upperclass or graduate students. The only area in which the growth group chairmen reported greater competitive pressure than those in the decline group was in student costs. Perhaps in relation to other pressures faced by the decline group chairmen, cost in a public institution is seen as a comparatively small problem. In this area the growth subjects may have more confidence that interested students are available, but fear that students may choose their institution with more concern for cost than quality.

There were great individual differences in descriptions of competitive pressures within each group. This may reflect a number of differences within each curricular area due to local, regional and national developments in particular subject areas. Thus, even if there are fewer students interested in a major such as archaeology, there also may be a
limited number of institutions offering the major. The concentration of above average responses among subjects in the decline group, however, indicates a consensus within the group that they function in competitive environments. The trends in the data for this question would lend support to the idea that department chairmen in decline perceive more problems and pressures in their environment that those in growth.

Preferred Outcomes or Goals

The nearly identical profiles of the growth and decline groups in rating the importance of goal areas may have simply indicated that all of the subjects shared a mutual concern for the most prevalent problem areas within the university setting. This conclusion is questionable, however, because of the inconsistency between the rated importance of the goal areas and the number of strategies mentioned in these areas during the interview. For example, even though both groups rated "achieving or maintaining a high rate of growth in enrollment" lower than other goal areas, the number and importance of strategy decisions which some departments made related to enrollment were greater than the number in areas rated as more important by department chairmen. Student enrollment strategies included program changes designed to make programs more appealing to students, changes in the availability of scholarship money, arranging convenient class hours, and advertising.

The wording of the question as "achieving or maintaining a high rate of enrollment growth" may have affected the responses of the growth and decline chairmen. Growth chairmen reported during the interview that even though their student enrollment was increasing, the department allocations they received from the University had not kept pace. Continued
high enrollments for them would lead to a decrease in quality due to their inability to effectively handle the teaching loads, especially in an institution with an open enrollment policy. On the other hand, a high rate of enrollment growth may have been viewed as unrealistic or even undesirable by the decline chairmen, considering the availability of jobs in certain fields.

Although there appeared to be no differences between growth and decline chairmen in their preferred outcomes or goals, this question will be further explored in relation to the strategies used by the department chairmen in their efforts to respond to problems of decreasing resources.

Personal Modes of Processing Information

This question was examined with respect to both cognitive and motivational orientation. The cognitive orientation results are discussed first. The two aspects of cognitive orientation examined in the study were tolerance of ambiguity and modes of information gathering and information evaluation.

The mean scores for the growth and decline groups indicated that in general the decline group subjects were more tolerant of ambiguous situations than the growth group. In addition, less variability in scores was reported within the decline group. These trends suggest that the decline group would be able to cope better with the higher degree of uncertainty in their environment than the growth group would have been under similar circumstances.

McCaskey and Budner suggest that organization members may adjust their perceived environmental uncertainty level to fit their personal needs for stimulation and closure. If this is true, the decline subjects
(with the exception of subject D1) should have rated environmental variables such as the degree of risk, unpredictability, stress, and dynamism in the environment higher than those in the growth groups. This was generally true, although the growth group subjects rated dynamism slightly higher than the decline group. However, subject D1, whose score indicated a high intolerance of ambiguity, rated the degree of environmental risk, unpredictability, domination, and stress even higher than his "tolerant" decline colleagues.

McCaskey has suggested that researchers avoid a narrow application of the results of his intolerance of ambiguity studies because of the possibility that people might be trained or even educate themselves to work effectively at different levels of ambiguity. He also noted that controversy that exists over the question of whether or not such a change in personality is possible. This question has not been resolved. 5

Because only seven of the eight department chairmen agreed to complete the personality inventories, the identification of data trends was more difficult. It was evident from the comments of the chairman who refused to participate, as well as from those who did comply, that even though anonymity was promised, chairmen were uncomfortable in completing the personality inventories.

For the Myers-Briggs 6 indicator, profiles for the growth and decline groups indicated that all of the seven subjects who completed the instrument were dominant in intuition rather than the sensing mode of information gathering. The descriptions of people dominant in the intuitive mode as those who enjoy solving new problems and following inspirations, and who exhibit patience in problem-solving substantiate statements that
the type of atmosphere generally found in the academic world is attractive to intuitives.

The scores indicated no patterns between the growth and decline groups on the thinking-feeling dimension. A comparison of the chairmen dominant in the feeling mode of information evaluation with individual ratings by faculty of the consideration scale of the Leadership Behavior Description Questionnaire also produced no pattern. However, it should be noted that the Myers-Briggs instrument was self-administered by department chairmen and the LBDQ was a compilation of faculty opinions of their chairman's leadership style.

Myers-Briggs thinking-feeling profiles were also examined in relation to the Harrison Scale, where the secondary score for the growth subjects and subject D3 was the "person" orientation. Although the consideration score was equal to or greater than the initiating structure score for these subjects, this was also true for all of the subjects in both groups except subject D4. An examination of academic areas also indicated no trends.

Perhaps the absence of trends in the cognitive orientation data reflects the fact that the department chairmen in the study did not necessarily choose to manage decline. Since the enrollment declines in most areas have been a relatively recent phenomenon, it is likely that the decline group chairmen were not even selected with this in mind. In most cases, the enrollments declined during their tenure as chairmen.

Motivational orientation was examined using the Harrison Scale. The ranking of the task orientation as the preferred orientation for both the growth and decline groups may have reflected the fact that faculty
members work in a setting which provides greater individual autonomy than in most occupations. Even though the relationship of the department chairman to the faculty does involve evaluation, it is often based on "objective" criteria such as the number and importance of publications. In the day to day business of the department, the emphasis is on collegial relationships, and decisions are made with input from faculty members as professional colleagues. Thus, it is not surprising that major emphasis is placed upon the completion of the task.

In examining secondary preferences, however, the three growth subjects who completed the instrument rated the person orientation second, and three of the four decline subjects rated the role orientation second. The absence of a relationship between the "person" orientation and the consideration score of the LBDQ has already been discussed. It might also be assumed that a preference for the role orientation would indicate a higher faculty rating for initiating structure than for consideration. However, only subject D4 received a higher score for initiating structure than for consideration. Again it should be noted that the comparison is between a self reported instrument by chairmen and a report by faculty members in their department.

These findings raise the question of whether ideology preferences of department chairmen reflect only the personal values of the subjects, or whether the decline subjects perceive a need to increase their "role" behavior when difficult decisions must be made about personnel or programs. Although the instrument was designed to measure personal ideology preferences, the fact that chairmen were asked to respond to work-related questions may have affected the nature of their responses.
Preferred Management Style

Because academic institutions have traditionally honored the "collegial" approach, it is not surprising that the favored management style of all department chairmen in the study was the participative style. This finding may indicate that in order to measure management style preferences of department chairmen in greater detail, a more precise instrument would need to be developed. Some small differences did appear between groups which could have implications for the management of decline in higher education. Both groups were low on the coercion dimension, but this was the only area where the decline group exceeded the growth score. This leads to the question of whether decline chairmen prefer a more coercive style, or as suggested by the Path Goal Theorists, their inability to maintain acceptance by group members creates a need for more coercive responses. Khandwalla reported in his study that the evidence favored the conclusion that style affected performance more than performance affected style. However, this question is open to further investigation.

Although the differences were not great, the growth group scores exceeded the decline group scores on the dimensions of flexibility and risk-taking. This also raises a question of direction of causality. Are decline chairmen less flexible because mistakes are most costly in an environment of declining resources, or are the decline chairmen losing resources because they have failed to take risks or flexibly respond to environmental change?
Preferred Strategies

In general, growth group chairmen reported a greater number of strategic decisions concerning faculty and research than students or programs. The chairmen agreed that the resource allocations they received from the University had not kept pace with their enrollment increases, creating problems with overloaded classes and leaving faculty members with less time for research. Encouraging faculty research was a significant strategy in nearly all of the growth departments, and they were able to increase research expenditures between 19 and 28 percent from 1972 to 1976. They also sought additional instructional staff members, but in most cases the University response was to increase specials rather than full-time faculty.

A second category of response by the growth chairmen to their need for resources were attempts to alter the nature of their environments through strategic maneuvering. For example, in one department a program "review" of each student's work was made at the end of the sophomore year to screen students in an effort to reduce the number of majors who entered the program each year. Another department re-organized its scholarship program to exclude freshman students who often changed their major after accepting scholarship money.

The growth group chairmen also reported using a greater number of cooperative strategies than those in the decline group. Thompson and Galbraith have described cooperative strategies as more costly than independent strategies because the use of these strategies forces the organization to relinquish some of its autonomy. The use of these more costly strategies is hypothesized to increase when the environment is high
in uncertainty or dependency. Because the environment of the decline chairmen has been described as more stressful, hostile and uncertain, it would be expected that the decline group chairmen would have been more willing to trade autonomy for resources than those in growth situations.

As noted earlier, however, the growth group chairmen described their environments as more dynamic and technically complex although less stressful and hostile than their colleagues with declining enrollments. This would indicate that some uncertainty also exists in their environments, particularly in relation to technological change. In addition, the need to increase resources from sources outside the University budget allocation remains a problem for growth chairmen. The fact that growth department enrollments are increasing may also have provided assurances that cooperative programs, especially with other University departments, would not threaten their status or existence.

In rating the importance of goal items on the questionnaire, the concern of growth chairmen for maintaining budget levels, faculty satisfaction, and departmental strength seemed to be reflected in their strategy preferences of faculty and research, students, and programs. The comparatively lower degree of concern for increasing or maintaining student enrollment was also understandable in view of the problem of acquiring new faculty positions.

The decline chairmen as a group reported a greater number of independent strategies related to students, followed by program and faculty. They also reported that University resource allocations were inadequate, and noted losses in both faculty and special personnel. In academic areas where research dollars were available, considerable pressure was placed
on faculty members to submit proposals. In two departments, this led to increases of 63 percent and sixteen hundred percent. In two other departments, however, contract research dollars were virtually unavailable.

A few attempts at strategic maneuvering were undertaken by decline group departments, although the focus was aimed at increasing rather than limiting resources. One department developed a terminal Master's degree program aimed at attracting a new type of graduate student. In another department, efforts were made to re-define budget expenditures paid by the University and the research contract.

The decline group subjects engaged in fewer cooperative strategies than the growth group, especially with other departments. More "turf" battles surfaced, and the emphasis was placed upon protecting one department from possible encroachment by others. Although nearly all of the decline departments had lost personnel in both faculty and special FTE's, few joint appointments were made or proposed.

The two groups had reported nearly identical responses for the goal area variables presented in the questionnaire, but the strategies of the department chairmen in the decline group did not reflect the goal preferences as closely as had been found in the growth group. The stated concerns for maintaining the budget, faculty satisfaction, and departmental strengths were addressed through increasing research dollars and reviewing programs. However, even though "increasing or maintaining student enrollments" was ranked very low in importance when compared with the ranking of other variables, more strategy decisions were made in this area than any other. Perhaps department chairmen find it professionally or socially unacceptable or politically unwise to "sell" openly their programs within
the University, even though much of their strategic decision-making ability is focused upon making their programs attractive to students.

One of the major differences between the growth and decline groups in the area of strategic choice was in the number and types of constraints to strategy-making reported by the decline departments. As previously noted, constraints are defined as "fixed conditions to which the organization must adapt." The decline department chairmen faced major constraints such as poor job markets for graduates, negative public opinion, over-staffing, lack of available research money, faculty and administrative value conflicts, "constant justification of program," obsolete equipment, and the lack of support facilities. Although the growth departments also face constraints, they tend to be less severe and less pervasive. It can be pointed out, however, that two of the growth departments included in the study had undergone major program reorganizations in the past which had provided them with a greater degree of domain consensus.

In summary, both the growth and decline departments were concerned with the decrease in departmental resources and had made a number of strategic decisions in an effort to re-establish domain consensus and gain a more favorable position in relation to their environments. The growth department chairmen mentioned independent faculty strategies most frequently, and the decline departments reported a greater number of strategies related to student enrollments. The growth departments engaged in a greater number of cooperative efforts, and appeared to be less threatened by encroachment from other areas. The decline chairmen reported a much greater number of constraints.
A common problem for the decline departments was illustrated by their preferences for independent strategies over cooperative strategies, and their focus on conserving the scarce resources they possess rather than seeking additional resources through cooperation or strategic maneuvering. Over time, it is likely that these departments will deplete any resource "reserves" they have, thus limiting future strategy options. Ultimately they may be forced into trading autonomy for survival through cooperative strategies. The decline chairmen also reportedly took fewer risks than the growth group chairmen, perhaps because mistakes become too costly when resources are scarce.

One department which experienced comparatively great losses in both personnel and budget allocation funds (D4) was also unable to obtain research dollars. The absence of the research option posed a serious problem for this department, and may suggest a broader problem for smaller colleges which are often less successful in acquiring resources through research grants.

Actual Outcomes in Relation to Preferred Outcomes

Both quantitative and qualitative outcomes data were examined in the study. Quantitative measures included changes in the percentage of faculty and special FTE's, research expenditures through the Research Foundation, and University budget allocations. The measure which most closely reflected the decline in enrollment was the data concerning personnel. The single department in both groups which received an increase in faculty FTE's was department C3. Three of the growth departments increased in special FTE's. This was apparently a strategy decision by members of the University administration to add part-time or non tenure
track positions to growth departments rather than regular faculty positions.

The option of increasing departmental resources through contract research seems to be related to the availability of research money in various academic areas. However, one of the decline departments made substantial gains in research expenditures in an area where funds were not readily available. Departments such as D1 have been able to maintain reasonable resource levels through research even though student enrollments had dropped considerably. The emphasis on research was the most widely used strategy for increasing departmental resources by both the growth and decline departments.

The most interesting figures used to examine outcomes were those representing the percentage of change in the University budget allocations for the growth and decline departments. The largest gains were made in two of the growth departments (G3 and G4), one of which reported no contract research projects at all (G4). This department reported a greater number of faculty independent strategies, cooperative strategies, and strategic maneuvering than most other departments. The conclusion can be drawn that there are a number of different strategies which a department might use to receive a relatively high share of the University budget allocation. In addition, the third largest percentage of increase in the University budget allocation was received by a decline department (D3). This department reported the greatest total number of strategies of any department. It also experienced the greatest loss in special FTE's. In examining department G3 it becomes evident that even though constraints may increase the difficulty of re-establishing domain consensus, it is
not impossible to achieve success.

Two other departments should also be examined. Although department G1 was in the growth group, it experienced decreases in both faculty and special FTE percentages, and received the second lowest increase in University budget allocations of all departments studied. It appears that departments should plan to lose personnel positions as their enrollments drop, but an enrollment increase does not necessarily result in personnel increases. Of course, the number of faculty positions is also affected by the number of tenured faculty in each department. Secondly, department D4 experienced decreases in faculty FTE percentages and in research dollars, and received only a modest increase from the University budget allocation. In this department the chairman may need to re-examine the number and effectiveness of strategy decisions in attaining desired outcomes.

As the contingency theorists have stated many times, the data reveal that there is no one best way to manage. Both growth and decline chairmen have been able to gain successfully a larger share of the University budget allocation than their colleagues. One decline department received the smallest gain of all departments studied in the University budget allocation, but managed to increase research expenditures by 63 percent. Other departments have received modest increases in two or three areas.

Faculty ratings on the satisfaction scale provided a qualitative measure to supplement the outcomes data. Faculty members in both groups rated job autonomy as the most satisfying aspect of their work. Since job autonomy is highly valued in academic institutions, it is not unusual that autonomy would be selected by both groups. In the other areas surveyed by
the satisfaction instrument, the preference ratings of the two groups were remarkably similar. However, the mean scores for the decline group exceeded the means scores for the growth group in every category, indicating a trend toward greater overall dissatisfaction. The standard deviations also revealed a greater dispersion of scores within the decline group faculties.

Although there was some variation within departments, the faculties of both groups rated extrinsic satisfaction as the second most satisfying aspect of their work. These results suggest that faculty members in both groups find their work outwardly rewarding, perhaps because most of them are tenured and are still able to obtain most of the traditional rewards for publishing and being awarded grants.

In most departments, job pleasantness was rated as less satisfying than extrinsic satisfaction, and the scores were more variable in this category. Intrinsic satisfaction was rated least satisfying by all departments in the study, although job pleasantness scores equalled intrinsic satisfaction scores for two of the decline departments. Since it has been suggested that faculty in decline departments receive fewer rewards and may be exposed to a greater number of value conflicts than faculty in growth departments, greater differences between growth and decline department faculties would have been predicted. However, all department chairmen interviewed in research areas reported increased pressure for faculty to apply for grants, and even some departments with no research contracts reported pressure from deans to seek research funds. These pressures are being felt by all faculty, which may have influenced the results. In addition, under current economic conditions research dollars are more
difficult to obtain in nearly all areas, and greater numbers of faculty members are undertaking projects which may not match their interest areas.

Finally, the area of leadership was briefly explored to determine whether the leadership style of the department chairman may have acted as a moderating variable in the successful accomplishment of departmental objectives. The LBDQ also provided information from a source other than the self-reports of the department chairmen. In all departments except one (D4), faculty scores for consideration were equal to or greater than the score for initiating structure in describing their chairman's leadership style. These scores produced no trends when compared with Myers-Briggs types of Harrison Scale preferences.

Because of the unique scores reported by the faculty in department D4, this department was examined in greater detail. The faculty in department D4 rated their chairman higher in initiating structure than consideration. The standard deviation for the consideration score was more than five times greater than the lower consideration score standard deviation within the decline group. Department D4 also experienced decreases in the percentage of change in faculty FTE's and in research expenditures, and received the third lowest increase in the University budget allocation of the departments in the study. The department chairman reported Harrison Scale preferences of task, role, person, and power, and indicated an intuitive-thinking preference on the Myers-Brigg instrument.
The large variation in faculty perceptions of leader consideration for the department chairman may suggest conflict within the department, and perhaps points to a split in departmental support of the department chairman. The chairman's tendency toward thinking rather than feeling and the lower degree of preference for the "person" ideology may have also contributed to these perceptions. Although it would be extremely difficult to determine the cause and effect relationships of the many variables acting in this situation, it may be illustrative of the problems faced by decline departments which have difficulty obtaining outside resources. Departments similar to D4 would be candidates for further investigation in the study of departments in decline.

CONCLUSIONS

In this study the researcher sought to explore and provide insights into three general questions concerning the management of university departments with growing and declining enrollments. First, the researcher gathered data to examine whether growing units were managed differently from those in decline. Some patterns or trends were found. Growth group chairmen described their environments as high in expansion and technical complexity, and reported less competitive pressure than decline group chairmen. Decline chairmen reported higher degrees of risk, stress, fluctuation, and domination in their environments, and described a higher degree of competitive pressure, particularly in the areas of program quality and variety. The growth and decline chairmen reported virtually no differences in the importance they attached to goal areas, although the strategies used were less consistent with the stated importance of
goal areas in the decline group than in the growth group.

Personality variables revealed more similarities than differences between the groups. No patterns were evident with Myers-Briggs types, except the intuitive dominance for all chairmen. The task preference was also chosen by all chairmen on the Harrison Scale, although when secondary scores were examined, the growth group was primarily "person" oriented and the decline group was more tolerant of ambiguity, which may have enabled them to cope more effectively with their environmental situation. The fact that these subjects were not necessarily selected to manage decline may have been reflected in these findings.

Both the growth and decline group chairmen preferred the participative management style, but a few differences emerged. The growth chairmen reported greater preferences for risk-taking and flexibility, and the decline chairmen described a more coercive style. Independent strategies were most often used by both groups. However, the growth group reported a greater number of strategies related to faculty, and the decline group mentioned independent student strategies more frequently. The growth group chairmen used cooperative strategies and strategic maneuvering more often than the decline chairmen. The decline group chairmen reported considerably more constraints in making strategy decisions than those in the growth group.

The growth group chairmen were more successful in obtaining resources in the areas of personnel, research expenditures, and the University budget allocation than the decline departments, but some decline departments were also successful in increasing research dollars and budget allocations. The faculties in both groups were most satisfied
with their degree of job autonomy and reported intrinsic satisfaction as the least satisfying aspect of their work. The faculties in both growth and decline departments most often rated the leadership style of their chairman as higher in consideration than initiating structure.

The predictions of Trow,13 Cheit,14 and others that the management of decline is more difficult than the management of growth have been supported by the trends in the research data. Department chairmen in decline reported more stress than competitive pressure in their environments, especially with regard to quality and variety of programs, and an increase in the number of value conflicts within their departments. They were concerned with developing strategies to attract students, whether or not they gave verbal support to the goal of achieving or maintaining a high rate of growth in enrollment. They also reported a greater number of constraints in making strategy decisions. Especially in areas where research dollars were not available, constraints often imposed a considerable burden upon the ability of the department to maintain or improve resource levels. Faculties in the decline departments expressed more dissatisfaction in relation to actual scores on the satisfaction scale, but were similar to the growth group in the ranking of the sub-scales.

The second general question examined in the study focused upon possible differences in management styles or strategies among decline group chairmen. Among the style dimensions, decline chairmen rated participation highest and were lower on coercion. Chairman D3, who gained
greater number of cooperative strategies than the other decline departments.

The greatest loss of resources was recorded for department D4. The chairman of this department described a management style very low in coercion and high in participation. Department D4 reported the lowest number of strategies among the decline departments, although this was equal to the number used by department D2. The department also reported some use of both cooperative strategies and strategic maneuvering. These descriptions do not indicate any particular differences in management style between the most and the least "successful" decline departments, but a few differences were found in the number and types of strategies employed.

The last general question examined in the study asked whether or not some department chairmen were better able to manage decline than others. Although the outcomes data would suggest that some decline departments were better able to maintain resource levels than others, the results were mixed. Basically, all decline departments experienced losses in the area of faculty and special FTE's, with only a minor exception. As discussed above, department D3 made comparatively substantial gains in both research dollars and University budget dollars. However, the other decline departments reported mixed results. Department D1 enjoyed a 63 percent increase in research expenditures, but also received the smallest percentage gain in the University budget allocation. Conversely, department D2 suffered research expenditure losses, but enjoyed a modest gain in the University budget allocation. Because of the small number of departments in the decline group, it is difficult to draw conclusions of relative success.
of failure. It would appear, however, that this area is one worthy of further investigation.

IMPLICATIONS FOR FURTHER RESEARCH

The exploratory nature of this study suggests numerous possibilities for further research in the management of decline in higher education. The study was broad in scope and the number of subjects included was limited. Future studies should focus on particular areas of the model and employ larger sample sizes.

Organizational sub-units should be identified where the overall decline in resources is more severe than was evident with the departments examined here. This should increase the chance of more clearly defined data trends. Although growth and decline were defined within organizational sub-units for purposes of the study, the strength and commitment of the larger university in which the sub-units were imbedded to maintaining institutional quality undoubtedly equalized some of the effects of the enrollment declines. Since the predicted decline in the actual number of traditional age college students available to institutions of higher education is now becoming a reality, researchers should be able to readily identify units in decline. In addition, if the research involved the study of personality variables, it would be useful to seek out subjects who choose to manage decline or were selected with such a challenge in mind.
Some departments in the study referred to pressures placed upon the department by the deans and other administrators to implement certain strategies, or the failure of other strategies because of the lack of administrative support. In view of this influence, it might be advantageous to examine higher level decision-making units within the University in addition to the study of sub-unit behavior. A study of higher level decision-makers at a smaller institution where the entire institution is suffering from declining resources would provide research insights. An interesting question related to this research is whether it is necessary to change the leadership of an organization or sub-unit to change its direction, or whether the organizational leadership is able to re-adjust to the new environmental condition.

Measures, or in some cases improved measures, need to be developed in areas such as environment, goals, and strategies. Management style measures may need to be refined to identify better individual differences within a setting of traditionally participative management styles. In the area of job satisfaction, there may be differences between satisfaction and morale which might be more accurately identified.

The importance of the organizational decision-makers in the evaluation of environmental variables and decisions of strategic choice should be recognized in future research. Contingency theorists need to expand their models to include decision-maker choice in seeking to explain and predict the behavior of organizations.

Environmental perceptions are particularly important in an organization or organizational sub-unit experiencing a decline in resources because the organization is in a state of dissensus with its task
environment. Ultimately, the effectiveness of the organization depends upon its ability to re-establish domain consensus with task environment elements or find new elements. In this study, data trends indicated that decision-makers in organizational sub-units with declining resources perceived their environments as more hostile and stressful than decision-makers in growing sub-units. Further it was found that decision-makers in organizational sub-units with declining resources perceived a greater degree of competitive pressure in their task environments than those in growth. In view of this, sub-units in decline emphasized program quality to a greater degree than in growing sub-units. Further studies are needed to determine the significance of these relationships.

Elements of the objective environment of an organization are also important and should be identified and studied. Institutional characteristics such as the type of enrollment policies, the level of tenure of the faculty, the location, and the administrative structure affect the strategic choices available to decision-makers at all levels of the institution. The identification of these environmental characteristics and their impact upon strategic choice would also provide useful insights for organizational decision-makers.

A number of questions remain regarding the differences in strategic choices between organizations or organizational sub-units in environmental states of growth or decline. One particularly interesting question for further investigation concerns the difference between stated goals and observed strategies. It is hypothesized that the "gap" between stated goals and observed strategies will be greater in sub-units with declining
resources than in those with growing resources. Additional hypotheses concerning the strategies of organizational sub-units in growth and decline include the following:

1. Decision-makers in organizational sub-units with declining resources will encounter a greater degree of conflict in establishing sub-unit goals than those in growth.

2. Growing organizational sub-units which experience resource limitations from the larger organization will employ strategies to limit growth.

3. Decision-makers in organizational sub-units with declining resources will engage in a greater number of "territorial" disputes with other task environment elements than decision-makers in growing sub-units.

4. Decision-makers in organizations with declining resources will encounter a greater number of constraints in decision-making than those with growing resources.

5. Organizational sub-units with declining resources will be called upon to a greater degree than growing sub-units to justify their programs and actions to the larger organization.

6. Strategies considered appropriate to the particular environmental situation of an organizational sub-unit will lead to a greater degree of organizational effectiveness than sub-unit strategies which do not "match" environmental needs.

Much work needs to be done in the area of strategy. Perhaps in-depth case studies are needed to identify the proactive or reactive intent of the strategies pursued by individual departments. In addition, the process of strategic decision-making should be examined in addition to the content of type of strategy. The effects of long-term vs. short-term strategies should also be explored.
Finally, an entire series of "direction of causality" questions is open for examination. Can a person who is intolerant of ambiguity really learn to function effectively in an ambiguous environment? Can personal value ideologies be altered by the nature of the work situation? Does management style affect performance to a greater degree than performance affects style? Can the department chairman who led the department during a period of declining resources successfully turn it into a growth department? Would growth chairmen use the same management strategies as decline chairmen if they faced the same constraints?
Chapter VI

Footnotes


5McCaskey, p. 75.


7Andrew W. Halpin, Manual for the Leader Behavior Description Questionnaire (Columbus: The Ohio State University, Bureau of Business Research, 1957), p. 143.


12Thompson, p. 24.


14Cheit, p. 61.

15Thompson, p. 24.
APPENDIX A

ENVIRONMENTAL ASSESSMENT QUESTIONS
These questions are attempting to assess the "total picture" of this department in relation to its environment, both within the University and in the larger environment. Please rate the characteristics anywhere along the continuum as it applies to your present situation.

1. **VERY HOMOGENEOUS** (Elements very similar) 1 2 3 4 5 6 7

2. **VERY DYNAMIC** (Marked by change) 1 2 3 4 5 6 7

3. **VERY SAFE** (Little threat to survival or well-being) 1 2 3 4 5 6 7

4. **VERY UNPREDICTABLE** (Very hard to anticipate the nature or direction of environmental change) 1 2 3 4 5 6 7

5. **VERY RAPIDLY EXPANDING** (Very many students, rapidly growing area) 1 2 3 4 5 6 7

6. **STRONG CYCLICAL OR OTHER PERIODIC FLUCTUATION** 1 2 3 4 5 6 7

7. **RICH IN OPPORTUNITIES, NOT AT ALL STRESSFUL** 1 2 3 4 5 6 7

8. **TECHNOLOGICAL A VERY SOPHISTICATED AND COMPLEX ENVIRONMENT (Discipline)** 1 2 3 4 5 6 7

**Very Heterogeneous** (Elements have variegated characteristics and needs)

**Very Stable** (Virtually no change)

**Very Risky** (A false step could be very costly)

**Very Predictable** (Easy to forecast the future state of affairs in the environment)

**Very Stagnant or Even Shrinking** (Very few students, declining area)

**Virtually No Periodic Fluctuation**

**Very Stressful, Exacting Hostile** (Very difficult to survive)

**Little in the Way of Technologically Sophistication in the Discipline.**
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<td>9. DOMINATING ENVIRONMENT</td>
<td>ENVIRONMENT THAT THE DEPARTMENT CAN CONTROL AND MANIPULATE TO ITS OWN ADVANTAGE (Dominant department with little competition for resources and few hindrances)</td>
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<td></td>
<td>Department initiatives count for very little against the tremendous forces of the University or outside environment</td>
<td>1 2 3 4 5 6 7</td>
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<td>10. VERY RESTRICTIVE, CON-</td>
<td>VERY CONSTRAINT-FREE, UNRESTRICTED ENVIRONMENT</td>
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<td>STRAINING ENVIRONMENT</td>
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<td></td>
<td>(Severe economic or political or social or legal constraints)</td>
<td>1 2 3 4 5 6 7</td>
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APPENDIX B

COMPETITIVE PRESSURE QUESTIONS
At this point in time, how intense do you feel the competition is in each of the areas below with departments in your field at other institutions?

1. COMPETITION FOR STUDENTS
   Negligible 1 2 3 4 5 6 7 Extremely Intense

2. COMPETITION FOR RESEARCH DOLLARS AND SERVICE PROJECTS (if relevant)
   Negligible 1 2 3 4 5 6 7 Extremely Intense

3. COMPETITION FOR FACULTY
   Negligible 1 2 3 4 5 6 7 Extremely Intense

4. COMPETITION IN QUALITY OF SERVICES AND PROGRAMS
   Negligible 1 2 3 4 5 6 7 Extremely Intense

5. COMPETITION IN VARIETY OF SERVICES AND PROGRAMS
   Negligible 1 2 3 4 5 6 7 Extremely Intense

6. COMPETITION IN RELATION TO COSTS OF STUDENT TUITION AND FEES
   Negligible 1 2 3 4 5 6 7 Extremely Intense
APPENDIX C

GOAL AREA QUESTIONS
The following list contains five goal areas which are often considered by departments in general. How important are these goals to you when your department considers decisions which are long-term in nature? Please rate each goal below:

1. MAINTAINING BUDGET LEVELS

Moderately Important
1 2 3 4 5 6 7
Quite Important

2. ACHIEVING A HIGH RATE OF GROWTH IN ENROLLMENT

Moderately Important
1 2 3 4 5 6 7
Quite Important

3. MAINTAINING HIGH FACULTY SATISFACTION AND COMMITMENT

Moderately Important
1 2 3 4 5 6 7
Quite Important

4. MAINTAINING STRENGTH AS A DEPARTMENT WITHIN THE UNIVERSITY

Moderately Important
1 2 3 4 5 6 7
Quite Important

5. ACHIEVING OR MAINTAINING AN EXCELLENT PUBLIC IMAGE

Moderately Important
1 2 3 4 5 6 7
Quite Important
APPENDIX D

BUDNER–INTOLERANCE OF AMBIGUITY SCALE
Name ________________________________

Following is a list of statements concerning your attitudes. For each statement please indicate on the scale to what degree you agree or disagree by placing an X in one of the intervals.

<table>
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<tr>
<th>Statement</th>
<th>Strongly Disagree</th>
<th>Strongly Agree</th>
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<tbody>
<tr>
<td>1. An expert who doesn't come up with a definite answer probably doesn't know too much.</td>
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<td>2. There is really no such thing as a problem that can't be solved.</td>
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<td>3. People who fit their lives to a schedule probably miss most of the joy of living.</td>
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<td>4. Many of our most important decisions are based upon insufficient information.</td>
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<td>5. I would like to live in a foreign country for a while.</td>
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<td>6. A good job is one where what is to be done and how it is to be done are always clear.</td>
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<td>7. What we are used to is always preferable to what is unfamiliar.</td>
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<td>8. I like parties where I know most of the people more than ones where all or most of the people are complete strangers.</td>
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<td>9. The sooner we all acquire similar values and ideals the better.</td>
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<td>10. People who insist upon a yes or no answer just don't know how complicated things really are.</td>
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11. Often the most interesting and stimulating people are those who don't mind being different and original.

12. It is more fun to tackle a complicated problem than to solve a simple one.

13. Teachers or supervisors who hand out vague assignments give a chance for one to show initiative and originality.

14. A person who leads an even, regular life in which few surprises or unexpected happenings arise, really has a lot to be grateful for.

15. A good teacher is one who makes you wonder about your way of looking at things.

16. In the long run it is possible to get more done by tackling small, simple problems rather than large and complicated ones.

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<th>Strongly Disagree</th>
<th>Strongly Agree</th>
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PART I. Circle the answer which comes closest to how you actually feel or act.

1. Are you more careful about:
   a. people's feelings
   b. their rights

2. When you have to meet strangers, do you find it:
   a. something that takes a good deal of effort
   b. pleasant, or at least easy

3. Does following a schedule:
   a. appeal to you
   b. cramp you

4. Do you usually get on better with:
   a. imaginative people
   b. realistic people

5. Are you naturally:
   a. rather quiet and reserved in company
   b. a good "mixer"

6. Is it harder for you to adapt to:
   a. routine
   b. constant change

7. Which of these two is the higher compliment:
   a. he is a person of real feeling
   b. he is consistently reasonable

8. Would you judge yourself to be:
   a. more enthusiastic than the average person
   b. less excitable than the average person

9. In doing something with many other people, does it appeal more to you:
   a. to do it in the accepted way
   b. to invent a way of your own

10. Are you at your best:
    a. when following a carefully worked out plan
    b. when dealing with the unex-pected

11. Do you get more annoyed at:
    a. fancy theories
    b. people who don't like theories

12. Is it higher praise to call someone:
    a. a man of vision
    b. a man of common sense

13. Do you more often let:
    a. your heart rule your head
    b. your head rule your heart

14. When you think of some little thing you should do or buy, do you:
    a. often forget it until much later
    b. usually get it down on paper before it escapes you
    c. always carry through on it without reminders

15. Can you:
    a. talk easily to almost anyone for as long as you have to
    b. find a lot to say only to certain people or under certain conditions

16. Do you think it is a worse fault:
    a. to show too much warmth
    b. to be unsympathetic

17. If you were a teacher, would you rather teach:
    a. courses involving theory
    b. fact courses
18. When it is settled well in advance that you will do a certain thing at a certain time, do you find it:
   a. nice to be able to plan accordingly
   b. a little unpleasant to be tied down

19. Can the new people you meet tell what you are interested in:
   a. right away
   b. only after they really get to know you

20. In your daily work, do you (for this item only, if two are true, mark both):
   a. rather enjoy an emergency that makes you work against time
   b. hate to work under pressure
   c. usually plan your work so you won't need to

21. In a large group, do you more often:
   a. introduce others
   b. get introduced
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<th>A</th>
<th>B</th>
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<td>22</td>
<td>A. compassion</td>
<td>B. foresight</td>
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<td>23</td>
<td>A. punctual</td>
<td>B. leisurely</td>
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<td>A. justice</td>
<td>B. mercy</td>
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<td>A. production</td>
<td>B. design</td>
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<td>26</td>
<td>A. foundation</td>
<td>B. spire</td>
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<td>27</td>
<td>A. gentle</td>
<td>B. firm</td>
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<td>28</td>
<td>A. uncritical</td>
<td>B. critical</td>
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<tr>
<td>29</td>
<td>A. calm</td>
<td>B. lively</td>
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<tr>
<td>30</td>
<td>A. theory</td>
<td>B. experience</td>
</tr>
<tr>
<td>31</td>
<td>A. literal</td>
<td>B. figurative</td>
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<tr>
<td>32</td>
<td>A. imaginative</td>
<td>B. matter-of-fact</td>
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APPENDIX F

HARRISON SCALE
Below you will find fifteen characteristics of organizations. For each characteristic you will find four statements as to the value that characteristic might have in an organization.

Read each statement carefully and rank each statement in order of its importance to you for the particular organization characteristic. For example, if the first statement represents your dominant view, you should place a "1" beside it, a "2" for the next closest, a "3" for the next and a "4" for the least dominant.

1. A good boss is:

______ strong, decisive and firm, but fair. He/she is protective, generous and indulgent to loyal subordinates.

______ impersonal and correct, avoiding the exercise of his/her authority for his/her own advantage. He/she demands from subordinates only that which is required by the formal system.

______ egalitarian and capable of being influenced in matters concerning the task. He/she uses his/her authority to obtain the resources needed to complete the job.

______ is concerned and responsive to the personal needs and values of others. He/she uses his/her position to provide satisfying and growth stimulating work opportunities for subordinates.

2. A good subordinate is:

______ compliant, hard-working and loyal to the interests of his/her superior.

______ responsible and reliable, meeting the duties and responsibilities of his/her job and avoiding actions which surprise or embarrass his/her superior.

______ self-motivated to contribute his/her best to the task and is open with his/her ideas and suggestions. He/she is nevertheless willing to give the lead to others when they show greater expertise or ability.

______ vitally interested in the development of his/her own potentialities and is open to learning and receiving help. He/she also respects the needs and values of others and is willing to give help and contribute to their development.
3. A good member of the organization gives first priority to the:

_____ personal demands of the boss.

_____ duties, responsibilities and requirements of his/her own role, and to the customary standards of personal behavior.

_____ requirements of the task for skill, ability, energy and material resources.

_____ personal needs of the individuals involved.

4. People who do well in the organization are:

_____ shrewd and competitive, with a strong drive for power.

_____ conscientious and responsible, with a strong sense of loyalty to the organization.

_____ technically effective and competent, with a strong commitment to getting the job done.

_____ effective and competent in personal relationships, with a strong commitment to the growth and developments of people.

5. The organization treats the individual as:

_____ though his/her time and energy were at the disposal of the persons higher in the hierarchy.

_____ though his/her time and energy were available through a contract with rights and responsibilities for both sides.

_____ a co-worker who has committed his/her skills and abilities to the common cause.

_____ an interesting and worthwhile person in his/her own right.

6. People are controlled and influenced by the:

_____ personal exercise of economic and political power (rewards and punishments).

_____ impersonal exercise of economic and political power to enforce procedures and standards of performance.

_____ communication and discussion of task requirements leading to appropriate action motivated by personal commitment to goal achievement.
7. It is legitimate for one person to control another's activities if:

- he/she has more authority and power in the organization.
- his/her role prescribes that he/she is responsible for directing the other.
- he/she has more knowledge relevant to the task.
- the other accepts that the first person's help or instruction can contribute to his/her learning and growth.

8. The basis of the task assignment is the:

- personal needs and judgment of those in authority.
- formal divisions of functions and responsibility in the system.
- resource and expertise requirements of the job to be done.
- personal wishes and needs for learning and growth of individual organization members.

9. Work is performed out of:

- hope of reward, fear of punishment or personal loyalty toward a powerful individual.
- respect for contractual obligations backed up by sanctions and loyalty toward the organization or system.
- satisfaction in excellence of work and achievement and/or personal commitment to the task or goal.
- enjoyment of the activity for its own sake and concern and respect for the needs and values of the other persons involved.

10. People work together when:

- they are required to by higher authority or when they believe they can use each other for personal advantage.
- co-ordination and exchange are specified by the formal system.
their joint contribution is needed to perform the task.

The collaboration is personally satisfying, stimulating, or challenging.

11. The purpose of competition is to:

- gain personal power and advantage.
- gain high status positions in the formal system.
- increase the excellence of the contribution to the task.
- draw attention to one's own personal needs.

12. Conflict is:

- controlled by the intervention of higher authorities and often fostered by them to maintain their own power.
- suppressed by reference to rules, procedures and definitions of responsibility.
- resolved through full discussion of the merits of the work issues involved.
- resolved by open and deep discussion of personal needs and values involved.

13. Decisions are made by the:

- person with the higher power and authority.
- person whose job description carries the responsibility.
- persons with most knowledge and expertise about the problem.
- persons most personally involved and affected about the problem.

14. In an appropriate control and communication structure:

Command flows from the top down in a simple pyramid so that anyone who is higher in the pyramid has authority over anyone who is lower. Information flows up through the chain of command.
Directives flow from the top down and information flows upwards within functional pyramids which meet at the top. The authority and responsibility of a role is limited to the roles beneath it in its own pyramid. Cross functional exchange is constricted.

Information about task requirements and problems flows from the center of task activity upwards and outwards, with those closest to the task determining the resources and support needed from the rest of the organization. A co-ordinating function may set priorities and overall resource levels based on information from all task centers. The structure shifts with the nature and location of the tasks.

Information and influence flow from person to person, based on voluntary relationships initiated for purposes of work, learning, mutual support and enjoyment, and shared values. A co-ordinating function may establish overall levels of contribution needed for maintenance of the organization. These tasks are assigned by mutual agreement.

15. The environment is responded to as though it were:

- a competitive jungle in which everyone is against everyone else and those who do not exploit others are themselves exploited.

- an orderly and rational system in which competition is limited by law, and there can be negotiation or compromise to resolve conflicts.

- a complex of imperfect forms and systems which are to be re-shaped and improved by the achievements of the organization.

- a complex of potential threats and support. It is used and manipulated by the organization both as a means of self-nourishment and as a play-and-work space for the enjoyment and growth of organization members.
APPENDIX G

MANAGEMENT STYLE PROFILE
4A1-4A11; 4B1-4B3; 4C1-4C3; 4D1-4D7
These questions are designed to obtain information about your personal philosophy, or style, as department chairman. The statement on the left is represented by the number 1 and the statement on the right by number 7, with 4 as a mid-point indicating a combination of the two, or "some of both."

<table>
<thead>
<tr>
<th></th>
<th>Some of Both</th>
<th>In decision making, likely to put great reliance on experience and common sense</th>
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<tbody>
<tr>
<td>1</td>
<td>In decision-making, likely to put great reliance on technical expertise or specialists</td>
<td>1 2 3 4 5 6 7</td>
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<tr>
<td>2</td>
<td>Tight formal control of most operations by means of sophisticated control and information systems</td>
<td>1 2 3 4 5 6 7</td>
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<td>3</td>
<td>Strongly group or committee oriented, consensus seeking, participative decision-making</td>
<td>1 2 3 4 5 6 7</td>
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<td>4</td>
<td>Strong emphasis on always getting personnel to follow formally laid down procedures</td>
<td>1 2 3 4 5 6 7</td>
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<td>5</td>
<td>A bird-in-the-hand emphasis on the immediate future in making departmental decisions</td>
<td>1 2 3 4 5 6 7</td>
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<td>6</td>
<td>Emphasis on seeking new ways to maintain present budget levels</td>
<td>1 2 3 4 5 6 7</td>
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<tr>
<td>7</td>
<td>Strong emphasis on guidance from department policies and traditions despite changing conditions</td>
<td>1 2 3 4 5 6 7</td>
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<td></td>
<td>Strong emphasis on getting things done even if this means disregarding formal procedures</td>
<td>1 2 3 4 5 6 7</td>
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<td></td>
<td>Loosely informal control, heavy dependence on informal relationships and norms of cooperation</td>
<td>1 2 3 4 5 6 7</td>
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<td></td>
<td>Strongly individualistic decision-making by the formally responsible leader</td>
<td>1 2 3 4 5 6 7</td>
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<td></td>
<td>Emphasis on long-term (over five years) planning of goals and strategy</td>
<td>1 2 3 4 5 6 7</td>
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<td></td>
<td>Emphasis on efficient use of funds from present sources</td>
<td>1 2 3 4 5 6 7</td>
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<tr>
<td></td>
<td>Strong emphasis on adapting freely to changing circumstances without much concern for past practice</td>
<td>1 2 3 4 5 6 7</td>
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<td>Strong emphasis on giving the most say in decision-making to faculty with seniority in the department</td>
<td>Strong tendency to let the &quot;expert&quot; in a given situation have the most say in decision-making even if it means bypassing formal authority</td>
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<tr>
<td>9.</td>
<td>Emphasis on new and diverse teaching, research or service programs, even if results could be risky</td>
<td>Emphasis on teaching, research, or service programs which the department knows best and is most qualified for</td>
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<tr>
<td>10.</td>
<td>Very competitive, &quot;undo-the competitors&quot; philosophy</td>
<td>Philosophy of cooperative coexistence with major competitors (local, Big 10, national)</td>
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<tr>
<td>11.</td>
<td>Open channels of communication with financial and operating information flowing quite freely</td>
<td>Highly structured communication, restricted faculty access to some financial and operating information</td>
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Researchers have indicated that decision-making in organizations takes place in three distinct (but not necessarily mutually exclusive) modes or styles. Please indicate how closely each of the following modes resembles the ways decisions are made in your department.

MODE 1: Adaptive mode, characterized by a cautious, pragmatic, one small step at a time adjustment to problems. Decisions are generally a compromise between conflicting demands within the department or between the department and other environmental elements. Decisions are made locally more often than centrally, and the primary concern is with stability and steady growth.

Little resemblance to department decision-making style 1 2 3 4 5 6 7

Very great resemblance to department decision-making style

MODE 2: Entrepreneurial mode, characterized by an active search for big new opportunities; large, bold decisions despite the uncertainty of their outcomes; a charismatic decision-maker at the top wielding great power and rapid growth as the dominant goal.

Little resemblance to department decision-making style 1 2 3 4 5 6 7

Very great resemblance to department decision-making style

MODE 3: Planning mode, characterized by a systematic search for opportunities and anticipation of problems; a systematic consideration of costs and benefits of alternatives; and a conscious attempt to integrate programs of action to achieve specified goals efficiently. The accent is on long-term planning, and the extensive use of expertise and solid research before making decisions.

Little resemblance to department decision-making style 1 2 3 4 5 6 7

Very great resemblance to department decision-making style
To what extent is decision-making in the department characterized by participative, group, or democratic decision-making, in relation to the following classes of decision:

1. PROGRAM-RELATED DECISIONS

   No participation: decisions made by department chairman

   Decisions made by department after full discussion and attempt at reach consensus—failing which decisions are taken by majority vote

   1 2 3 4 5 6 7
   Department chairman discusses with faculty before deciding

2. BUDGET ALLOCATION DECISIONS

   No participation: decisions made by department chairman

   Decisions made by department chairman after full discussion and attempt at reaching consensus—failing which decisions are taken by majority vote

   1 2 3 4 5 6 7
   Department chairman discusses with faculty before deciding

3. POLICY-RELATED ISSUES (Changes in department policies)

   No participation: decisions made by department chairman

   Decisions made by department chairman after full discussion and attempt at reaching consensus—failing which decisions are taken by majority vote

   1 2 3 4 5 6 7
   Department chairman discusses with faculty before deciding
Attempts at instituting departmental changes often run into the problem of strong opposition and/or lack of commitment on the part of faculty and staff. Department chairmen tend to use several methods for instituting change, overcoming this resistance, and getting the required commitment. These methods are not mutually exclusive, and there is no method that works best or worst under all circumstances. Please rate these methods as they are used in your department.

1. Explain concepts underlying the proposed changes to those involved or affected by them. In other words, provide detailed justification for the changes to those affected by them before or after changes are effected.

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2. Find or train faculty or staff personnel with the right drive and expertise to implement the proposed changes.

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3. Before taking action, direct faculty or other internal groups to investigate scientifically the underlying problem with a view to formulating optimal action alternatives.

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4. Use human relations skills involving better communication with faculty and staff members, establishing personal relationships with them, and lending a sympathetic ear to their problems, and encouraging them to communicate with one another.

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5. Procure the services of outside experts, such as consultants, to investigate the problem and propose changes.

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6. Involve fully those likely to be affected at each phase of the change process—gathering pertinent information, formulating alternatives, and implementation—by means of participative, consensus-seeking, democratic decision-making, followed by feedback of the results of change and group evaluation.

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7. Issue orders and implicitly or explicitly warn personnel of serious consequences of resisting the orders of the chairman.
APPENDIX H

INTERVIEW QUESTIONS
1. What do you see as the "state of your department" at the present time?

2. To what factors do you attribute the enrollment growth or decline in the past six years?

3. What are the major sources of funding for the department? What changes have occurred in them in the past six years?

4. What are the most significant problems or concerns of your department?

5. What kinds of problems or issues does this department face in relation to students? Has there been much change in the needs or demands of undergraduate or graduate students in the past six years?

6. What are your goals (formal or informal) in relation to students? In other words, what "desired state" or "end result" would this department be satisfied with in relation to students?

7. How has your department attempted to work toward achieving the desired "end state"?

   -- Have the efforts in dealing with students included seeking more or different students (such as adult or evening students), or perhaps concentrated on effective programs for those already enrolled?

   -- What changes have occurred, if any, in the mix of undergraduate and graduate students in the department?

   -- What effect did these changes have on faculty members in the department?

8. What kinds of constraints have you encountered in working toward the achievement of your goals?

   -- Have the schools who compete with your department for students (local, national, etc.) had any effect on decisions in this area?

   -- Have any groups or individuals outside the department influenced these decisions?

   -- How did the changes come about?

   -- Have they involved any "recruitment" programs or procedures such as the use of departmental publications or the use of alumni?
9. How would you assess your actual outcomes in relation to your desired end result?

10. What kinds of problems or issues does this department face in relation to its teaching program—whether they relate to changes in student needs, faculty preferences, or from other environmental changes?

11. What are your formal or informal goals in relation to your teaching program?
   -- Has the department changed degree or program offerings or requirements during the past six years?
   -- Why were the changes made?
   -- Has there been any change in the type of student your program appeals to?
     -- Have courses or programs been developed to appeal to different or special audiences? (Summer programs, special interest groups, etc.?)

12. How has the department worked toward achieving the desired "end result"?
   -- Has there been any change in the number of cooperative program efforts with other departments? (Do your students take approximately the same number and type of courses outside the department as before)?
   -- What programs or courses have been added or dropped in recent years? Why?
   -- Which ones have changed?
   -- Does the department offer more 4 or 5 credit courses than it did six years ago? Why?

13. What kinds of constraints have you encountered in working toward the achievement of your teaching program goals?
   -- How was the faculty affected by these changes? Were there changes in faculty roles or responsibilities as a result?
   -- Have programs of "competing departments" at other institutions had any effect on decisions in this area?
   -- Were these decisions affected at all by University or outside groups, individuals, or policies?
   -- Were they affected by any regulatory groups such as accrediting agencies?
-- In what ways have these constraints changed during the past six years? To what degree?

-- Have some courses been offered less often than before?

14. How did the decisions for change come about?

15. How would you assess your actual outcomes in relation to your desired "end result"?

16. What kinds of problems or issues has this department faced in relation to its research program?

17. What have been your formal and informal goals in relation to your research program?

-- What kinds of changes have occurred in the number or type of research projects?

-- Is this department presently involved in any cooperative projects with other institutions or faculties? Has this changed recently?

18. How has your department attempted to work toward achieving the desired "end result"?

-- Has there been any shift in emphasis in faculty roles? (For example, less research, more service?)

-- Has there been any change in expectations for faculty members in the department, such as the number of courses taught or the pressure for writing research proposals?

19. What kinds of constraints have you encountered in working toward achieving your research goals?

-- Has the number or nature of these constraints changed during the past six years? In what ways?

20. How would you assess actual outcomes in relation to desired results?

21. What problems or issues does this department face in relation to the area of service?

-- Formal or informal goals?
-- Means of achieving "end result?"
-- Nature of constraints?
-- Assessment of outcomes?

22. Has budget or personnel retrenchment been a factor?

-- How was it handled within the department?
23. What kinds of things has this department done to use its resources more efficiently?

24. What proportion of the faculty members in this department have tenure?
   -- Has the total number of faculty changed since 1972?
   -- What has been the rate of staff turnover? Reasons?
   -- Has the department increased or decreased in the number of part-time faculty?
   -- Has the number of joint appointments changed?
   -- In what ways, if any, are the qualifications expected of present applicants for faculty positions different from those of five or six years ago?
   -- Has there been any change in (a) Length of contracts, (b) Class size, or (c) Course load in the past six years?
   -- Any changes in the time of day when classes are held? (Such as additional evening classes)?
   -- How have the changes in the number of faculty members affected your teaching and research programs?
   -- What do you do when conflicts arise within the department?
   -- What is your criteria for merit decisions?

25. LIST OF GOAL AREAS - For the goal areas which you have rated as "Extremely Important", how have you tried to work toward achieving them in this department?
   -- What kinds of constraints did you encounter?
   -- How did the changes come about?
   -- How would you assess your actual outcomes in relation to your preferred outcomes?

26. If courses in this area are taught on O.S.U. branch campuses, briefly, what has happened in the branch campus operation in the past few years?
   -- Has there been any shifting of faculty to or from branches, or other Centers?
Has there been any change in the number of Main Campus courses (graduate) taught at branch campuses?

27. Has this department used TV courses, programmed or individual learning methods, or other types of "technological aids" to a greater or lesser extent during the past six years?

28. How do you see the place of your department within the College and the University? Do you feel the department receives its share of resources in comparison with other departments?

-- To what extent are you dependent upon others and vice-versa? Does your department offer many service courses for students in other majors, or do your majors take a number of service courses from other areas?

-- How would your characterize the type or severity of competition of this department for its share of the University and College allocation of resources during the past six years?

-- Are members of your faculty actively involved in any campus governing or policy-making bodies?

-- What have been the major changes in departmental, College, or University policies (which affect the department) during the past six years?

29. Is this department subject to any special advantages such as a good reputation, favorable legislation or public interest, a favorable job market for graduates, or the like?

30. Is it subject to any special pressures or disadvantages due to location, facilities, particular control by outside or inside groups or agencies, an unfavorable job market for graduates, or the like?

31. How has your role as department chairman changed in the past six years?

-- How much autonomy do you feel you have?

-- Has this changed in the past six years?
APPENDIX I

LEADER BEHAVIOR DESCRIPTION QUESTIONNAIRE
LEADER BEHAVIOR DESCRIPTION QUESTIONNAIRE
Developed by staff members of
The Ohio State Leadership Studies

Name of Leader Being Described ________________________________

Name of Group Which He/She Leads ______________________________

Your Name ________________________________________________

On the following pages is a list of items that may be used to describe the behavior of your supervisor. Each item describes a specific kind of behavior, but does not ask you to judge whether the behavior is desirable or undesirable. This is not a test of ability. It simply asks you to describe, as accurately as you can, the behavior of your supervisor.

Note: The term "group," as employed in the following items, refers to a department, division, or other unit of organization which is supervised by the person being described.

The term "members," refers to all the people in the unit of organization which is supervised by the person being described.

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Columbus, Ohio 43210

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DIRECTIONS:

a. READ each item carefully

b. THINK about how frequently the leader engages in the behavior described by the item.

c. DECIDE whether he/she always, often, occasionally, seldom or never acts as described by the item.

d. DRAW A CIRCLE around one of the five letters following the item to show the answer you have selected.

A = Always
B = Often
C = Occasionally
D = Seldom
E = Never

1. Does personal favors for group members.  A  B  C  D  E
2. Makes his/her attitudes clear to the group.  A  B  C  D  E
3. Does little things to make it pleasant to be a member of the group.  A  B  C  D  E
4. Tries out his/her new ideas with the group.  A  B  C  D  E
5. Acts as the real leader of the group.  A  B  C  D  E
6. Is easy to understand.  A  B  C  D  E
7. Rules with an iron hand.  A  B  C  D  E
8. Finds time to listen to group members.  A  B  C  D  E
9. Criticizes poor work.  A  B  C  D  E
10. Gives advance notice of changes.  A  B  C  D  E
11. Speaks in a manner not to be questioned.  A  B  C  D  E
12. Keeps to himself/herself.  A  B  C  D  E
13. Looks out for the personal welfare of individual group members.  A  B  C  D  E
<p>| | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>14.</td>
<td>Assigns group members to particular tasks.</td>
<td>A</td>
<td>B</td>
<td>C</td>
</tr>
<tr>
<td>15.</td>
<td>Is the spokesperson of the group.</td>
<td>A</td>
<td>B</td>
<td>C</td>
</tr>
<tr>
<td>16.</td>
<td>Schedules the work to be done.</td>
<td>A</td>
<td>B</td>
<td>C</td>
</tr>
<tr>
<td>17.</td>
<td>Maintains definite standards of performance.</td>
<td>A</td>
<td>B</td>
<td>C</td>
</tr>
<tr>
<td>18.</td>
<td>Refuses to explain his/her actions.</td>
<td>A</td>
<td>B</td>
<td>C</td>
</tr>
<tr>
<td>19.</td>
<td>Keeps the group informed.</td>
<td>A</td>
<td>B</td>
<td>C</td>
</tr>
<tr>
<td>20.</td>
<td>Acts without consulting the group.</td>
<td>A</td>
<td>B</td>
<td>C</td>
</tr>
<tr>
<td>21.</td>
<td>Backs up the members in their actions.</td>
<td>A</td>
<td>B</td>
<td>C</td>
</tr>
<tr>
<td>22.</td>
<td>Emphasizes the meeting of deadlines.</td>
<td>A</td>
<td>B</td>
<td>C</td>
</tr>
<tr>
<td>23.</td>
<td>Treats all group members as his/her equals.</td>
<td>A</td>
<td>B</td>
<td>C</td>
</tr>
<tr>
<td>24.</td>
<td>Encourages the use of uniform procedures.</td>
<td>A</td>
<td>B</td>
<td>C</td>
</tr>
<tr>
<td>25.</td>
<td>Gets what he/she asks for from his/her superiors.</td>
<td>A</td>
<td>B</td>
<td>C</td>
</tr>
<tr>
<td>26.</td>
<td>Is willing to make changes.</td>
<td>A</td>
<td>B</td>
<td>C</td>
</tr>
<tr>
<td>27.</td>
<td>Makes sure that his/her part in the organization is understood by group members.</td>
<td>A</td>
<td>B</td>
<td>C</td>
</tr>
<tr>
<td>28.</td>
<td>Is friendly and approachable.</td>
<td>A</td>
<td>B</td>
<td>C</td>
</tr>
<tr>
<td>29.</td>
<td>Asks that group members follow standard rules and regulations.</td>
<td>A</td>
<td>B</td>
<td>C</td>
</tr>
<tr>
<td>30.</td>
<td>Fails to take necessary action.</td>
<td>A</td>
<td>B</td>
<td>C</td>
</tr>
<tr>
<td>31.</td>
<td>Makes group members feel at ease when talking with them.</td>
<td>A</td>
<td>B</td>
<td>C</td>
</tr>
<tr>
<td>32.</td>
<td>Lets group members know what is expected of them.</td>
<td>A</td>
<td>B</td>
<td>C</td>
</tr>
</tbody>
</table>
A = Always  
B = Often  
C = Occasionally  
D = Seldom  
E = Never

33. Speaks as the representative of the group. A B C D E

34. Puts suggestions made by the group into operation. A B C D E

35. Sees to it that group members are working up to capacity. A B C D E

36. Lets other people take away his/her leadership in the group. A B C D E

37. Gets his/her superiors to act for the welfare of the group members. A B C D E

38. Gets group approval in important matters before going ahead. A B C D E

39. Sees to it that the work of group members is coordinated. A B C D E

40. Keeps the group working together as a team. A B C D E
APPENDIX J

WORK SATISFACTION SCALE
Please indicate on the scale the degree to which the statement applies to your particular job at this time.

For example:

<table>
<thead>
<tr>
<th>Statement</th>
<th>Completely</th>
<th>Not at all</th>
</tr>
</thead>
<tbody>
<tr>
<td>I have a great deal of free time on my job.</td>
<td>1 2 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>1. My work is very interesting.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>2. I very much enjoy the work I am doing here.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>3. I have many opportunities to plan ahead and to carry out the plan.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>4. There is great appreciation shown for my work.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>5. I have many opportunities to develop friendships in this organization.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>6. My job provides great challenge.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>7. I have much opportunity for independent thought.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>8. I know that my work is acceptable.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>9. I feel this organization is a very good place to work.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>10. I am able to use my own unique capabilities, realize my potentialities.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>11. I have much opportunity to decide on appropriate courses of action.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>12. My position has great prestige inside the organization.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>13. I have pleasant interactions with fellow employees.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>14. I feel my job is a very important one.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>15. I have great freedom to express independent opinions about my work.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
</tbody>
</table>
16. Others express awareness of my performance when I perform well.  
\[1\ 2\ 3\ 4\ 5\ 6\ 7\]

17. I am always treated with dignity.  
\[1\ 2\ 3\ 4\ 5\ 6\ 7\]

18. I feel high self-esteem in my position.  
\[1\ 2\ 3\ 4\ 5\ 6\ 7\]

19. I have many opportunities to discuss personal problems with fellow employees.  
\[1\ 2\ 3\ 4\ 5\ 6\ 7\]

20. I feel I am accomplishing worthwhile work.  
\[1\ 2\ 3\ 4\ 5\ 6\ 7\]

21. I feel self-fulfillment from my work.  
\[1\ 2\ 3\ 4\ 5\ 6\ 7\]
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