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Bell, Edwin Dewey

SOME THEORETICAL IMPLICATIONS OF POWER, RESOURCE ALLOCATION, AND THEORIES OF ACTION ON HIGHER EDUCATION

The University of North Carolina at Greensboro   ED.D.   1985

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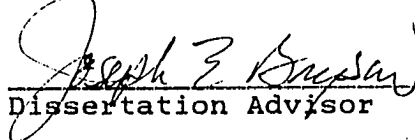
ON HIGHER EDUCATION

by

Edwin Dewey Bell

A Dissertation Submitted to
the Faculty of the Graduate School at
The University of North Carolina at Greensboro
in Partial Fulfillment
of the Requirements for the Degree
Doctor of Education

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1985

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APPROVAL PAGE

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ii

BELL, EDWIN DEWEY, Ed.D. Some Theoretical Implications of
Power, Resource Allocation, and Theories of Action on
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Many of the models and procedures for planning,
management, and resource allocation are based on the
assumptions of rational decision making. However, the
administrative reality of most institutions is not
completely rational. Administrative reality is a mix of
rationality, bureaucracy, and politics. Administrators
develop theories of action to explain and govern their
behavior in their organizations.

This study presents a theoretical definition of power:
the ability to shape or stymie the behavior and/or beliefs of
others. It argues that power is defined in terms of its
sources, bases, and instruments. Several studies of the
relationship between power and resource allocation at large
research universities are analyzed. In each analysis there
is a significant relationship between power and resource
allocation.

The procedures for the development of an explicit,
coherent, and flexible theory of action are discussed.
The study presents recommendations for the development of a
user-oriented metatheory for the practice of administration
in higher education and recommendations for the curriculum
of the in-service and the formal education of administrators
in higher education.

ACKNOWLEDGEMENTS

I would like to express my appreciation and thanks to my Advisor, the late Dr. Dwight Clark; my Committee Chairman, Dr. Joseph Bryson; and to the other members of the committee: Dr. Roland Nelson, Dr. Donald Reichard, and Dr. James Svara. Without the encouragement and support of my wife, Sheila, and the example of my parents, Mary and Frank Bell, this dissertation would not have been possible.

TABLE OF CONTENTS

v

LIST OF TABLES

LIST OF FIGURES

CHAPTER I

INTRODUCTION

Higher education has entered a period where both its

internal and external environments are becoming increasingly

more complex, and each institution has the responsibility and

the opportunity to shape its own future (Mayhew, 1979)

(Carnegie Council, 1980). The effectiveness of an

institution's administration is one of the major factors

in determining how bright the institution's future will be.

> Institutional vitality, viability, and even survival
> depend on the timely interaction of established and
> tested procedures and processes, wise human skills
> and abilities, and fortunate vagaries of history.
> ... Thus, the first step toward gaining, regaining,
> or retaining institutional vitality is the establishment
> of an administrative structure that preserves for
> the central administration the needed prerogatives of
> implementing effective policies and assuring that
> subordinate units of the institution behave in fiscally
> responsible ways, while at the same time allowing for
> orderly consultation with all members of the academic
> community. (Mayhew, 1979, p. 27)

Effective planning, management, and resource allocation

are essential in dealing with the problems of changing

missions, retrenchment, and program revision and development

in higher education. The overall purpose of this study is to

explore the relationship between power and resource

allocation in institutions of higher education and to begin

the development of a user-oriented management theory.

Statement of the Problem

Many of the models and procedures for planning,
management, and resource allocation are based on the
assumptions of rational decision making (Micek, 1980)
(Orwig & Carruthers, 1980) (Leslie, 1984). However, the
administrative reality of most institutions of higher
education is not completely rational. The goals and purposes
are not always clear; alternatives are often not clearly
defined; actions are implemented that do not optimize the
stated goals of the institution. Administrative reality is a
mix of rationality, bureaucracy, and politics. The
prescriptive models that administrators are taught do not
match the organizational realities that administrators must
face. One of the major discrepancies is the failure of the
prescriptive models to deal explicitly with the issues of
power and influence.

Because of the discrepancies between the prescriptive
models and organizational reality and the general
socialization in the culture, many administrators espouse an
acceptable prescriptive model but practice an implicit model
that matches their assumptions about human nature and their
organization. Since the model is implicit, it is usually not
available for verification, even to those who use it.
Consequently, individuals can not really test the
effectiveness of their theories-in-use. (Argyris & Schon,
1974)

Questions to be Answered

This study primarily addresses two questions:

1. How does power affect resource allocation in institutions of higher education?

2. How does one conceptualize and assess power in institutions of higher education?

Baldridge & Tierney (1979) evaluated an Exxon Education Foundation program called Resource Allocation and Management Program (RAMP). The program was designed to improve the management of private liberal arts colleges and universities. The goals of the program were clearly identified with the goals of the rational decision-making model. However, Baldridge & Tierney emphasized, "The introduction of management innovations is a highly political process." (p. 10) Volkwein (1984) argued that the implementation of the individual decisions in the strategic planning process at the State University of New York was a difficult political process. Politics and power are intuitively obvious factors in resource allocation, but we need to understand how they interact with one another.

Greenfield (1980) wrote:

> The point is that our theories create the facts that
> are relevant to them, and we can, therefore, only
> explore truth within a framework that defines what it
> is. (p. 29)

Brunsson (1982) argued, "Perspectives determine what data are seen, what theories are developed, and what kind of results

turn up." (p. 29) Frasher & Frasher (1981) pointed out that
a manager uses a naive psychology to make some sense of
organizational events. They called this naive psychology
administrative attribution theory. This attribution theory
attempts to provide a plausible explanation for the behavior,
beliefs, and attitudes of the individual and other members of
the organization. However, Kelley (1955) and Kelley (1972)
argued that attribution theory limits and filters perceptions
of reality. Weick (1969) made this point:

> The phrase "enacted environment" preserves the crucial
> distinctions that we wish to make, the most important
> being that the human creates the environment to which
> the system adapts. The human actor does not react to
> an environment, he enacts it. It is this enacted
> environment, and nothing else, that is worked upon by
> the process of organizing. (p. 64)

How we conceptualize power and other variables of the
organization will determine what we see.

Scope of the Study

This study examines the interaction between power and
resource allocation in institutions of higher education.
The data come exclusively from large, research universities
and may limit the generalization of the results to smaller
institutions with different missions.

Hage (1972) argued that the major problems of theory
development are really problems of metatheory, i.e., the
underlying questions of when and how to apply theory.
Consequently, this study emphasizes the work of Argyris &

Schon (1974) on theories of action because it addresses the
the metatheory of practical administration. The study also
emphasizes the general systems perspective because of its
flexibility and breadth.

> ... the rationalizing influence of general
> systems theory is expressed in its adoption of a triadic
> ontology which subsumes the relevant portions of all
> three traditional positions. In its simplest phrasing,
> we can suggest that there is no significant evidence
> to a priori restrict reality to either cognitive,
> empirical, or subjective (i.e. idiosyncratic) domain,
> and there is every evidence to suggest that knowledge
> (i.e. scientia) may be some product of all three
> domains. (Sutherland, 1973, p. 61)

Methods, Procedures, and Sources of Information

The basic research technique of this theoretical study
is to examine and analyze the available references concerning
decision making, power, theories of action, open systems, and
resource allocation in higher education institutions. A
search was made of Dissertation Abstracts International for
related topics. Journal articles and books were located
through the use of Educational Administration Abstracts,
Public Affairs Information Service, Sociological Abstracts,
and various books on higher education administration, social
psychology, and political science.

Significance of the Study

Higher education institutions are complex organizations
that are functioning in an increasingly heterogeneous and
vacillating environment. Cohen & March (1974) argued that

managers have much less control in an organization than most

members of the organization would believe. They argued that

unobtrusive management is the most effective tool

administrators have.

> Unobtrusive management uses interventions of greater
> impact than visibility. Such actions generally have
> two key attributes: (1) They affect many parts of the
> system slightly rather than a few parts in a major way.
> The effect on any one part of the system is small enough
> so that no one either really notices or no one finds it
> sensible to organize significantly against the
> intervention. (2) Once activated, they stay activated
> without further organizational attention. Their
> deactivation requires a positive organizational action.
> (Cohen & March, 1974, p. 213)

Resource allocation can be a major tool in unobtrusive

management. Mintzberg (1973) argued that the role of

resource allocator is central to the control of the

strategy-making process of the organization. It is important

to understand how resource allocation actually occurs in

institutions of higher education and the relationship among

its rational, bureaucratic, and political determinants.

Mintzberg (1973) inferred that managers carry an array

of models in their memories to facilitate decisions. Argyris

& Schon (1974) called these models theories of action, which

are composed of espoused theories and theories-in-use.

Administrators in higher education need consonant and

verifiable theories-in-use for their institutions. These

working theories must allow the individuals and the

organization to learn from experience. The dissonance that

is created by espousing one theory of management and using

another tends to minimize commitment and creativity in complex organizations (Etzioni, 1961) (Davis, Strand, Alexander, & Hussain, 1982). Assessing and explicitly dealing with power in an organization can be a first step in developing a theory of action which has an explicit theory-in-use that is consistent with the espoused theory of the manager and the organization (Argyris, 1982).

Design of the Study

The remaining parts of this study are divided into five additional chapters. The second chapter reviews the literature on decision-making models, open systems theory, and power. The third chapter reviews a series of studies on the relationship between power and resource allocation. The fourth chapter addresses the concept of theory of action and deals with the perception and assessment of power. The summary, conclusions, and recommendations of the study are in chapter five.

CHAPTER II

LITERATURE REVIEW

Decision Making Models

Keen & Morton (1978) stated that the literature on decision making can be classified into five schools of thought: the rational manager, bounded rationality, organizational procedures, political interaction, and individual differences perspective. The rational manager viewpoint is based on the microeconomic assumptions of a clear separation of ends and means, a knowledge of all available alternatives and their outcomes, and well defined criteria for judgement. Bounded or limited rationality assumes that the role of the rational manager can still be pursued with limited and imperfect information. The organizational procedures school of thought concentrates on the standard operating procedures of the subunits of the organization. Political interaction focuses on the personalized bargaining that occurs between the organizational units and accepts the idea that power and influence determine the outcome of any decision. The individual differences perspective concentrates on the individual manager and his or her problem-solving and information-gathering behavior. This section of the study addresses limited rationality, organizational procedures, and

political interaction. The individual differences

perspective will be addressed in a later chapter and the

omniscience that is required of the truly rational manager

is not currently possible in higher education.

Limited Rationality

Cyert, Simon, & Trow (1956) made this point:

In economics and statistics the rational choice process
is described as follows:
1. an individual is confronted with a number of
different, unspecified alternative courses of action.
2. to each of these alternatives is attached a set of
consequences that will ensue if that alternative is
chosen.
3. the individual has a system of preferences or
"utilities" that permit him to rank all sets of
consequences according to preference and to chose that
alternative that has the preferred consequences.
(p. 237)

They argued that several elements are missing from the

economic rational model in its application to decision making

in organizations. The problem is often not given; it must

be identified and defined. The alternatives are usually not

given for nonroutine decisions; they must be developed.

Consequences are not given; they must be projected.

Moreover, the comparisons among the consequences of the

various alternatives are done with numerous criteria. They

urged a modification of the rational choice model.

Our illustration suggests that search processes and
information gathering processes constitute a significant
part of decision-making and must be incorporated in a
theory of decision if it is to be adequate. (Cyert,
Simon, & Trow, 1956, p. 248)

Simon (1957) accepted the idea that it is often difficult to separate means from ends in rational decision making and that the "rationality" of the various criteria that are used in the selection of alternatives is related to the various value systems involved. He described the purpose of limited rationality this way:

> Broadly stated, the task is to replace the global rationality of the economic man with a kind of rational behavior that is compatible with the access to information and computational capacities that are actually possessed by organisms, including man, in the kinds of environments in which such organisms exist. (Simon, 1957a, p. 241)

He argued that the dominant problem-solving techniques that a human being used were determined by habit. However, he believed that organizations can affect the perception and the problem-solving strategies of their members through socialization.

> Human rationality operates, then, within the limits of a psychological environment. This environment imposes on the individual as "givens" a selection of factors upon which he must base his decisions. However, the stimuli of the decision can themselves be controlled so as to serve broader ends, and a sequence of individual decisions can be integrated into a well conceived plan. (Simon, 1957, pp. 108-109)

This belief assumes an exceptionally successful socialization of the members in the norms and values of the organization.

Organizational Procedures

Cyert & March (1963) accepted the idea that organizational decisions can be made with limited rationality, but they did not accept the assumption of an

exceptionally successful socialization. They argued that the decision making of organizations is based on four relational concepts and the first relational concept is the quasi-resolution of conflict over goals. The other concepts are uncertainty avoidance, problemistic search, and organizational learning.

Cyert & March (1963) stated that many organizations function with contradictory goals. The organizations never really resolve the conflict among diverse goals; they simply address the goals sequentially. Organizations attempt to avoid uncertainty by focusing on short-term issues and by negotiating with the environment to make it more predictable. The search for solutions is usually motivated by a specific problem. The individuals searching for the solution are usually biased by their training, experience, and goals and start their search with the simplest methods first. If the search for a solution is unsuccessful and the organization can determine that the search is unsuccessful the organization can learn by either modifying its search procedures, modifying its decision rules, modifying its attention rules, or modifying its goals.

Cyert & March (1963) assumed that organizational learning is an aggregate of the learning of individuals in the organization. This assumption implies that the members of the organization accept the local rationality implicit in the pursuit of a particular goal, that the

members develop essentially the same information from the
feedback from the environment, and that they are able to
change the standard operating procedures of the organization.
Rubin (1977), in a study that attempted to test hypotheses
of Cyert & March (1963), found that under environmental
pressures some organizational members no longer choose to
adapt or to optimize their behavior. Brunsson (1982) argued
that if the standard operating procedures are concerned
with initiating action, then the decision-making process will
often deviate from normative rationality, i.e., searching for
alternatives and estimating consequences is minimized.

Political Interaction

Initiating action is the major emphasis of this
viewpoint. Keen & Morton (1978) described it this way.

> Here decision making is seen as a personalized
> bargaining process between organizational units. Those
> who hold this view argue that power and influence
> determine the outcome of any given decision. (p. 63)

Allison (1971) argued that decision making as a political
process had three characteristics: (1) the goals and values
involved are diverse; (2) competing groups are identified
with each of the goals and/or policies; (3) the relative
power of the groups is as important as if not more important
than the strength of their argument in the determination of
the final decision. A person's rationale for the selection
or the support of a particular alternative is based on the
individual's location in the organization.

Bacharach & Lawler (1981) presented five assumptions which they believed support the political process of decision making:

1. Organizations are best conceptualized as political bargaining systems.
2. Specific decision-making spheres are the primary arenas for bargaining and conflict in organizations.
3. Within decision spheres, most organizational politics involve the efforts of actors to mobilize interest groups and coalitions for the sake of influencing the decisions of those in authority.
4. On the basis of collective objectives, interest groups merge into coalitions and select tactics to achieve their common objectives.
5. The formation of coalitions and coalition alliances will depend on the nature of the organizational structures and the distribution and control of organizational resources. (p. 213)

Bacharach & Lawler (1981) emphasized that coalitions are not necessarily groupings that have been created by the formal structure of the organization. They are social groupings that develop from natural groupings, i.e. interest, sex, race, as well as work groups. Bacharach & Lawler (1981) and Allison (1971) agreed that the makeup of the competing groups can change with the goals and issues that are being contested. The contest often continues even after a decision is made.

Bardach (1979) argued that the outcome or impact of decisions are usually different from the goals of the decision because the relevant groups that are necessary for the implementation of the decisions are still involved in a political process that Bardach calls implementation games.

There are four basic categories of games: the diversion of resources, the deflection of goals, the dilemmas of administration, and the dissipation of energies. In the diversion of resources various players try to obtain the maximum in money, prestige, and benefits and to produce the minimum in terms of output. In the deflection of goals some of the players try to overload the original goal of the decision or to deflect the goal of the decision to their own purpose. The dilemmas of administration involve the system inertia that resists any change, and dissipation of energies involves the passive resistance or aggression of people involved in struggles of turf and ego.

Eclectic Reality

Each decision making model has different assumptions which produce diverse perspectives. Which perspective is most effective? Allison (1971) argued that all three perspectives are useful. Limited rationality is useful in the creation of the decision criteria for the strategic planning process of an organization. Organizational procedures are a useful perspective in understanding how information is collected, how alternatives are produced, and how routine actions are taken. The political interaction perspective is useful in understanding any attempt to formulate goals or policy and any attempt to alter the status quo. Norris & Mims (1984) argued that the challenges facing

higher education in the 1980s require planning and management
that, "incorporate the best aspects of rational and
political decision making." (p. 706) Jedamus (1984) made this
point about planning and management in higher education:

> Strategic planning involves the setting of policies, the
> choice of objectives, the selection of resources,
> long-range forecasting, and the evaluation of plans of
> action. Tactical planning (or management control)
> includes short-range forecasting as well as making
> decisions to assure effectiveness in the acquisition and
> use of resources. Operational control involves making
> decisions to assure the effectiveness in the conduct of
> operations. ... All three types of planning and control
> are performed by faculty members, department heads,
> deans, chancellor, and governing board-though in
> different proportions-at each of the various decision
> centers. (p. 80)

One theoretical perspective allows the integration of limited
rationality, organizational procedures, and political
interaction into one viewpoint and allows the perception of
all the significant actors and forces that affect the
organization. That perspective is open systems theory.

Open Systems Theory

Bertalanffy (1975) argued that the open system
perspective can be traced to the Aristotelian world view that
the whole is more than the sum of its parts.

> As with every scientific theory of broader scope,
> general systems theory has its "metascientific" or
> philosophical aspects. The concept of "system"
> constitutes a new "paradigm", or, as the present writer
> put it, a "new philosophy of nature", contrasting the
> "blind laws of nature" of the mechanistic world view
> and the world process as a Shakespearean tale told by an
> idiot, with an organismic outlook of the "world as a
> great organization". (pp. 164-165)

General systems theory is, as emphasized, a model of
certain general aspects of reality. But it is also
a way of seeing things which were previously overlooked
or bypassed, and in this sense it is a methodological
maxim. (p. 168)

Bertalanffy (1968) also presented an insightful warning

concerning the use and application of general systems theory

in management.

Such knowledge can teach us not only what human behavior
and society have in common with other organizations, but
also what is their uniqueness. Here the main tenet will
be: Man is not only a political animal; he is before and
above all, an individual. The real values of humanity
are not those it shares with biological entities, the
function of the organism or the community of animals,
but those which stem from the individual mind. Human
society is not a community of ants or termites, governed
by inherited instinct and controlled by the laws of the
superordinate whole; it is based upon the achievement of
the individual and is doomed if the individual is made a
cog in the social machine. This, I believe, is the
ultimate precept a theory of organization can give: not
a manual for dictators of any denomination more
efficiently to subjugate human beings by the scientific
application of Iron Laws, but a warning that the
Leviathan of organization must not swallow the
individual without sealing its own inevitable doom.
(pp. 52-53)

Boulding (1956) took the general system concept, the world as

a great organization, and divided the world into nine

conceptual levels. In his framework each higher level

subsumed all the characteristics of the preceding levels.

The levels were as follows:

1. Static structure - the level of frameworks and

   categories.

2. Dynamic system - a simple system with predetermined

   necessary motions.

3. Cybernetic system - a system with a thermostatic

   mechanism to maintain equilibrium.

4. Open system - a self-maintaining structure that

   exchanges with its environment; the level of cells.

5. Genetic-societal system - differentiation appears

   among the subunits of the system; the level of

   plants.

6. Informational system - characterized by increased

   use of information, purposeful behavior, and

   self-awareness; the animal level.

7. Symbolic system - the ability to produce, absorb,

   and interpret symbols is the characteristic of

   this level; the human level.

8. Social system - this level is characterized by the

   impact of roles, expectations, and values.

9. Transcendental system - this level deals with the

   absolutes and ultimates that constitute the

   unknowables.

Level eight was the foundation for much of the application of
general/open systems philosophy to the understanding and
management of organizations.

Katz & Kahn (1966) argued that organizations are open
systems that have nine common characteristics:

1. Importation of energy - open systems import some

   form of energy from the external environment.

2. Throughput - open systems transform the available

to them.

3. Output - open systems export some product to the environment.

4. Systems as cycles of events - the pattern of behavior in the system has a cyclic character.

5. Negative entropy - the open system uses energy to reverse its natural trend toward disorganization.

6. Information input - open systems not only receive energy inputs, but they also receive information about their internal functioning and the structure of the external environment. However, the reception of energy and information inputs is selective. An open system can only interpret the information inputs that it is coded to receive.

7. Steady state - the importation of energy from the external environment maintains some balance in the exchange of energy. Equilibrium is maintained by the balanced exchange of inputs and outputs.

8. Differentiation - the elements of an open system move in the direction of specialized functions and elaborations.

9. Equifinality - a system can reach the same final state from different initial conditions and by a variety of paths.

Katz & Kahn (1966) stated that most organizational theory and practice assume that social organizations are closed systems

and create some fundamental errors that are based on

misconceptions of the organization.

> One error which stems from this kind of misconception
> is the failure to recognize the equifinality of the
> open system, namely that there are more ways than one
> for producing a given outcome. ... Moves toward tighter
> integration and coordination are made to insure
> stability, when flexibility may be the more important
> requirement. (p. 26)

> A second error lies in the notion that irregularities
> in the functioning of the system due to environmental
> influences are error variances and should be treated
> accordingly. ... Open system theory, on the other hand,
> would maintain that environmental influences are sources
> of error variance but are integrally related to the
> functioning of the social system, and that we can not
> understand a system without a constant study of the
> forces that impinge on it. (p. 27)

Katz & Kahn (1966) also made an interesting point concerning

the boundaries of an open system and its various subsystems.

They argued that the boundaries were selectively permeable.

> System boundaries refer to the types of barrier
> conditions between the system and its environment which
> make for degrees of system openness. Boundaries are the
> demarcation lines or regions for the definition of
> appropriate system activity, for admission of members
> into the system, and for other imports into the system.
> the boundary constitutes a barrier for many types of
> interaction between people on the inside and the people
> on the outside, but it includes some facilitating device
> for the particular types of transactions necessary for
> organizational functioning. (pp. 60-61)

Haas & Drabek (1973) took the concept of selective

permeability even further. They argued that the boundary of

a system is really determined by the problem at hand, i.e.

the boundary of an organization is conceptual not factual and

needs to be placed where it allows the recognition of all the

relevant elements that affect the particular problem. They

also argued that the relationship of a system with the external environment and the relationship among its various subsystems reflect differing layers of control and autonomy. Thompson (1967) took the concept of differentiation in function, structure, control, and autonomy and theorized on the relationship between open systems and rationality.

> Most of our beliefs about complex organizations follow from one or the other of two distinct strategies. The closed system strategy seeks certainty by incorporating only those variables positively associated with goal achievement and subjecting them to a monolithic control network. The open system strategy shifts attention from goal achievement to survival, and incorporates uncertainty by recognizing organizational interdependence with the environment. A newer tradition enables us to conceive of the organization as an open system, indeterminate and faced with uncertainty, but subject to criteria of rationality and hence needing certainty.
>
> ... With this conception the central problem for complex organizations is one of coping with uncertainty. As a point of departure, we suggest that organizations cope with uncertainty by creating certain parts specifically to deal with it, specializing other parts in operating under conditions of certainty or near certainty. In this case, articulation of theses specialized parts becomes significant. (p. 13)

The majority of open systems applications to management are faithful to Boulding's (1956) eighth level of analysis. They concentrate on roles, structure, values, and management process. They emphasize what Brown & Moberg (1980) called macrolevel issues as opposed to microlevel issues which emphasize motivation, communication, and group processes. They do not, as Bertalanffy urged, emphasize the uniqueness of the individual. Nightingale & Toulouse (1977) presented

an open systems theory of organization that attempts to
integrate macrolevel and microlevel issues. Their conceptual
framework has five variables: organizational environment,
values, structure, process, and reactions-adjustments.
Reactions-adjustments are the individual feelings and
attitudes of organization members. Their study involved an
analysis of 1,000 organization members in 20
organizations. The 117-item questionnaire was given
to the subjects at their organizations. The questionnaire
items addressed the five variables. The results indicated
not only a congruence among the macro- and microlevel
variables but also reciprocal interactions among the
concepts. Moorhead (1981) supported the same conclusion.
His study involved 87 resident physicians from
16 departments in a large hospital. His instruments
were previously validated or standardized rating instruments
or surveys. His results indicated that the macrolevel
aspects of the organization, i.e., environment, values,
structure, and intergroup processes, affect and are affected
by the microlevel aspects of the organization, i.e.,
interpersonal processes and the reactions and adjustments
of the organizational members. Both studies (Nightingale &
Toulouse, 1977; Moorhead, 1981) indicated that a major
process variable, which affected both macro- and microlevel
variables, was power.

Power

The concept of power and its legitimate use have been debated since ancient times. Plato had Thrasymachus, the Sophist, make the following argument in the Republic:

> This then, my good man, is what I say justice is, the same in all cities, the advantage of the established government, and correct reasoning will conclude that the just is the same everywhere, the advantage of the stronger. (Grube, 1974, p. 13)

Moreover, the debate continues unabated. Galbraith (1983) stated:

> ... "power is the possibility of imposing one's will upon the behavior of others." This, almost certainly is the common perception; someone or some group is imposing its will and purpose or purposes on others, including those who are reluctant or adverse. ... It is because power has such a common sense meaning that it used so often with so little seeming need for definition. (p. 2)

However, the number of various explicit and implicit definitions of power that are available suggest that something more than the common sense definition is needed.

Theoretical Definition

Dahl (1957) described power as a relationship among people. He did not differentiate between authority, power derived from a formal position in an organization, and influence, power derived from informal factors. He argued that the relationship has three properties:

1. There must be some connection between the persons involved in the power relationship.

2. There is a time lag between the actions by the

person who is said to exert power and the responses
of the recipient of the power.

3. The actions must have some statistical probability
of success.

Bacharach & Lawler (1981) argued that this last property
implies that power only exists when it is successfully
applied. Bierstadt (1950) made the same point. "Power is
always successful; when it is not successful, it is not, or
ceases to be, power." (p. 73) Also, Bierstadt (1950) made a
distinction between power and influence. He argued that
power is coercive and that influence is persuasive. I do not
accept the argument that power is always coercive. Galbraith
(1983) pointed out that one of the major instruments of
power, conditioned power, is exercised by changing belief.
Moreover, I do not accept the arguments that influence always
involves persuasion and that power only exists when it works.
Gamson (1968) argued that influence is the probable impact of
all the resources that a person controls and can bring to
bear on those he wishes to affect. Obviously, some of those
resources may be coercive. In addition, it seems to me that
Dahl (1957) did not imply that power only existed when it
worked, but that the threat of sanction or reward must be
taken seriously by the target of the threat or promise.
It seems, however, that Dahl underestimated the impact of
unthreatened sanctions or rewards on human behavior.
Potential or even possible sanctions or rewards may have an

impact on some types of human behavior. Wrong (1968) argued this same point.

> Power is usually defined as the capacity to control others. Yet the capacity to perform acts of control and the actual performance are clearly not the same thing; power when thought of as a capacity is a dispositional concept. ... Thus a mother has power over her child when the child refrains from doing something in anticipation of her displeasure even when the mother is not present to issue a specific prohibition. Similarly, the President has power over congress when congressional leaders decide to shelve a bill in anticipation of presidential veto. (pp. 677-678)

Wrong (1968) also supported the argument that power is always a relationship between two actors. However, he emphasized that it is not a directly observable social behavior, e.g., participation in the discussion of an issue is not power.

Perrow (1970) argued that power in organizations is based on relationships, but the critical relationships are those among the various subunits of the organization. The relationships are determined by the specialization of the functions of the subunits. Crozier (1964) argued that the source of subunit power is the ability of the specialized unit to cope with uncertainty in the internal and external environment of the organization. Hickson, Hinings, Lee, Schneck, & Pennings (1971) also argued that intraorganizational subunit power is derived from the function of the subunits within the organization. They presented five hypotheses:

> Hypothesis 1. The more a subunit copes with uncertainty, the greater its power in the organization.

> Hypothesis 2. The lower the substitutability of the
> activities of the subunit, the greater its power within
> the organization.
> Hypothesis 3a. The higher the pervasiveness of the work
> flows of the subunit, the greater its power within the
> organization.
> Hypothesis 3b. The higher the immediacy of the
> workflows of a subunit, the greater its power within the
> organization.
> Hypothesis 4. The more contingencies are controlled
> by a subunit, the greater its power within the
> organization. (pp. 220-222)

They applied their hypotheses to the analysis of data that

had been collected in an earlier study and they reached this

conclusion:

> The concept of work organizations as interdepartmental
> systems leads to a strategic contingencies theory
> explaining differential subunit power by dependence on
> contingencies ensuing from varying combinations of
> coping with uncertainty, substitutability, and
> centrality. (Hickson et al, 1971, p. 227)

They acknowledged two problems with the strategic contingency

theory of intraorganizational power. First, the individual

differences of the people in the various subunits will affect

the power of the subunits. Second, The perception of power

can be as important as the reality of power. Bacharach &

Lawler (1976) made this same point in a later study.

Hinings, Hickson, Pennings, & Schneck (1974) took the same

five hypotheses and used them in a study of twenty-eight

subunits of three branch breweries in western Canada. Their

results indicated that none of the five variables, coping

with uncertainty, nonsubstitutability, pervasiveness,

immediacy, and unpatterned variability, is a sufficient

condition for high scores on a measure of intraorganizational

power; all of the variables must be present for a high score. Salancik & Pfeffer (1974) argued that intraorganizational power in higher education institutions is based primarily on the ability of the subunit to supply valuable resources to the organization. They also raised the question of the extent to which subunit power is based on criteria that are important to groups outside of the organization. Pfeffer (1978) accepted the work of Hickson et al. (1971), Hinings et al. (1974), and Salancik & Pfeffer (1974), but he argued that any consideration of subunit intraorganizational power must be done in the context of the power that flows from the hierarchical structure of the organization. Blau's survey of the organization of academic work emphasizes the importance of Pfeffer's point in higher education. Blau (1973) pointed out that "universities and colleges have administrative structures that are similar to other bureaucracies" (p. 279).

Schein (1977) accepted the arguments of Hickson et al. (1971) for the bases of intraorganizational power, but she argued that it is important not only to understand how the interpersonal power of the subunit head interacts with the intraorganizational power but also to understand the intent and means of the subunit heads. Schein (1977) argued that the intent of the unit head determines the nature of the means utilized. If the intent is personal and covert, the means will be covert. If the intent is organizational and

overt, the means will be overt. Without some understanding
of the intent of the individual subunit heads, it is not
possible to have an adequate understanding of the patterns
of power within an institution.

Mechanic (1962) raised another important consideration
for understanding intraorganizational power: the sources of
power of lower-ranking participants in complex organizations.
He accepted the argument that power is closely related to
dependence (Emerson, 1962) (Jacobs, 1974) and developed nine
hypotheses to explain the sources of power of lower-ranking
members of the bureaucracy:

1. Other factors remaining constant, organizational
power is related to access to persons, information, and
instrumentalities.

2. Other factors remaining constant, as a participant's
length of time in an organization increases, he has
increased access to persons, information, and
instrumentalities.

3. Other factors remaining constant, to the extent that
a lower-ranking participant has important expert
knowledge not available to high-ranking participants, he
is likely to have power over them.

4. Other factors remaining constant, a person difficult
to replace will have more power than a person easily
replaceable.

5. Other factors remaining constant, experts will be
more difficult to replace than nonexperts.

6. Other factors remaining constant, there is a direct
relationship between the amount of effort a person is
willing to exert in an area and the power he can
command.

7. Other factors remaining constant, the less effort
and interest higher-ranking participants are willing to
devote to a task, the more likely are lower-ranking

participants to obtain power relevant to the task.

8.   Other factors remaining constant, the more
attractive a person is, the more likely he is to obtain
access to persons, and control over these persons.

9.   Other factors remaining constant, the more central
a person is to an organization, the greater his access
to persons, information, and instrumentalities.
(pp. 353-361)

Bacharach & Lawler (1981) attempted to integrate the

various conceptual viewpoints of power by differentiating

the form and content of power.   "Form refers broadly to the

basic pattern or configuration of the phenomenon, such as the

parameters within which action or interaction occurs. "

(p. 14)   "Content refers to dimensions that are not

omnipresent in empirical situations.   Content is

idiosyncratic and specific to the situation." (p. 15)

Bacharach & Lawler (1981) argued that the form of power has

three dimensions: the relational aspect, the dependence

aspect, and the sanctioning aspect.

> The key point underlying the relational aspect of power
> is that, whatever the unit of analysis, we must attend
> to the interactional dynamics of power relationships
> ... The power of the organization vis-a-vis its members
> becomes a question of how key actors or groups, such as
> organizational elites, interact with other subgroups
> within the organization. (p. 18)
>
> From the standpoint of the power-dependence theory,
> power is a function of dependence.   More specifically,
> the power of an actor is a function of the other
> person's dependence on the actor.   The greater the
> other's dependence on the actor, the greater the
> actor's power in the relationship. (p. 20)
>
> The second dimension of dependence, outcome value, is
> generally treated as the importance of or the need for
> the outcomes in the social relationship.   In other

words, the theory indicates that actors will attach
values and priorities to the various outcomes obtained
from the given relationship. The greater the value
attached to the outcome of the relationship, the greater
the power of the other; by the same token, the more
value the other attaches to the outcomes, the greater
the actor's own power in the relationship. (p. 21)

While patterns of dependence are the parameters of the
power relationship, the sanctioning aspect of power is
a more integral part of the interaction process. It is
the active component of the power relationship,
referring to the direct manipulations of the other's
outcomes. (p. 25)

The content of power is authority and influence.

They are differentiated by their bases and their sources of

power. The relationship among the sources of power, the

bases of power, and the type of power are presented in Table

1. The bases of power are coercive, remunerative, and

normative, i.e. the ability to control sanctions, rewards,

symbolic rewards, and knowledge. The sources of power are

structural position, personal characteristics, expertise,

and opportunity. The bases of power are what enable people

to manipulate the behavior of others. The sources of power

are what enable individuals to control the bases of power.

Structural position is the source of power for authority and

provides for the control of the four bases of power:

coercive, remunerative, normative, knowledge. Influence can

have personality, expertise, or opportunity as a source and

these sources give access to coercive, normative, and

knowledge bases of power. Authority is a zero-sum type of

power. The structure can only give a limited number of

Table 1

Relationships among the Sources, Bases, and Types of Power

Source	Bases	Types
Structure	Coercive	Authority
	Remunerative	
	Normative	
	Knowledge	
Personality	Normative	Influence
	Knowledge	
Expertise	Normative	Influence
	Knowledge	
Opportunity	Coercive	Influence
	Knowledge	

(Bacharach & Lawler, 1981)

people the ability to make binding decisions. If one person gains authority, then another person has lost some authority. Influence, on the other hand, is not zero-sum. Personality, expertise, and opportunity are theoretically not finite. Consequently, the influence that one individual gains need not be the influence that another individual lost. (Bacharach & Lawler, 1981)

Although they integrated many diverse theoretical constructs of power into their work, their definition of the form of power seems to narrow. Bacharach & Lawler (1981) argued that the form of power has only three aspects: relational, dependent, and sanctioning, but the sources of influence which they identify--personality, expertise, and opportunity--implicitly suggest another aspect of power, the ability to persuade and change beliefs.

Galbraith (1983) described three instruments of power and three sources of power. The relationship between the sources of power and the instruments of power are displayed in Table 2. Condign power is the ability to punish; compensatory power is the ability to reward; conditioned power is the ability to change beliefs and shape values. Personality is a source of conditioned power; property or its control is a source of compensatory power; and organization is a source of conditioned, compensatory, and condign power.

Table 2

Primary Relationship Between Sources and Instruments of Power

Source	Instrument
Personality	Conditioned Power
Property	Compensatory Power
Organization	Conditioned Power
	Compensatory Power
	Condign Power

As there is primary but not exclusive association
between each of the three instruments by which power is
exercised and one of the sources, so there are numerous
combinations of the sources of power and the related
instruments. Personality, property, and organization
are combined in various strengths. From this comes a
varying combination of the instruments for the
enforcement of power. (Galbraith, 1983, p. 7)

For this study the theoretical definition of power is

the ability to shape or stymie the behavior and/or beliefs of

others. The primary relationship among the sources, bases,

and instruments of power for this definition is in Table 3.

Location in the organization can provide access to all four

bases of power. Property and the ability to provide

valuable resources to the organization provide access to

coercive and remunerative bases which support the instruments

of sanction and reward. Personality provides access to the

normative and knowledge bases which support the alteration of

beliefs and values. Expertise allows access to the same

bases and the same instrument as well as the instruments of

sanction and reward. The nature of expertise allows its

sharing or withholding to be used as a reward or sanction.

Opportunity grants access to the coercive, remunerative, and

knowledge bases of power and all three instruments of power.

All power, even power whose source is the personality or

expertise of an individual, is a function of relationships

among the individuals involved in the organization and the

dependencies and interdependencies that exist among them.

Table 3

Relationships Among the Sources, Bases, and Instruments of Power

Source	Base	Instrument
Organization	Coercive	Sanction/Threat
	Remunerative	Reward/Promise
	Normative	Alteration of Belief/Value
	Knowledge	
Property	Coercive	Sanction/Threat
	Remunerative	Reward/Promise
Personality	Normative	Alteration of Belief/Value
	Knowledge	
Expertise	Normative	Alteration of Belief/Value
	Knowledge	Sanction
		Reward
Opportunity	Coercive	Sanction/threat
	Remunerative	Reward/Promise
	Knowledge	Alteration of Belief/Value

Clevenger (1982) made this point:

> There are different types of power structures in
> different institutions, and power in universities
> is a subsidiary aspect of the university's social
> structure. (p. 1.33)

Gross & Grambsch (1974) argued that the social and power

structure of universities seems rather stable. They

conducted surveys of the administrators and faculty of

approximately 80 public and private universities in 1964

and 1971. They asked, among other things, who really has a

say in the major decisions that affect the institution. They

assumed, given the campus turmoil of the late 60's, that

there would be a significant difference between their 1964

and their 1971 results. Their assumption was wrong; the

results of both studies indicated that the senior

administrators and the Board had the most say in what

happened at the institution. Even at public institutions,

they ranked higher than the legislature. The faculty was
perceived as having

perceived as having significant power, in some cases more
than department heads.

than department heads Students, despite some increase in

1971, had less power than any group within the institution.

I would argue that the power structures and the use of power

in colleges and universities change very slowly because power

and its effect on the institution are seldom assessed in

relation to the effectiveness of the organization.

The Use of Power

Galbraith (1983) argued that the alteration of belief is the instrument that is most frequently used in organizations. It assists in the creation of the zone of indifference which allows the members of the organization to accept many requests and orders with no question (Barnard, 1968). The threat of sanction, sanction, the promise of reward, and reward are used by interest groups in the organization as they form coalitions to pursue their interests (Gamson, 1968; Baldridge, 1971; Baldridge, 1978; Bacharach & Lawler, 1981).

Pfeffer (1977) discussed the conditions that affect the use of power in the allocation of resources. The first two conditions are characteristics of the resource, scarcity and importance. Pfeffer argued that unless the resource was scarce, it was unlikely that a great deal of power would be expended to acquire the resource. Power was more likely to be used when conditions of greater resource scarcity exist in the organization. He also argued that resources varied in importance to the various subunits of an organization. It was unlikely that power would be used to contest a resource that is not important to the subunit.

> In order for power to be used in allocating resources,
> the resource must be both critical to most subunits
> within the organization and scarce as well.
> (Pfeffer, 1977, p. 249)

Pfeffer's third condition involved the amount of discretion

the decision makers have in the allocation of the resources.
Power was likely to be used only if some discretion was
involved and the allocation decisions could be affected by
influence attempts. Another condition was whether the
situation is public or private. "Power is more likely to
affect decision outcomes when decisions are made in private."
(Pfeffer, 1977, p. 250) However, Pfeffer (1977) and Feldman
and March (1981) pointed out that the more rational and
legitimate criteria that are presented in public meetings are
often only used to validate decisions that have already been
made in private. Uncertainty is the last of Pfeffer's
conditions; power is more likely to be used in conditions of
uncertainty

Galbraith (1983) argued that the use of power
instruments, especially condign and remunerative power, tends
to instigate the development of a countervailing power to
balance or limit the condign or remunerative power. Benson
(1977) argued that the process was really a dialectic of
organizational change. He argued that the dominant social
structure, which is constantly being created by the members
of the organization, contains within it elements which try to
limit or destroy the social structure itself. This conflict
creates the opportunity for praxis, "The free and
creative reconstruction of social arrangements on the basis
of a reasoned analysis of both the limits and potential of
the present social forms." (Benson, 1977, p. 5) Bacharach &

Lawler (1981) made a similar point. They argued that the
conflict generated by the power struggles among the various
interest groups and coalitions provided the opportunity for
innovations and change in organizations. Pfeffer (1981)
argued that the use and acceptance of power actually changed
its definition.

> The distribution of power within a social setting can
> also become legitimated over time, so that those within
> the setting expect and value a certain pattern of
> influence. When power is so legitimated, it is denoted
> as authority. ... The transformation of power into
> authority is an important process, for it speaks to the
> issue of the institutionalization of social control. ...
> For the moment, it is sufficient to note that within
> formal organizations, norms and expectations develop
> that make the exercise of influence expected and
> accepted. (pp. 4-5)

In other words, the use of an instrument of power, the
alteration of belief or value, can affect over time the
perception and expectations of all the instruments of power.
Kamber (1984) made this point about the use of power in
higher education.

> Whether by arrogance, a passion for efficiency,
> or merely the desire to save precious working hours,
> administrators will always be tempted to simplify
> administration by arrogating more power to themselves.
> What they need to remember is that short-term goals
> achieved in this way are usually outweighed by long
> term losses in collegiality, faculty morale, and
> institutional consensus. Despite the proliferation of
> administrative chores and the increased importance of
> those chores to institutional advancement, the essential
> work of a college or university is still carried on by
> the faculty. (p. 96)

Power and its use in higher education can affect institutions
of higher education in a variety of ways. They can help

generate an environment for innovation and change and they can damage faculty morale and commitment to the institution.

On the other hand, since individual and subunit power are derived from a variety of sources and bases and are applied through a variety of instruments, power can be affected by the internal and external environment of the organization. Moreover, administrators can affect access to some of the sources of power and can modify over time the centrality of others. It is important to begin to understand how power affects the functioning and is affected by the functioning of institutions of higher education.

This study investigates the relationship between power and one of the critical functions of an institution, resource allocation. The next chapter reviews a group of studies that explore the relationship among rational, bureaucratic, and political criteria in resource allocation. Most of the studies seem to look at power in a relatively narrow perspective, i.e., with an emphasis on coercive and remunerative instruments, not the broader perspective that was presented in this chapter.

CHAPTER III

POWER AND RESOURCE ALLOCATION

Parsons (1956) argued that there are three types of decisions in the internal relations of an organization, policy, allocative, and integrative decisions. Policy decisions commit organizations to certain goals; allocative decisions distribute people and resources; and integrative decisions involve coordination, coercion, and inducement. All three types of decisions interact with one another. However, allocative decisions are the necessary conditions for the other two; i.e., little can be done without people and resources.

Studies of Power and Resource Allocation in Higher Education

Pfeffer & Salancik (1974) examined the allocation of resources at the University of Illinois over a 13-year period. They used a paradigm called paramorphic representation to analyze the organization's decisions.

> The important feature of this paradigm is that the determination of attribute weights is made by statistical analysis of actual decisions and by obtaining protocols of the decision process or by asking the individuals involved in the task what they think are the decision criteria. (Pfeffer & Salancik, 1974, p. 137)

It is possible to observe the decisions and also the
values of those variables believed to be influencing the
the decisions. ... the relative influence of each
independent variable can be assessed. (Pfeffer &
Salancik, 1974, p. 138)

Pfeffer & Salancik (1974) presented this hypothesis:

It is the hypothesis of this study that organizational
decision making and particularly resource allocation
decision making, is a political process and can be
explained by consideration of relative subunit power,
as well as by the consideration of possible
bureaucratic criteria. (p. 139)

The dependent variable of the study was the proportional

share of the general funds budget for each of the 29

departments in the study. The general funds budget was used

because general funds could be allocated with more discretion

by administrators than restricted funds. The independent

variables were two types of assessment of power, a survey and

unobtrusive measures, and bureaucratically rational criteria

for resource allocation.

Each department head was asked to rate each department,

including his own, according to how much power the department

had within the university on an 8-point scale. The

department head was told that power was the ability to affect

decisions so that they conformed more closely to what the

department wanted. Two measures of power were built from the

survey. One measure with the "don't know" responses omitted

and another with the "don't know" responses included as an

indication of very little power. The unobtrusive measures

were memberships on various university committees.

Because some of the committees had control over the
allocation of resources within the colleges and within
the university, a powerful unit would want to have
representation on the committees. Moreover, membership
on the committees would provide the subunit with some
additional power. (Pfeffer & Salancik, 1974, p. 141)

The departments and the committees used in the analysis of
resource allocation are in Table 4. Committee membership
was broken into four variables, representation on the
university research board, representation on the budget
committee, and representation on each of the 13
committees. The five measures of power were analyzed with a
Spearman rank-order statistic to test the validity of the
measures. The correlations among the measures are in Table
5. The validity of the unobtrusive measures seems to be
supported since their correlations with the first survey
rating of power are all significant at the .01 level or less.

Pfeffer & Salancik (1974) conducted two types of cross-
sectional analysis on their data. In the first, they used
the individual data points over the 13-year period.
In the second, they used the average for each department for
the 13-year period. In each case a regression
analysis against the proportion of general funds received,
representation on the research board, and representation on
all committees had coefficients that were significant. This
result indicated that power had a major influence over the
the allocation of general funds. However, instructional
workload was also significant in each regression. That

Table 4

Departments and Committees Utilized in Study of University
Budget Allocations

Departments	Committees
Economics	Building program
History	Non-recurring
Psychology	appropriations
Anthropology	University research board
Political Science	Budget
Sociology	Student affairs
Geography	Senate coordinating
Electrical Engineering	council
Mechanical Engineering	Educational policy
Physics	
Chemistry	Executive committees of
Mathematics	College of Liberal
Civil Engineering	Arts and Sciences
Aeronautical and	Agriculture
Astronautical Engineering	Engineering
Geology	Physical Education
Computer Science	Fine and Applied Arts
Classics	Commerce and Business
English	Administration
Spanish and Italian	
French	
Germanic Languages	
Dairy Science	
Home Economics	
Accounting	
Finance	
Architecture and Fine Arts	
Health Education	
Business Administration	
Animal Science	

(Pfeffer & Salancik, 1974, p. 141)

Table 5

Correlations Among Measures of Subunit Power

	Power1	Power2	Resbd	àCom	Budget	Execcom
Power1		.96*	.62*	.61*	.46*	.60*
Power2			.66*	.54**	.42***	.53**
Resbd				.53**	.57*	.50**
àCom					.52**	.80*
Budget					.	.16

Power1 represents interview data with don't know responses
        omitted
Power2 represents interview data with don't know responses
        included as very little power
Resbd represents representation on university research board
àCom represents representation on sum of all committees
Budget represents representation on the budget committee
Execcom represents representation on the respective college
        executive committees.

  *p<.001.
 **p<.01.
***p<.05.
Correlations are Spearman rank-order and tests of
significance are one-tailed.

(Pfeffer & Salancik, 1974, p. 143)

was an indication of the major impact of a bureaucratic criterion on the allocation of resources. Pfeffer & Salancik concluded that bureaucratic criteria and power both affect the allocation of resources.

Salancik & Pfeffer (1974) dealt with the same survey data from the University of Illinois and analyzed the sources of power. They asked the 29 department chairmen to rank six dimensions on order of importance each should have in allocating budgets to departments. The department heads were also asked to rank the importance of seven resources that the departments provided to the university. Table 6 displays the average preference ranking and the average importance ranking for the criteria and the resources. The number of graduate students ranked first as a criterion for resource allocation and as a resource to the university. The amount of outside grants and contracts ranked fourth in importance and fifth in preference. Table 7 shows the correlations among the measures of power, both unobtrusive and survey, and the probable determinants of power. These correlations indicate that the most important determinant of subunit power is the provision of valuable resources to the organization. The proportion of restricted funds received and the proportion of faculty supported by restricted funds both had correlations with two of the measures of power at the .001 level of significance, and the proportion of faculty supported by restricted funds had a correlation with the

Table 6

Average Rankings of Criteria as a Preferred Basis for
Allocating the Budget and for Importance of a Resource
to the University

Criteria and resources	Average preference rank	Average importance rank
Number of graduate students	2.12	2.22
Number of undergraduate students	2.44	2.94
National rank or prestige of the department	2.97	2.85
Amount of outside grants and contracts	4.33	3.88
Public visibility of departments	4.92	4.42
Administrative and service contributions to the university	4.18	5.68
Business and professional contacts	*	5.95

*This criteria or resources was not included in the
preference measure.

(Salancik & Pfeffer, 1974, p. 459)

Table 7

Correlations Between Measures of Subunit Power and Indicators
of Determinants of Subunit Power

Determinants of subunit power	Resbd	Interview based measure of power	àCom
Proportion of restricted funds received	.62*	.72*	.36***
Proportion of faculty supported by restricted funds	.77*	.76*	.44**
Number of graduate students	.66*	.62*	.38***
Number of advanced graduate student instructional units	.66*	.56*	.26****
National rank in 1969, adjusted for number of contending departments	.47*	.66*	.43**
Number of undergraduate instructional units taught	.38***	.14	.03
Total instructional units	.46**	.30***	.16

Resbd represents representation on the research board
àCom represents representation on all committees
* $p < .001$.
**
$p < .01$.
***
$p < .05$.
****
$p < .10$.

(Salancik & Pfeffer, 1974, p. 460)

third measure of power that was significant at .01

Although this study addressed the probable determinants of power, it did not deal with either the bases of power or the instruments of power. However, one can speculate that the normative and knowledge bases were used and that the primary instruments were the ability to shape beliefs and values and the ability to reward/promise. The bureaucratically rational criterion of instructional workload did not appear in the preferred ranking of criteria and the number of graduate students was ranked at the top of the preference and importance criteria. The departments with the most outside resources were likely to attract more graduate students with the fellowships and grants that would be available in the department. The powerful departments were able to persuade the others that a criterion that gave them an advantage should be a criterion for the allocation of resources. Representation on the university research board, which made some allocation decisions, the contacts and special knowledge associated with that representation, and the overhead that was generated by the contracts and grants allowed the powerful departments to reward other units and individuals in the organization.

Salancik & Pfeffer (1974) also addressed the issue of when power is used in resource allocation. They hypothesized:

> For a resource critical to most subunits, the scarcer
> it becomes. the more power will be used as the basis for
> its allocation in the organization. (p. 464)

As part of the interview process, the department heads in the study were asked to rank the following seven resources in terms of scarcity and criticality:

1. graduate fellowships,

2. research board grants,

3. appointments to the Center for Advanced Study,

4. summer faculty fellowships,

5. computer money for faculty research,

6. computer money for instructional use, and

7. new courses.

The top four resources in scarcity and criticality were used in a series of correlations with measures of power. The average rankings of the resources are shown in Table 8. The lower the number, the more scarce or the more critical the resource was thought to be. Graduate fellowships were identified as the the most critical and the most scarce of the seven resources. Three types of correlations, a simple correlation, a partial correlation controlling for objective criteria, and a partial correlation controlling for objective criteria and national reputation were done. The correlations are displayed in Table 9. The results of the correlations seem to support the hypothesis. The measures of power are more highly correlated with the more critical and scarce resources. Even in the partial correlation that controlled

Table 8

<u>Average</u> <u>Rankings</u> <u>of</u> <u>Criticality</u> <u>and</u> <u>Scarcity</u> <u>of</u> <u>4</u> <u>Resources</u>

Resource	Average criticality	Average scarcity
University graduate fellowships	2.46	2.45
research board grants for faculty research	3.00	3.20
Summer faculty fellowships	5.36	4.37
Appointments to the Center for Advanced Study	5.75	3.89

(Salancik & Pfeffer, 1974, p. 467)

Table 9

Correlations of Measures of Subunit Power With Allocations of 4 Resources

Resource	Measures of Power		
	Resbd	àCom	Interview-based measure of power
Simple correlations			
Graduate fellowships	.90*	.44**	.58**
Research Board grants	.85*	.35***	.56**
Appointments to the CAS	.74*	.32***	.36***
Summer fac. fellowships	.31***	.01	.15
Partial correlations, controlling for objective criteria			
Graduate fellowships	.83*	.38***	.25****
Research Board grants	.72*	.22	.32
Appointments to the CAS	.57*	.10	.18
Summer fac. fellowships	-.21	-.37***	-.60*
Partial correlations, controlling for objective criteria and national ranking			
Graduate fellowships	.90*	.40****	.26
Research Board grants	.86*	.27	.32
Appointments to the CAS	.65**	.04	.00
Summer fac. fellowships	.04	-.41****	-.52***

Resbd represents membership on Research Board
àCom represents membership on all committees
CAS represents Center for Advanced Study
  *p<.001.
  **p<.01.
 ***p<.05.
****p<.10.

(Salancik & Pfeffer, 1974, p. 468)

for objective criteria and national ranking, the correlation
between graduate fellowships and one of the unobtrusive
measures of power, representation on the university research
board, was significant at the .001 level of probability. The
university research board actually made allocation decisions
concerning resources and with those resources went graduate
fellowships.

Hills & Mahoney (1978) also examined the relationship
among the allocation of resources, power, and scarcity. They
analyzed the budgets and other relevant information for
30 budgetary units of the University of Minnesota, a
large land-grant university. They focused on the time period
between 1964 and 1975. Based on the increase of state
appropriations they classified the years 1964-1970 and 1975
as abundant years and the years 1971-74 as scarce years.
Because so much of the budget at the University of Minnesota
was determined by formula established outside of the
institution they defined discretionary budget increment as
the dependent variable in the study. They presented two
hypotheses:

> 1. Under conditions of relative abundance of resources,
> the allocation of discretionary budget increments will
> be predominantly a function of universalistic criteria
> and less a function of power.
>
> 2. Under conditions of relative scarcity of resources,
> the allocation of discretionary budget increments will
> be predominantly a function of power and less a
> function of universalistic criteria. (Hills & Mahoney,
> 1978, p. 457)

The budgetary units in the study are listed in Table 10.
There is a mix of departments and schools, but they were the
organizational units that received separate budget
allocations between 1964 and 1975. The two measures of
universal or bureaucratically rational criteria were relative
workload and change in workload. The unobtrusive measures of
power were representation on the committees of the University
Senate, the existence of an external advisory board for the
unit, and the amount of matching funds the University
contributed to the grants that the unit received. The
University Senate committees are listed in Table 11.
Although some of the committees recommended resource
allocation policy, none of them allocated resources.
Hills & Mahoney also included the previous budget in their
correlation of the other variables. The correlation
analysis for all of the variables in both the abundant and
the scarce years are displayed in Table 12. The previous
budget had a significant correlation with the discretionary
budget increment in the abundant and the scarce periods.
However, in the scarce period the correlation is negative;
i.e., the bigger the previous budget, the smaller the
discretionary budget increment in the scarce years. Relative
workload had a significant correlation in both the abundant
and the scarce periods and change of workload had a
significant correlation in the scarce period. Committee
representation and matching funds had no significant

Table 10

Budgetary Subunits Analyzed in This Study

Agricultural Economics Department
Animal Sciences Department
Anthropology Department
Art History Department
Astronomy and Physics Department
Chemistry Department
College of Business Administration
Economics Department
Electrical Engineering Department
English Department
General College
Geography Department
History Department
Journalism Department
Library School
Mathematics Department
Philosophy Department
Political Science Department
Psychology Department
Rhetoric Department
School of Architecture
School of Forestry
School of Home Economics
School of Law
School of Social Work
School of Statistics
Social Sciences Department
Sociology Department
Spanish and Portuguese Department
Studio Arts Department

(Hills & Mahoney, 1978, p. 458)

Table 11

Standing University Senate Committees Included in this Study

Academic Standing and Relations
Committees
Consultation
Educational Policy
Faculty Affairs
Judicial
Library
Research
Resources and Planning

(Hills & Mahoney, 1978, p. 460)

Table 12

Correlation Coefficients among Variables

Period of Abundant Resources (1964-1970, 1975)

	Prev. budg.	Rel. wkld	Ch. wkld	àCom	Adv. board	Match. funds
Rel. workload	-.036					
Ch. Workload	.069+	.291+				
àCom	.411*	.042	-.019+			
Adv. board	.070	-.232*	.051+	.132*		
Mat. funds	.093	-.230*	.041+	.020	.123*	
Disc. budget	.395*	.213*	.204+	.031	.097	.089

Period of Scarce Resources (1971-1974)

	Prev. budg.	Rel. wkld	Ch. wkld	àCom	Adv. board	Match. funds
Rel. workload	-.116					
Ch. workload	-.005	-.046				
àCom	.406**	.217**	-.075			
Adv. board	.133	.089	.329**	.055		
Mat. funds	.127	-.261**	.051	-.088	.396**	
Disc. budget	-.199**	-.067	.235**	-.040	.369**	-.061

àCom represents committee representation
 *p$\leq$.05.
**p$\leq$.05.
+Because of missing data "Ch. workload" must have a correlation coefficient of + or - .14 or larger to be significant at the .05 level.

(Hills & Mahoney, 1978, p. 462)

correlations in either period. However, the existence of an advisory board had a significant correlation in the scarce period. The regression of the discretionary budget increment on the previous budget, measures of power, and the universalistic criteria are displayed in Table 13. In the abundant period four variables--previous budget, relative workload, committee representation, and advisory board--had significant coefficients. However, the first two were the most influential, and committee representation actually had a negative coefficient. In the scarce period three variables-- previous budget, matching funds, and advisory board--had significant coefficients. However, previous budget and matching funds had negative coefficients and only advisory board had a strong positive influence on the discretionary budget increment in the scarce period. The regression analysis seems to support the hypothesis that in the allocation of resources universalistic criteria predominate in abundant periods and power predominates in scarce periods. Previous budget and relative workload were most influential in abundant periods and the existence of an external advisory committee was most influential during the scarce periods. However, there does seem to be a conceptual weakness in one of the measures of power. The variable matching funds underestimates the unit's ability to provide valuable resources to the organization. The matching funds variable really addresses the resources the institution provides to

Table 13

Regression Models of Discretionary Budget Increments during
Years of Abundant and Scarce Resources (1964-1975)

Variable	Coefficient	F	Significance
Years of Abundant Resources (1964-1979, 1975)			
Previous budget	.458	46.08	$p \leq .05$
Relative workload	.267	15.36	$p \leq .05$
Change in workload	.080	1.52	$p > .05$
àCom	-.187	7.58	$p \leq .05$
Advisory board	.137	4.57	$p \leq .05$
Matching funds	.091	2.08	$p > .05$
	$R^2 = .270$		$p < .000$
	$N = 232$		
Years of Scarce Resources (1971-1974)			
Previous budget	-.264	8.00	$p \leq .05$
Relative workload	-.128	2.09	$p > .05$
Change in workload	.108	1.50	$p > .05$
àCom	.060	.40	$p > .05$
Advisory board	.412	18.50	$p \leq .05$
Matching funds	-.224	5.74	$p \leq .05$
	$R^2 = .238$		$p < .01$
	$N = 120$		

àCom represents committee representation
Note: Variable coefficients are standardized regression
coefficients.

(Hills & Mahoney, 1978, p. 463)

the unit to secure external funding.

Pfeffer & Moore (1980) replicated the work of Pfeffer & Salancik (1974) on two campuses of the University of California System. The same 20 departments were involved on each campus and the same committees were used. The departments and the committees are listed in Table 14. The dependent variables in the study were the proportion of the budget received and the FTE faculty positions obtained. The independent variables were measures of departmental power and paradigm development. Departmental power was assessed through reputational surveys and through unobtrusive measures, representation on committees, proportion of grants accounted for by the department, and the proportion of enrollment accounted for by the department. The first measure, representation on committees, is related to opportunity as a source of power. The last two measures, proportion of grants and enrollment provided, are related to the provision of a valuable resource to the organization as a source of power. Paradigm development was measured by the parsimony of language in the dissertations that were completed in the departments and the integration of knowledge as indicated by the amount of sequencing of required courses for the major concentrations in the departments. Paradigm development is related to expertise as a source of power; however, Pfeffer & Moore treated it as a separate variable.

Table 14

Department and Committees Utilized in the Study of Budget
Allocations

Departments	Committees
Anthropology	Budget and planning
Art	Committee on committees
Chemical Engineering	Educational development
Economics	Educational policy
Electrical Engineering	Graduate council
English	Fellowships and
French	scholarships
Geology	subcommittee of the
German	graduate council
History	Committee on research
Mathematics	
Mechanical Engineering	
Philosophy	
Physics	
Physiology (Biological Sciences at one campus)	
Political Science	
Psychology	
Sociology	
Spanish (Spanish and Portuguese at one campus)	

(Pfeffer & Moore, 1980)

The hypothesized relationship among the variables is illustrated in Figure 1. Paradigm development directly influences grant and contract dollars and resource allocation, i.e., budget and faculty positions. Grant and contract dollars influence departmental power, as measured by reputational survey and committee representation. Student enrollment directly influences departmental power and resource allocation. Both student enrollment and external funding are valuable resources to the institution. The regression analysis displayed in Table 15 seems to support the hypothesized relationship among the variables. The coefficient for paradigm development in the regression on grants and contracts was significant at the .01 level. The coefficient of enrollment was significant at the .10 level and the coefficient of grants was significant at the .01 level in the regression on the reputational measure of power. The coefficients of both enrollment and grants were significant at the .01 level in the regression on committee representation. The coefficients of enrollment, committees, paradigm development, and the interaction of enrollment and paradigm development were all significant at the .05 level or lower in the regression on the proportion of the budget. In the regression on faculty the coefficients of enrollment and paradigm development were significant at the .01 level and the coefficient of committees was significant at the .10 level.
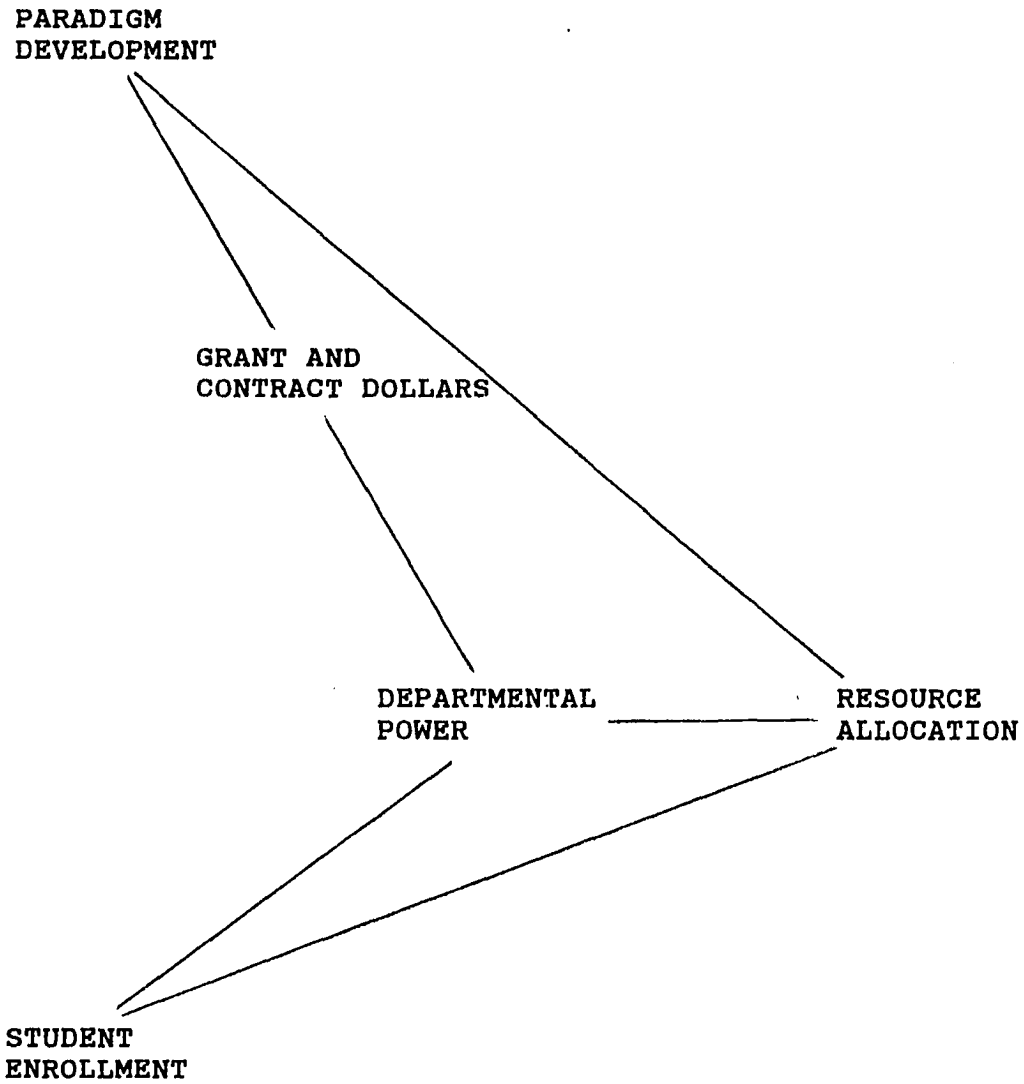
PARADIGM
DEVELOPMENT

GRANT AND
CONTRACT DOLLARS

DEPARTMENTAL
POWER

RESOURCE
ALLOCATION

STUDENT
ENROLLMENT

Figure 1. Model of power in decisions on budget allocations
(Pfeffer & Moore, 1980)

63

Table 15

Regression Equations Estimating Model of Power and Resource Allocation (N=40)

Grants = -.043 + .00311*** Paradigm

$(r^2 = .40)$ (.00061)

Power = 3.42 + 12.04* Enroll + 7.09 *** Grants

$(r^2 = .25)$ (6.18)   (2.33)

Committees = .0094 + .672*** Enroll + .131 *** Grants

$(r^2 = .50)$ (.127)   (.048)

Budget = -.0061 + .495*** Enroll + .216** Com. + .000702***
             (.094)   (.087)   (.000131)

           Par. + .0100** EnrollxPar.
$(r^2 = .76)$ (.0040)

Faculty = -.0036 + .661*** Enroll + .139* Com. + .00044 Par.

$(r^2 = .81)$ (.085)   (.078)   (.000120)

---

*$p \le .10$.
**$p \le .05$.
***$p \le .01$.

(Pfeffer & Moore, 1980, p. 645)

Pfeffer &·Moore (1980) also observed that resources were more scarce at Campus A than at Campus B. They ran the same set of regression equations for each campus and found stronger effects of power and more variance in the distribution of power at Campus A. This seems to support the idea that power is used more often in resource allocation when resources are scarce.

Pfeffer & Moore (1980) argued that analyzing the allocation of resources in an organization can provide a great deal of information about that particular institution.

> Research on organizations has barely begun to use budget and other forms of resource allocations to test organizational theories and issues. For example, it is possible to examine the magnitude of leadership effects by examining allocation changes when leaders change and to explore the conditions under which such effects vary. It is feasible to examine the effects of information systems on decision making by noting how changes in what is measured or how it is reported affect the apparent criteria that predict allocations. And, it is possible to examine the effects of changes in organizational structure, environmental constraints, and resource scarcity by exploring how the coefficients in a model of budget allocation vary both over time and in different contexts. (p. 652)

Chaffee (1981) used the allocation of resources to study the dynamics of decision making at Stanford University. She replicated the work of Pfeffer & Salancik (1974), Hills & Mahoney (1978), and Pfeffer & Moore (1980) with Stanford's data. She used a different statistical procedure because she was dealing with a population rather than a sample and she was unable to break the funding years at Stanford into abundant and scarce periods. She looked at the data from

38 departments over a ten-year period. Also, when
she used instructional units as an independent variable she
lagged the instructiqnal units of one year into the next
year's regression equation. Even with these exceptions and
modifications, her results were very similar to the original
studies. In the replication of Pfeffer & Salancik (1974)
power and instructional units had a strong influence on
resource allocation; however, the impact was not as great
at Stanford as it was at Illinois. The replication of Hills
& Mahoney (1978) confirmed the influence of the previous
budget on the current budget. The replication of Pffefer &
Moore (1980) confirmed that enrollment and power had
significant influence on resource allocation, but it did not
confirm the significance of paradigm development and the
replication did not address the variable of contracts and
grants provided to the institution.

Chaffee (1981) argued that the universalistic variables,
enrollment and instructional units, in the replications were
indicators of a bureaucratic decision-making model rather
than an indication of a rational model. She looked for
indicators of a rational decision-making model at Stanford
and found them in the planning and budgeting process of the
Provost's Office; allocation decisions were made against
explicit criteria in the pursuit of clearly established
goals. Moreover, a comprehensive modeling and decision
support system was used to minimize uncertainty. Chaffee

actually described rational strategic planning at the upper levels of Stanford University. This supports Allison's (1971) argument for the appropriate location for the application of the rational model in an organization. However, her description also revealed that the rational model was put in place through the routinized and personal charisma (Etzioni, 1961) of the Provost and his staff. The sources of their power were organization, expertise, and personality. Their primary power base was normative and their most effective instrument was persuasion in the acceptance of the values they wished to inculcate. They installed a rational decision-making model, but they created it with power not rationality. They developed specific evaluation criteria, but normative power, not rationality, determined the standards of excellence.

Implications of the Studies

All of the studies strongly suggest that power does affect resource allocation in higher education, but when and how power operates is affected by the internal and external environment of the organization; i.e., how much discretion do administrators have, how open is the allocation process, and how scarce and critical are the resources involved. Every study reviewed also indicates that bureaucratic criteria affect the the allocation of resources and I would argue that in some cases power is used to shape the bureaucratic

criteria to the advantage of the powerful. Power can also be used to create and support a rational model for resource allocation, but it must be used in a way that shapes values and develops commitment to the organization. Chaffee's (1981) study of decision making at Stanford supports the argument that alteration of belief or value is one of the most effective instruments of power in complex organizations (Etzioni, 1961; Galbraith, 1983). If power is used to shape values and norms, then the power structure or decision-making model which those values and norms support become legitimate in the organization (Pfeffer, 1981).

There is a tremendous diversity within and among organizations. It is impossible for an administrator to adopt one action plan or management style which will be effective in all situations. Before any constructive change can be made in the organization, one needs to understand the organization as it actually functions. One needs to identify the most commonly used instruments of power, the bases of power, and the sources of power. One needs to understand the relationship among the rational, bureaucratic, and political elements of resource allocation. One needs to understand what goals are actually supported by the current pattern of resource allocation; one needs to understand the norms, values, and history of the organization; one needs to understand the theories of action of the organization.

CHAPTER IV

USER ORIENTED METATHEORY

In this chapter of the study the concept of theory

of action and the perception and assessment of power are

used to establish the rudiments of a user-oriented

metatheory for management in higher education. A strategy

for planned change in organizations is suggested that can be

consistent with realities that administrators face in their

institutions.

Theories of Action

This is a decision making model that focuses on the

individual differences, perceptions, and strategies of the

people in an organization.

> Theories of action are theories that can be expressed
> as follows: In situation S, if you intend consequence
> C, do A, given assumptions a1 ... aN. Theories of
> action exist as espoused theories and theories-in-use,
> which govern actual behavior. Theories-in-use tend to
> be tacit structures whose relation to action is like
> the relation of grammar-in-use to speech; they contain
> assumptions about self, others, and the environment -
> these assumptions constitute a microcosm of science in
> everyday life. (Argyris & Schon, 1974, p. 30)

Argyris & Schon (1974) argued that the espoused theory is

how one predicts he would act. It is the theory of action

to which the individual gives allegiance. His theory-in-use

may or may not be compatible with his espoused theory and the

person may not be aware of the incompatibility.

Argyris & Schon (1974), Argyris & Schon (1978), and Argyris (1982) argued that the prevailing theories-in-use in our society fit into a conceptual framework which they called Model I. The model consists of a set of governing variables, behavioral actions, and consequences for the behavioral world. Four governing variables were identified: define goals and achieve them, maximize winning and minimize losing, minimize generating or expressing negative feelings, and be rational. Four action or behavioral strategies were identified: design and manage the environment unilaterally, own and control the task, unilaterally protect self, and unilaterally protect others. These governing variables and action strategies generally produce consistent behavioral consequences.

> We can predict four consequences. (1) The actors will be defensive. Some... will be authoritarian because they can exercise unilateral control over others. The others will fear their vulnerability and be overly concerned about themselves ... underconcerned with others. (2) Interpersonal and group relationships will become more defensive than facilitative. Group dynamics become more rigid and more a matter of winning/losing than collaboration. (3) Defensiveness in individuals, interpersonal relations, and group behavior will generate norms that support such behavior; norms such as conformity, antagonism, and mistrust will be generated rather than individuality, concern, and trust. (4) There will be little freedom to explore and search for alternatives, which is understandable given the first three consequences. Lack of freedom to explore and define goals, to explore new paths to these goals, and to set realistic but challenging levels of aspiration tends to little commitment to group decisions and little risk taking. (Argyris & Schon, 1974, p. 73)

Argyris & Schon (1974), Argyris & Schon (1978), and Argyris (1982) argued that there are two kinds of behavioral learning: learning to adopt new action strategies, i.e., single-loop learning, and learning to question or adopt new governing variables, i.e. double-loop learning. Double-loop learning does not replace single-loop learning; it complements it. Double-loop learning allows the individual to address nonroutine activities and decisions with more flexibility. Given the model I governing variables--action strategies and behavioral consequences, the learning that is possible for theories-in-use is, at best, single-loop, and, at worst, self-sealing; i.e., the assumptions of the theory-in-use are never tested. This limited ability to learn decreases the long-term effectiveness of model I theories-in-use.

Argyris & Schon (1974), Argyris & Schon (1978), and Argyris (1982) indicated that model II theories-in-use are more effective for individual and organizational learning. Three governing variables were identified for model II theories-in-use: valid information, free and informed choice, and the internal commitment to choice and the constant monitoring of its implementation. Four action strategies were identified: design situations or environments where participants can experience high personal causation, control tasks jointly, make protection of self or others a joint operation, and address directly observable behavior. These

governing variables and action strategies produce behavioral

consequences that are the opposite of model I

theories-in-use.

> If individuals behave according to the governing
> variables and action strategies of model II, others will
> tend to see them as minimally defensive and open to
> learning, as facilitators, collaborators, and people
> who hold their theories-in-use firmly (because they are
> internally committed to them) but are equally committed
> to having them confronted and tested. Defensiveness
> in interpersonal and group relationships will tend to
> decrease, and people will tend to help others, have more
> open discussions, exhibit reciprocity, and feel free to
> explore different views and risky ideas. Moreover,
> group norms will tend away from defensiveness and toward
> growth and double loop learning; for example, trust,
> individuality, powersharing, and cooperation will tend
> to become the norms, with competition being confronted
> when it becomes dysfunctional. As these norms are
> emphasized, authenticity, autonomy, and internal
> commitment will tend to increase. (Argyris & Schon,
> 1974, p. 91)

To understand why resource allocation in higher

education appears to have elements of rational, bureaucratic,

and political decision-making models, one must understand the

theories-in-use of the individual institution as they relate

to resource allocation. To understand, predict, and control

resource allocation so that it optimizes organizational

effectiveness and learning, the organization must move toward

the development of model II theories-in-use. The transition

from complete reliance on model I theories-in-use to the

addition of model II theories-in-use is difficult and centers

around the ability to explicitly evaluate current

theories-in-use for internal consistency, congruence with the

espoused theory, testability, effectiveness, and the values

generated by the theory-in-use. The key issue seems to be the creation of conditions that facilitate double-loop learning, i.e., focusing on observable behavior and testing all inferences openly. This process can facilitate a change of the governing variables of the theories-in-use and move them toward Model II (Argyris, 1982).

Efforts to create model II theories-in-use are most effective when they start at the top of the organization, but they can be successful in any subunit (Argyris & Schon, 1978). Argyris (1982) argued that a coherent program of organizational development should be implemented to facilitate model II theories-in-use. The program should involve seminars for the managers on the theory and practice of double-loop learning and the periodic intervention of an external consultant to stimulate the process of double-loop learning. The key issues of the entire process seem to be using data not above the first level of inference, i.e., directly observable data, or the second level of inference, i.e., culturally understood and accepted meanings, and to publicly test any inference above the second level. I would argue that even second-level inferences need to be publicly tested in organizations that are becoming more heterogeneous because culturally understood and accepted meanings may differ across subcultures. One additional point should be emphasized.

> Learning a theory of action so as to become competent
> in professional practice does not consist of learning to
> recite the theory; the theory of action has not been
> learned in the most important sense unless it can be
> put into practice. (Argyris & Schon, 1974, p. 12)

Model II theories-in-use can be used to explain,

predict, and possibly control the relationship between power

and resource allocation because Model II can incorporate the

rational, bureaucratic, and political elements of decision

making. However, I would argue that a perceptual framework

is needed to provide a common foundation to define what is

observable data and to provide the parameters of culturally

accepted meaning. One acceptable framework is open systems

theory. The conceptual integration of the theory of action

and the open systems perspective can produce what Keller

(1983) identified as successful academic strategy.

> Strategic action recognizes that human nature is an
> amalgam of intellect, power plays, and emotions such as
> fear, envy, anger, compassion, greed, and the desire for
> purpose and meaning. So it gathers the best information
> and forecasts; struggles to overcome political
> jealousies, inertia, and sabotage; and builds
> psychological awareness and commitment.
> unapologetically, it marries rationality and
> artfulness, financial facts and politics. (p. 149)

Perception of Power

Nightingale & Toulouse (1977) presented an open system

theory of organization in which the pattern and use of power

are an integral part. The theory has five variables:

environment, values, structures, process, and

reactions-adjustments. The variable environment includes

cultural, political, economic, legal, and technological factors as well as the state of information about the organization. Values are abstract orientations that define acceptable beliefs and behavior. They also provide an underlying continuity for the beliefs and behavior in the organization. Structure is any formalized, routine, and officially sanctioned procedures through which the organization is administered. Process is the interpersonal and intergroup behavior that takes place within the defined structure of the organization.

> Communication upward, downward, and across the organizational hierarchy; face-to-face interaction among the members - for example, the encouragement of a best effort; interpersonal and intergroup conflict; bases of power; participation - that is, informal influence which members have within the limitations imposed by the organization's structure; and promotion practices are examples of the process. (Nightingale & Toulouse, 1977, p. 265)

Reactions-adjustments are feelings and attitudes of organizational members. For example, sense of alienation, trust in peers and superiors, satisfaction with organizational life, loyalty, and commitment to the organization.

Nightingale & Toulouse (1977) argued that congruence will occur among the five variables. The reciprocal interactions among the last four variables—values, structure, process, and reactions-adjustments—push them toward congruence over time. Aspects of the environment affect the managerial value system of the organization and

elements of the organization's structure. Broad cultural values and beliefs about authority, human nature, and work also affect the value system. Technological demands and constraints affect the structure of the organization. The managerial values system influences and is influenced by the structure and the process of the organization as well as the reactions-adjustments of the members of the organization. Each of the four variables within the framework of the organization affects and is affected by the others. For example, the way power is used in the process of the organization will over time affect not only the reactions-adjustments of the members of the organization but also the values and structures of the organization.

Nightingale & Toulouse (1977) tested the theory in 20 industrial organizations in Canada. The results of the study supported the hypothesized relationship and the strongest correlation was between the measures of process and reactions-adjustment. (The measures that were used are in the Appendix.) These results tend to support the intuitively obvious point, that the way people are treated in an organization will affect their loyalty and commitment to the organization. It is especially important in certain types of organizations, i.e., those that require highly skilled and independently functioning participants, that the members of the organization be committed to the values and major goals of the organization. In their case compliance is not enough;

compliance will not generate innovative or creative behavior. (Etzioni, 1961)

There are a number of alternatives that can be used to apply Nightingale & Toulouse's conceptual framework to the patterns of power and influence in higher education. One alternative is to use modified versions of the measures in the Appendix for the faculty, staff, and administrators of the institution and analyze the results by group. Will the three groups share the same goals? Will they share the same values? What will be the most common base of power? Are the faculty satisfied or alienated?

Another alternative is to use standardized instruments designed for higher education to address the same issues. Two suitable sets of instruments are the Institutional Goals Inventory (IGI) and the Institutional Functioning Inventory (IFI). The IGI is a standardized survey for the various constituent groups of a college or university. The survey elicits reactions to over 90 institutional goals as they are and as they should be. The instrument has additional space for up to 20 goals developed at the institution and six supplementary questions. The IFI asks faculty, students, and administrators for their perceptions of the institution on 11 scales: intellectual-aesthetic extracurriculum, freedom, human diversity, concern for improvement of society, concern for undergraduate learning, democratic governance, meeting local needs, self-study and planning, concern for

advancing knowledge, concern for innovation, and institutional esprit (Educational Testing Service, 1972).

A third alternative is suggested by the work of Alderfer & Smith (1982). They combined intuitive analysis of the organization with survey research. They argued that any data that are collected about an organization are not only a function of the theory used but also a function of the method used to collect the data. Moreover, the method has a stronger direct influence on the data than theory. Their work focused on intergroup relationships in organizations. They argued that the groups in an organization can be divided into two classes: identity and organizational groups.

> An identity group may be thought of as one whose members share common biological characteristics (such as sex), have participated in equivalent historical experiences (such as migration), are subjected currently to certain social forces (such as unemployment), and as a result have similar world views. When people enter organizations, they bring along their identity groups, which are based on variables such as ethnicity, sex, age, and family. (Alderfer & Smith, 1982, p. 38)

> An organizational group may be conceived of as a group whose members share approximately common organizational positions, participate in equivalent work experiences, and consequently have similar organizational views. Organizations assign members to organizational groups according to division of labor and hierarchy of authority. One critical factor in intergroup relations in organizations is that membership in identity groups is not independent from membership in organizational groups. (Alderfer & Smith, 1982, p. 38)

The last point simply means that membership in certain identity groups limit the organizational groups that one can enter. Both types of groups share five common

characteristics:

1. interdependent relations within the group,

2. perceive themselves as a group,

3. recognized as a group by others,

4. interdependent relationships with other groups, and

5. roles in the group are a function of member and
   expectations.

Alderfer & Smith (1982) used microcosm groups as a
major tool in studying the characteristics of the intergroup
relations within the organization. A microcosm group is a
sample of the identity and organizational groups that are
relevant to an issue that is of concern. The microcosm
group should contain no more than 12 members at any one
time, but the membership should vary over time as the issues
in the organization change. Alderfer & Smith used the
mechanism to study group relations, but the procedure could
be used to study or assess any process variables in the
organization.

Discussions with the microcosm group are where the
intuitive identification of the characteristics of relevant
process variables would be defined and developed. Survey
instruments would be developed and pilot tested with the
group. The surveys would be modified based on the feedback
from the group so that the substance and style of the
instrument would be relevant to the internal reality of the
organization. When the survey of the organization was

completed the results would be reviewed and discussed

by the microcosm group. The basic idea behind the use of

the microcosm group is that not only is the data collected

more accurate and valid but also the method itself creates

more involvement and commitment to the organization; i.e.,

the method of identifying the process of the organization

also improves the process of the organization. A microcosm

group is usually more effective if an external consultant

works with the group directly and collaborates with the

internal managers on the interventions that will be

implemented. It lends itself to the testing of assumptions

and inferences and could provide the environment to initiate

the type of double-loop learning that is necessary for the

development of an effective theory of action.

Implications of Power

One issue that should be dealt with explicitly when

analyzing the patterns of power in the process of an

organization is that power is also the ability to thwart the

planned behavior of others. In many complex organizations

the participants need only not cooperate fully, i.e.,

simply comply in terms of their external behavior, in order

to stymie the goals and the objectives of the management of

the organization. This behavior is often the type of

countervailing power that develops when coercive and

remunerative power bases are used excessively. The

participants in the organization can not really influence or shape the behavior of the authorities, i.e., those who can enforce binding decisions; they simply frustrate them (Gamson, 1968). In this case, this degenerates into "working to the rule", i.e., only doing the minimum that the formal structure and procedures require. No institution of higher education can function effectively over time if a significant number of the members of the organization simply work to the rule.

What Galbraith (1983) called conditioned power, i.e. the use of a normative power base, is the one most effective means of power in complex organizations (Etzioni, 1961). It does not generate countervailing power and is not zero sum in its nature (Galbraith, 1983). The most common pragmatic criterion for power is whether it will accomplish the desired objective in the short term. However, the most important criteria should be the long-term impact on the values, structure, and reactions-adjustments of the organization. Power should be used to improve organizational effectiveness.

Cameron (1978) pointed out that organizational effectiveness in higher education is multidimensional, i.e., external dimensions, morale dimensions, and student-oriented dimensions. The concept of equifinality suggests that there is more than one way to reach the desired goal, organizational effectiveness (Katz & Kahn, 1966). However, open systems theory also suggests that the ability to adapt

appropriately to the external and internal environment--i.e.,

innovation--is a major criterion for organizational

effectiveness. Davis, Strand, Alexander, & Hussain (1982)

argued that innovation is a function of the organizational

environment and the characteristics of the individuals within

the organization. However, they make this point.

> In the early stages of the innovation process,
> innovators clearly perceive their motivation as the
> primary or most important factor of the change process.
> (p. 584)

If any institution of higher education is to be innovative

and effective, it must have committed and motivated faculty

and staff. Their reactions-adjustments to the process of the

organization must be generally positive. The value system

and structure of the organization must be constructive. The

appropriate use of power can achieve these ends. An

administrator must use power constructively in a coherent

theory of action to have a high probability of organizational

effectiveness (Pettigrew, 1975; Argyris, 1982).

This chapter suggests some basic guidelines for

administrators in higher education:

1. Develop a theory-in-use which is explicit and

consistent with the espoused theory of action;

2. Encourage an environment that supports double-loop

learning;

3. Assess the process of your organization, especially

power, and its impact on the total organization;

4. Involve students, faculty, staff, and consultants
in the assessment of the process of the organization and
in the process of double-loop learning.

5. Maintain an open system perspective which accepts all
sorts of data as legitimate; and maintain an awareness
for new variables and relationships.

It is important to keep in mind that the perceptions of
power are not only a function of the sources, bases, and
instruments of power but also the assumptions of the
perceiver. The guidelines indicate a broad road to a level
of perception of the organization that is often only reached
by a narrow and hidden path of intuition. Each of the
studies in Chapter III on the relationship between power and
resource allocation had slightly different definitions of
power and determinants of power; each study illustrated
slightly different relationships among the rational,
bureaucratic, and political criteria of resource allocation;
each study described an organizational environment that had
differential affects on the interaction between power and
resource allocation. An efficient administrator should be
able to use all the instruments of power; the individual
should be able to influence the access of individuals and
subunits to the sources of power. However, only a
realistic perception of the organization can make these
actions effective. An administrator needs a theory of action
that allows the individual to learn and grow.

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary

The problem this theoretical study addressed was that
while many of the models for planning, management,
and resource allocation are based on the assumptions
of rational decision making, the administrative reality of
most institutions of higher education is not completely
rational. The goals are not always clear; alternatives are
often not clearly defined; actions are implemented that
do not optimize the stated goals of the institution.
Administrative reality is a mix of rationality, bureaucracy,
and politics. The prescriptive models that many
administrators are taught do not match the organizational
realities that those same administrators must face.

Administrators develop theories-in-use, working models
that actually govern their behavior. Theories-in-use are
often tacit; the individual may or may not be aware of what
actually governs his behavior. Moreover, the theory-in-use
may not be consistent with the individual's espoused theory,
the theory to which the administrator gives his allegiance.
As long as the theory-in-use is not explicit, it is
difficult to verify the effectiveness of the theory-in-use

in promoting organizational health and development.

The research reviewed in this study suggests that in several cases the theory-in-use for resource allocation did not match the espoused theory. The espoused theory was rational planning; the theory-in-use appeared to be a combination of rational, bureaucratic, and political elements. The particular theory-in-use varied from institution to institution, but all of them seemed to have the same combination of elements. Also, in each organization some form of power played a significant part in the theory-in-use of resource allocation.

Power is a pervasive and complex organizational variable. It can have a variety of bases, sources, and instruments, but its use always affects all the major elements of the organization. Power in the organization must be understood if one wishes to develop an organizationally effective model II theory-in-use that is explicit and consonant with the espoused theory of the organization. Building this type of theory-in-use can be done most effectively by focusing on observable behavior and testing assumptions and inferences. An open systems view helps define what is observable and helps determine what are acceptable inferences. Building an effective model II theory-in-use is the beginning of one's personal metatheory of management.

Conclusions

In Chapter I of this study two questions were asked:

1. How does power affect resource allocation in

institutions of higher education?

2. How does one conceptualize and assess power in

institutions of higher education?

The review and analysis of the literature indicate several

answers to these questions.

1. Power affects resource allocation in institutions of

higher education in combination with bureaucratic,

political, and rational factors.

2. Power is used most often when resources are scarce

and critical and when the decision-making process is

closed and ambiguous.

3. Power is an integral part of any organization. It

has several sources: organization, property,

personality, expertise, and opportunity; four bases:

coercion, remuneration, norms, and knowledge; and three

instruments: sanction/threat, reward/promise, and

alteration of belief/value.

4. Power is best assessed through a combination of

intuitive and logical analysis and survey research.

This process can not only give insights into the nature

and use of power but also give some indication of the

reaction and affect of power.

5. The assessment of power is most effective when it

is done cooperatively with the members of the
organization in microcosm groups, i.e., samples of
the groups significant to the process.

6. A model II theory-in-use allows the testing of
assumptions underlying the use of power in the
organization.

7. Double-loop learning, i.e., learning which tests and
changes the governing variables of a theory-in-use, is
essential for the development of model II
theories-in-use.

Recommendations

The analysis of the literature reviewed in this study
produced a number of recommendations not only for
administrators in higher education but also for the education
of administrators. The recommendations for administrators
involve guidelines for the development of their own user
oriented management theory. The recommendations for the
education of administrators deal with guidelines for the
development of an effective curriculum. There are five
recommendations for administrators:

1. develop a coherent theory of action in which your
theory-in-use is explicit and consistent with your
espoused theory;

2. encourage an environment that supports double-loop
learning; make it possible for governing variables,

basic assumptions, to be questioned and changed;

3. assess the process of your organization, especially

power, and its impact on key organizational functions,

e.g. resource allocation;

4. involve others--faculty, staff, students, and

external consultants--in the assessment process of the

organization and in the process of double-loop

learning;

5. maintain a perspective and an organizational

heterogeneity which allows you to collect relevant

information from a wide variety of sources and which

allows you to discover new relationships.

There are four recommendations for the education of

administrators:

1. The curriculum should teach the skills necessary for

the development of a cohesive theory of action. Three

basic skills are involved: diagnosis of the internal and

external environment, testing of theories-in-use and

assumptions, and understanding and accepting one's

personal causality. In order to maintain a competent

performance administrators must understand the history

and current situation of their organization; they need

to be aware of the theories-in-use and continually test

them for appropriateness and effectiveness; and they

must understand their role as a technical and

interpersonal instrument in the organization.

2. The curriculum should provide exposure to a wide variety of theoretical perspectives and require the integration of several of the perspectives into a proposed theory of action.

3. The curriculum should provide an opportunity for double-loop learning in as many courses as possible so that double-loop learning will become a basic part of the administrators' repertoire of behavior.

4. The curriculum should provide an opportunity for the students and faculty to test their theories-in-use. Simulations, case studies, and role playing may be required, but an effective theory of action has not been learned until it can be practiced.

Concluding Statement

Management in higher education is a combination of art and science. Despite the professional education of many administrators, the practice of management is often learned through apprenticeship. This process may have been acceptable in a relatively stable environment, but in increasingly complex organizations that exist in a rapidly changing environment managers can not rely on what their mentor did.

Administrators must be able to reconstruct the reality of their organization and be able to test the validity of the

vision. Administrators must be able to understand not only how power affects their organization but also how to use power to make the organization more effective. Administrators need to understand whether they practice what they say they believe and to understand how their practice affects the values and commitment of the people they affect. Administrators need to test their assumptions and values and to know what to hold and what to let go. The professional education of administrators, whether it is formal or in-service education, should prepare them for these tasks. It should teach them the art, the science, and the practice of management and the ability to continually educate themselves.

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APPENDIX

Measures of Concepts from Nightingale and Toulouse (1977)

Values

The values questions were introduced by the following statements: "Below are listed a number of statements. There are no right or wrong answers to these statements. We are interested only in your opinion about each statement." Each question was measured on a five point scale, which ranged from strongly agree to strongly disagree.

Measures

1. Index consisting of average responses to three questions: A good superior discourages his subordinates from talking to him about their personal problems. A superior should give his subordinates only that information which is necessary for them to do their tasks. The more a superior grants the requests of his subordinates, the more he loses authority.

2. Most people work best under close supervision.

3. A superior should always explain his decisions to his subordinates.

4. Generally, one must learn to be cautious with relations with others.

5. A superior can not afford to make mistakes.

6. Most people today try to work as little as possible.

7. Group goal setting offers advantages that can not be obtained by individual goal setting.

Structure

The structure questions were introduced by the statements: "The following statements may be either true or false as they apply to your job. On the scale, describe the extent to which each statement applies to your company." A four point scale ranging from definitely true to definitely false was used except where indicated otherwise.

Measures

1. Task definition index: Everyone has a specific job to do. There is a complete job description for my job.

2. Job codification index: First, I feel that I am my own boss in most matters. Employees are often permitted to use their own judgement as to how to handle various problems. A person can make his own decisions here without checking with anybody else. People here are allowed to do almost as they please.

3. Rules observation index: The organization keeps a written record of everyone's job performance. Going through proper channels is constantly stressed. Written orders from higher up are followed without questions. Employees are constantly being checked on for rule violations. People here feel that they are constantly being watched to see that they obey the rules.

4. Rules orientation measure: Whatever situation arises, we have procedures to follow in dealing with it.

5. Variety of work measure: One thing people like around here is the variety of work.

6. Slope and control curve: influence of the plant manager and his executive board minus the influence of the workers as a group, measured on a five point scale ranging from very little influence to a great deal of influence.

7. Height of control curve: index of average influence of three groups measured on a five point scale: the plant manager and his executive board, all other managerial and supervisory personnel, and the workers as a group.

8. Hierarchy of authority index: A person who wants to make his own decisions would be quickly discouraged here. Even small matters have to be referred to someone higher up for a final answer.

Process

Process questions were measured on four or five point scales. Measures us five point scales unless noted otherwise.

Measures

1. Positive bases of promotion index:
    a. quality of work
    b. quantity of work
    c. supervisor's opinion
    d. dependability
    e. creativeness, inventiveness, and taking initiative
    f. having good professional knowledge
    (importance ranges from not at all to very great)

2. Negative bases of promotion index:
    a. having friends and relatives in higher management
    b. recommendations of a political or a religious nature
    c. ethnic considerations
    d. (importance ranges from not at all to very great)

3. Promotion based on seniority in the plant.
    (importance ranges from not at all to very great)

4. To what extent do persons in their work group encourage each other to give their best effort.
    (To a very great extent ... not at all)

5. When decisions are made, are the the people affected asked for their opinion and suggestions?
    (almost never asked ... almost always asked: four point scale)

6. Is there a free flow of communication existing downward?
    (to a very great extent ... not at all)

7. Is there a free flow of communication existing upward?
    (to a very great extent ... not at all)

8. Is there free flow of communication existing sidewise?
    (to a very great extent ... not at all)

9. To what extent are you told what you need to know to do your job in the best possible way?
    (to a very great extent ... not at all)

10. Do you know how your job fits into the functioning of this plant?
    (I do not know at all ... I know completely)

11. In working with other departments, problems are bound to arise from time to time. When these problems occur, to what extent are they handled well?
    (to a very great extent ... not at all)

12. From time to time, major changes in policies, procedures, or equipment are introduced by this company. Generally, how do these changes work out?
        (changes of this kind are always an improvement ... they are never an improvement)

13. How much strain or stress do these changes create for the people who work in this company?
        (extremely high strain ... no strain at all)

The following bases of power questions were introduced by the statement: "when you do what your immediate supervisor requests you to do on the job, why do you do it?" , and were measured on a five point scale.
        (not at all ... to a very great extent)

14. I respect his competence and judgement.

15. He can give special help and benefits.

16. He is a nice guy.

17. He can penalize or otherwise disadvantage me.

18. It is my duty.

19. It is necessary if the organization is to function properly. (Nightingale & Toulouse, 1977, p. 277-279)

Reactions-adjustments

Measures

1. Index of alienation: average score of ten statements answered on a five point scale ranging from very true to very untrue.
        a. Men like me can not influence the course of events; only men in high positions can have such influence.
        b. I have never had the influence over others that I would like.
        c. Public affairs are so complicated that it is impossible to orient oneself to them.
        d. Despite the many advantages science has made, life today is too complicated.
        e. Life seems to be moving on without rules or order.
        f. Nowadays, it is hard to know right from wrong.
        g. It is not possible to rely on others.
        h. Today it is practically impossible to find real friends because everyone thinks only of himself.

i. I can never do what I really like because
circumstance require that I do otherwise.
j. Life is so routinized that I do not have a chance to
use my true abilities. (Tannenbaum, Kavcic, Wieser,
Rosner, & Vianello, 1974, p. 159-160)

2. All in all, how satisfied are you with your job?
    (not at all ... very much)

3. Index of ideal-actual participation: When decisions are
being made should (are) the people asked for their opinions
and suggestions?
    (They should (are) almost never asked for their opinions
    and suggestions ... they should (are) almost always
    asked for their opinions and suggestions)

4. Index of ideal-actual personal control: How much influence
do (should) you actually have on what happens in this plant?
    (very little influence... a very great deal of
    influence)

5. To what extent do you really feel responsible for the
success of your own work group?
    (not at all ... very much)

6. To what extent do you really feel responsible for the
success of your department?
    (not at all ... very much)

7. To what extent do you really feel responsible for the
success of the whole plant?
    (not at all ... very much)

8. What are the attitudes of company members toward plant
management?
    (attitudes are strongly opposed ... attitudes strongly
    support management: four point scale)

9. Do you think responsible people have a real interest in
the welfare of those who work here?
    (they have no interest at all ... they have a very great
    interest)

10. To what extent do you have confidence and trust in your
superior?
    (to a very great extent ... not at all)

11. To what extent do you have confidence and trust in the
persons in your work group?
    (to a very great extent ... not at all)

12. Do you feel free to discuss personal problems with your immediate superior?
     (to a very great extent ... not at all)
(Nightingale & Toulouse, 1977, p. 279-280)