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The organizational culture of the academic department: A case study of a Department of Biological Sciences

Martha Anne Smith
College of William & Mary - School of Education

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The organizational culture of the academic department: A case study of a Department of Biological Sciences

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THE ORGANIZATIONAL CULTURE OF THE

ACADEMIC DEPARTMENT:

A CASE STUDY OF A DEPARTMENT OF BIOLOGICAL SCIENCES

A Dissertation

Presented to

The Faculty of the School of Education

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Of the Requirements for the Degree

Doctor of Education

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by

Martha Anne Smith

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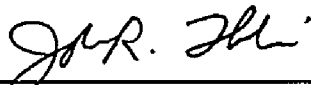
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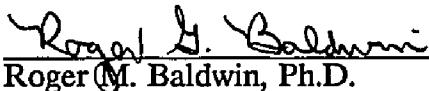
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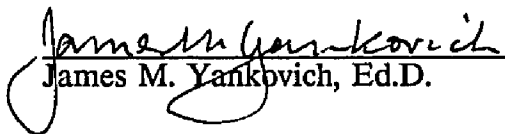
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DEDICATION

In memory of V.S.B., neighbor and friend
In recognition of her thirty-seven years of service to the Department of Biological
Sciences and to the University

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ACKNOWLEDGEMENTS

THE ORGANIZATIONAL CULTURE OF THE ACADEMIC DEPARTMENT:

A CASE STUDY OF A DEPARTMENT OF BIOLOGICAL SCIENCES

ABSTRACT

The purpose of this study was to examine theories of organizational culture typically applied to the university level of organization and their applicability to the academic department. Chaffee and Tierney's (1988) theory of organizational culture, dimensions of culture, and leadership strategies became the basis for a qualitative case study of a Department of Biological Sciences in a metropolitan university.

Interviews of current faculty members, current and former deans, and other administrators were conducted. Observations were made of faculty meetings and retreats and of departmental governance committee meetings. Extensive review of documents and correspondence covering more that twenty years provided additional data.

Interview and observation transcripts and documents were analyzed in terms of Chaffee and Tierney's (1988) concepts of the structural, environmental, and values dimensions of the department. Linear, adaptive, and interpretive strategies of faculty members and the department chair were identified.

The department was found to have what Clark (1972) refers to as strong organizational saga, or a sense of unique accomplishment which serves to maintain and perpetuate the integrity of the culture. Central to the value system of the

Department of Biological Sciences is the shared sense that the department is unique in the degree to which faculty members work together cooperatively for the good of the department. These strong values were rooted in an earlier era when the department was experiencing growth and development of its research programs under adverse circumstances.

The primary usefulness of the results of this study go far beyond the particular findings for this individual academic department. Most important is the demonstration of the value of using this method of organizational analysis to understand the role of culture in shaping and perpetuating the organization. Administrators, department chairs, and faculty members can enhance their understanding of the departmental organization by applying concepts of organizational culture.

Further study and analysis are needed to evaluate disciplinary and institutional similarities and differences in departmental culture and to expand the existing theory to accommodate the variety of academic departments in colleges and universities.

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PROGRAM: HIGHER EDUCATION

THE COLLEGE OF WILLIAM AND MARY IN VIRGINIA

THE ORGANIZATIONAL CULTURE OF THE

ACADEMIC DEPARTMENT:

A CASE STUDY OF A DEPARTMENT OF BIOLOGICAL SCIENCES

CHAPTER 1

Viewing the Academic Department as a Culture

Introduction

The department is the center of academic life of the university. Most often, departments are organized around commonly-recognized academic disciplines. The department is a convenient unit of organization and analysis, especially in organizations which are hierarchial in structure. Such organizations successively divide the university into colleges or schools, which are further divided into academic departments.

Departments provide the context for observable activities such as teaching, learning, research, service, and administration. These activities are frequently seen to provide and perpetuate the organizational unit's coherence and persistence over time. The mechanisms of departmental integrity are the topic of the current discussion.

Using the Metaphor of Culture to Understand the Department

People often use metaphors to help understand complex organizations (Morgan 1986). Metaphors are of particular value because of their ability to describe organizational activities and to provide the basis for understanding the mechanisms

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underlying the origin and perpetuation of the organization over time.

Common metaphors for understanding the operations and functions of the university are many. Some of these metaphors include perceiving the organization alternatively as a bureaucracy, collegium, political system, cybernetic system, organized anarchy, and most recently, as a cultural system. Each of these metaphors provide an alternative way to understand the seemingly limitless complexities which comprise the university. The value of the metaphor is revealed by the degree to which it provides order to the organizational observer, both in descriptive and explanatory terms.

Most metaphors or theories of university organization focus on the institutional level of analysis, as an attempt is made to explain coherence at the level of the organization as a whole. Although some theories have elements which address lower levels of organization within the university, little work has been done to develop theory which can be applied at various levels of organization.

Most theoretical discussions of the academic department focus on the functions of the department and the role of the chair of the department. Much of what has been written, including the emerging management literature on chairing the academic department, has been largely descriptive in nature. There remains a considerable need to develop common organizational concepts and theories that, in a comprehensive and unifying way, integrate the operations of the organization at all levels, including the department and the university.

The Purpose of the Current Study

The purpose of the current study is to evaluate the utility of applying concepts of organizational culture, which have been developed to as a means of understanding university organization, to the level of the academic department. The goal of this process is to force a convergence of thinking about university organization which will result in (1) increased validation of the application of theories of organizational culture to colleges and universities; and, (2) the development of more parsimonious and comprehensive theories that apply to all levels of organization.

Research Questions and General Hypotheses

The major research question in the current study is: **Can theories of organizational culture prove useful in describing and explaining the organization of the academic department?** Current theories will be discussed and evaluated by the research design in terms of their applicability to observations of departmental activities.

An additional question is: **What additions or elaborations to theory are necessary to generate a comprehensive theory of organizational culture which will apply at the university and department levels of organization?** An assessment of the need for additional theory and extensions of theory will be made in the data analysis process.[1]

Chapter 1 Notes

1. The style manual adopted for this work is <u>A</u> <u>Manual</u> <u>for</u> <u>Writers</u>, Fifth edition by Kate L. Turabian (1987). Slight modifications to the established style were made when particular requirements of the dissertation necessitated them.

CHAPTER 2

A Review of the Literature

Organizational Culture and the Academic Department

Introduction

Concepts of organizational culture appear to be quite useful in understanding the organization of colleges and universities. However, these concepts are currently applied only at the highest levels of university organization.

The present review will accomplish several things. It will: (1) provide a review of the relevant concepts of organizational culture and how they apply to colleges and universities; (2) present a discussion of academic culture and the culture of the discipline; and, (3) provide a review of the relevant literature on the organization of the academic department and on the position of chair[1] in the department.

This review will illustrate the need for and the value of an extension of concepts of organizational culture to the analysis of the academic department. A case study model will emerge as the best way to evaluate the applicability of theories of organizational culture to the analysis of academic culture in the academic department.

Concepts of Organizational Culture in Higher Education

Colleges As Organizations

Colleges are highly complex systems of people, functions, accountabilities, and traditions. Students of college organizations use models or metaphors to describe and explain the activities they observe. A **collegial model** views the college as a community of scholars who achieve organizational goals by reaching consensus. A **bureaucratic model** likens the organization to a machine which functions using rational policies within a hierarchical structure. According to a **political model**, the college is made of conflicting interest groups which function through negotiating and coalition-building (Baldridge et al. 1977).

Cohen and March (1974) acknowledge the apparent irrationality observed in many college organizations in their model of the **organized anarchy**. From this perspective, the university is composed of a number of smaller units whose functioning is internally organized but is loosely coupled to that of other units. While activities at the college level might appear to be chaotic, organization and coordination exist at lower levels.

Birnbaum (1988) describes the college as a **cybernetic system** which constantly monitors its activities and makes appropriate corrections as needed to maintain equilibrium. College leaders monitor the self-regulating mechanisms which help maintain the college's stability.

A view of the college as a **culture** emphasizes the values, assumptions, and social conventions which are the essence of the organization. Identifying and analyzing culture goes beyond the superficially observable. According to Kuh and

Whitt (1988), the

> culture of higher education is the collective, mutually shaping patterns of norms, values, practices, beliefs, and assumptions that guide the behavior of individuals and groups in an institute of higher education and provide a frame of reference within which to interpret the meaning of events and actions on and off-campus (12-13).

Why Study Organizational Culture in Colleges?

Traditional models of organization typically emphasize order and rationality. Much of the appeal of the concept of organizational culture lies in its ability to explain seemingly nonrational events which are not addressed by other models (Kuh and Whitt 1988). Culture provides a way for organizational participants to make sense of what they experience. Most people are aware of the existence of culture in organizations (Schein 1985). Almost everyone tends to sense a pattern or rhythm in activities within a familiar culture. When faced with a new culture, anxiety and the desire to conform to a different culture's demands are common responses to exposure to an unfamiliar organization.

Many theorists believe that organizational effectiveness can be improved through understanding the culture of organizations, especially in areas where seemingly rational actions fail or are met with resistance. The enhanced ability to detect and act on differences in values underlying organizational difficulties can be extremely valuable to leaders.

Concepts of Culture

Basic definition. What does it mean to view the college as a culture? Basic to a cultural view is the recognition that certain values, beliefs, and assumptions are shared by all members in an organization in ways that bind the organization into a

cohesive social group with certain norms and expectations.

Culture can serve a number of purposes including giving members of an organization **identity**, instilling **commitment** to the organization, providing a **stabilizing** influence, and providing a means for organizational participants **to make sense** of the events around them. Definitions often include **regularity in observed behavior**, the existence of **shared norms, rules, and values**, guidance of the group by a **central philosophy**, and the existence of **rules for getting along** for participants.

Sociologist Clifford Geertz (1973) observed, "man is an animal suspended in webs of significance he himself has spun" (5). Culture is socially constructed by members of a group who share common experiences. Reality is not considered objective fact; instead, reality is seen as a construction.

Schein (1985) argues that the culture of an organization can be viewed as both product and process. Culture can be conceived of in terms of its end products which include constructed meanings and values. Alternatively, Schein suggests that the culture may be better conceived as a process by which meaning and order is structured by participants, a process which "shapes human interactions and reflects the outcomes of mutually shaping interactions" (45).

Schein's framework. Schein (1985) provides an excellent framework for understanding and using the concept of culture in the analysis of organizations. Schein reminds us that, while it has many surface manifestations, culture itself exists on a deeper level. Shared assumptions and beliefs exist below the level of consciousness and are taken for granted by members of the culture. These assumptions are acquired through learning and serve to help the organization adapt

to internal and external pressures.

> Culture is a pattern of basic assumptions - invented, discovered, or developed by a given group as it learns to cope with its problems of external adaptation and internal integration -- that has worked well enough to be considered valid, and, therefore, to be taught to new members as the correct way to perceive, think and feel in relation to those problems (Schein 1985, 9).

This definition illustrates that Schein's definition of culture finds its intellectual foundations in the sociocultural tradition in anthropology.

According to Schein's framework, all organizations faces two types of survival problems: (1) adaptation to the external environment, and (2) integration of its internal processes. In the process of facing and solving these problems, beliefs and assumptions which underlie successful solutions become a part of the group's collective understanding, viz., culture.

Making a distinction between surface and deep manifestations, Schein describes **three levels of culture: (1) artifacts, (2) values, and (3) basic assumptions. Artifacts** exist at the most visible level and are "constructed physical and social environment . . . [which include] . . . technology, art, and visible and audible behavior." Examples of artifacts in colleges and universities include: agenda items at a departmental meeting, who speaks up at faculty meetings, who gets assigned to which committees, and faculty attitudes about administration. Artifacts present a challenge to the researcher because they may or may not reflect underlying values and assumptions.

Values held by members of an organization reflect a sense of what is ideal and become a part of the group perspective when they support successful solutions to problems. Some values are transformed into basic assumptions if they continue to

support successful solutions in the collective eyes of the group. The researcher must take care to make a distinction between true group values and **espoused values,** that is, what group members say are their values.

Basic assumptions are taken-for-granted solutions to problems which are so uniformly adopted by group members that "behavior on any other premise is inconceivable" (Schein 1985, 17). Assumptions operate outside the awareness of participants and thus present a considerable challenge for the researcher to uncover. According to Schein, **the essence of culture is the basic underlying assumptions;** artifacts and values are useful to the extent they reveal underlying assumptions.

Symbolic aspects of culture. Much of the study of organizational culture concerns itself with the symbolic aspects of culture. The underlying assumptions, values, and beliefs which make up the culture are both reflected in and reinforced by displays of symbols in the day-to-day life of the organization. Much communication within a culture and between the culture and its environment is accomplished with symbols. Symbols provide "windows" through which we are able to view the richness and complexity of organizational culture (Masland 1985). Basic assumptions shared by members of a culture can be studied through such things as institutional saga, stories, myths, legends, rites, rituals, and ceremonies.

Organizational saga refers to what Burton Clark (1972) calls "a collective understanding of unique accomplishment in a formally established group" (178). Organizational saga facilitates the cohesion of the college community by giving participants reason for commitment to the organization.

A primary element of saga is the claim that the college has achieved **unique**

accomplishments, e.g., a distinctive academic program. Elements of the saga are **expressed publicly** and can become a key part in public relations for an institution. Although saga is **based on actual events** in the history of the institution, it is frequently **embellished.** The saga **evokes strong emotion** from organizational participants.

Organizational stories are similar to organizational saga but exist on a smaller scale. Stories depict real episodes in an organization's life which reflect central values. These stories serve to socialize newcomers to the organization and to reinforce values of those already a part of the community.

Although **myths** and **legends** add exaggerated and embellished aspects to organizational stories, their functions for the organization are similar. According to Masland (1983), myths are a cultural force which shapes behavior. They help solidify the social structure and reduce ambiguity for participants. Just as the name implies, myths are not based on reality, but some ideal held dear by the organization or to the society at large. **Legends** are often components of organizational saga and frequently highlight the activities and values of organizational **heros.** Like myths and stories, values are illustrated by the use of embellishment.

Rites, rituals, and ceremonies reflect cultural values and assumptions in observable behavior. They serve to illustrate and engender community solidarity and to reduce ambiguity. Common **rites** in college life include the socialization process achieved by freshmen orientation programs and the awarding of tenure to a deserving faculty member. **Ceremonies** include graduation, convocation, and

presidential inaugurations. In these activities, symbols of the academic culture are widely displayed, e.g., in the form of the wearing of academic regalia, the display of the school seal, speeches expounding on the values (and often the uniqueness) of the institution, and the recognition of leaders and heroes by the award of prizes and honorary degrees. **Rituals** are also patterned sets of behavior. They often have no direct instrumental function yet serve to reduce anxiety of organizational participants.

Chaffee and Tierney's Model of Organization

Introduction. Chaffee and Tierney's (1988) model of organizational culture represents an integration of elements of the classic models of organization with concepts of organizational culture. Critical elements of this model will become the theoretical basis for this dissertation. The primary focus of Chaffee and Tierney's discussion is leadership, and thus, for them, the purpose of studying culture is to improve the effectiveness of leadership.

Like other theorists of culture, Chaffee and Tierney primarily discuss leadership at the highest levels -- the presidency and the vice presidency in colleges and universities. These authors suggest that when leaders assume the perspective of the cultural analyst they are more able to interpret and act upon events they observe in their institution. Particular areas for leadership improvement include: (1) better understanding of how conflicts arise and can be resolved; (2) more awareness of structural contradictions in the organization; (3) greater sensitivity about how decisions are affected by culture; (4) increased awareness of the symbolic aspects of culture and leadership; (5) identification of group differences and how

such differences result in divergent behavior; and, **(6)** an increased ability to bring about innovation and change in the context of the institutional culture (p. 8).

Prior to discussing the specifics of their framework, Chaffee and Tierney discuss what they call **elements of culture**. They emphasize the existence of a **symbolic dimension** which has an impact on ostensibly instrumental, rational decisions. The **history** or **saga** of an institution plays a strong role in how people interpret current organizational activities. **Time** and **space** are very powerful tools in the hands of the leader because they can by used to advance a number of symbolic agenda. **Information** can play a similar role to time and space and can be used to enhance position and power.

The following discussion will review the various dimensions of culture and the appropriate strategies leaders should use with each dimension. The concept of dynamic equilibrium will be introduced to describe the use of strategy to increase the congruence between the various dimensions.

Dimensions of culture. The **structural dimension** of a college's culture is the means by which the organization conducts many of its activities. Structural aspects include academic programs, financial programs, and the governance system. Much of this dimension is represented in a traditional organization chart, but it goes farther to include both formal and informal types of decision-making.

Much of what Chaffee and Tierney consider the structural dimension is often discussed in terms of bureaucracy in the classic models of organizational governance. Although these authors emphasize the cultural perspective, they recognize the necessity to incorporate into their model the many routine, often

rationally-established programs and procedures which are key elements in the day-to-day life of the organization. What they **do** add is the overlay of culture, which can explain the disruption of formal process when no apparent rational justification exists.

The **environmental dimension** has to do with the institution's relationship with what it sees to be its environment. Thus, the environment in Chaffee and Tierney's view is not what is thought of as objective reality; it is an **enactment** -- a construction of what the organizational participants see as the environmental context of the organization. This enacted environment may or may not correspond to the real world, but it is the perception to which people in the organization react.

The **values dimension** refers to the "beliefs, norms, and priorities of the institution" (Chaffee and Tierney 1988, 19). Values are often manifest in the mission and in the "quality and direction of leadership" (20). How an organization presents what it considers to be important values to the public is a clue to elements of organizational culture.

Values manifest themselves in many places and in many ways in the organization. Chaffee and Tierney pay particular attention to the degree of agreement that exists about these values among organizational participants and how they are reflected in the structural and environmental dimensions of the culture.

Leadership strategy. According to Chaffee and Tierney, the goal of leadership is to establish a **dynamic equilibrium** between the structural, environmental, and values dimensions of the institutional culture. Thus, effective leadership should bring into greater congruence the programs and structures, the organization's

perceptions of its environment, and its system of values.

Dynamic equilibrium can be achieved by the use of three types of **strategy** which correspond to the dimensions of culture. Strategy is a process, "a way of looking, listening and thinking" (Chaffee and Tierney 1988, 22). The strategy is **not the solution; it is a way of getting to the solution.** Linear strategy addresses the structural dimension; adaptive strategy addresses the environmental dimension; and interpretive strategy addresses the values dimension.

Linear strategy addresses the formal structural aspects of the organizational culture. Application of this strategy can include assessment of institutional goals and planning future action. Linear strategy alone is not sufficient for effective leadership because it ignores informal structural aspects, the enacted environment, and the values systems of the institution.

Adaptive strategy is evolutionary and ecological in nature in that it focuses on the relationship between the organization and its environment. Effective adaptive strategy appreciates the complexity and dynamic nature of the environment. It guides the formulation of psychological and physical responses to environmental pressures. Ideally, adaptive strategy gets the institution in line with the environment and helps identify an appropriate niche.

Interpretive strategy takes the values of the organization into consideration and acknowledges that the organization plays a role in constructing its structure and environment. Chaffee and Tierney state that "[i]nterpretive strategies enable constituencies to understand the organization and its environment and motivate them to support its missions" (22). Thus, leaders using interpretive strategy help

organizational participants make sense of the events around them. These leaders will shape participants' interpretations in a way to enhance the effectiveness of the organization.

According to Chaffee and Tierney, these three strategies interact with each other. In the final analysis, these authors see interpretive strategy as most important into which both linear and adaptive strategy must be integrated. Thus, the strategies are not sequential, but instead are seen as **hierarchical**, with interpretative strategy taking its place at the top of the hierarchy. Planning and adapting to the environment are essential activities for the organization but must be done in the context of the analysis and interpretation of the system of values, beliefs, and assumptions of the organization.

Outstanding Issues In the Study of Organizational Culture

Introduction

With the exception of Clark's contribution of the idea of saga in the early 1970s, the application of the concept of organizational culture to higher education is in its infancy. The model of Chaffee and Tierney (1988) represents an initial attempt to develop a comprehensive model of organizational culture which addresses qualities of colleges covered by some classic models of organization with the important overlay of the concept of culture. Taken together with Schein's concepts of culture, the heuristic value of Chaffee and Tierney's model can be assessed with original research. The following discussion outlines some limitations of current theory and potential new dimensions into which theories of organizational

culture might expand.

Organizational Culture At the Institutional Level

At the present time, most discussions of the organizational culture focus on the college culture at large. Chaffee and Tierney's Collegiate Culture and Leadership Strategies (1988) presents theory and case studies illustrating the patterns of culture at the institutional level. Clark's (1972) concept of organizational saga describes a set of common values and beliefs which bind an entire college community together and which even extends beyond the boundaries of the institution. A common-identified limitation of Clark's study is that it focused on a particular type of institution where organizational saga was likely to be the strongest and perhaps is of limited applicability in more diverse institutions.

In his discussion of the modern research university, Clark Kerr (1982) coined the term "multiversity" to describe the current organizational state of the many institutions. According to Kerr, the college organization has gone from a "community of masters and students with a single vision of its nature and purpose" (8) to a "whole series of communities and activities" (1). He attributes some of the problems of the multiversity to "[t]hese several competing visions of true purpose, each relating to a different layer of history ... [and] a different web of forces" (8). Thus, Kerr recognizes that certain aspects of culture are likely to emerge at a level below that of the institution as a whole.

Looking Below the Institutional Level: Subcultures

In addition to those values and assumptions shared by all members of organization, most complex organizations have identified subgroups, or **subcultures**

(Kuh and Whitt 1988). The concept of subculture is borrowed from sociology and describes coherent social groups which usually share some of the larger culture's values while having a distinct identity of their own. In colleges, the broad subcultures often identified include students, faculty, and administrators.

Academic Culture and the Culture of the Discipline

The culture of academic life in colleges and universities has been a topic of interest to Burton Clark for more than two decades. He has identified several levels of culture which exist within the academic profession (1987). Clark's **culture of the discipline** is perhaps the most studied. Subcultures and their attendant values and assumptions seem to be associated with certain disciplines or groups of disciplines.

Gouldner (1957) identified two distinct groups of college faculty: locals and cosmopolitans. **Locals** are "company men" whose loyalty is to the institution and teaching; commitment to an academic specialization or to professional skills is low, and their social group identification is with individuals within the institution. **Cosmopolitans** are experts in their fields who have relatively little loyalty to the institution. Their commitment to professional and specialized values is great and their social reference group is outside the institution.

Biglan (1973) developed several dimensions to evaluate the differences in academic disciplines. The **hard-soft** dimension describes the scientific and methodological orientation of a discipline. This dimension focuses on the degree to which a discipline is guided by a single paradigm or many (Hayward 1986). Hard

disciplines include the sciences, engineering, and agriculture, while the soft disciplines include the social sciences, education, and the humanities.

The **pure-applied** dimension focuses on the object of study, whether it is to uncover basic knowledge or to develop practical applications. The sciences and most social sciences are pure, while education and engineering are applied. An additional tentative distinction is made between **life and non-life** subject matter. Agriculture, biology, social sciences, and education are life, while the physical sciences are considered non-life.

Biglan asserted that these dimensions made some important distinctions among disciplines. In this context, he argued that social characteristics of particular disciplines affect scholarly endeavors. He states that the "content and methods of a field are linked to the cognitive and perceptual processes of its members" (1973, 202).

Becher (1984; 1987) identifies several dimensions on which discipline groupings show distinct differences. The **structure of knowledge** within a particular discipline can affect the social structure of the group. Also, differences in what is considered appropriate **methodology** affect the formation of subcultures among disciplines. Whether a discipline **considers values or not** affects interaction.

According to Becher, discipline groupings differ in their **initiation rites**. For example, graduate students in the hard-pure disciplines (e.g., physics) choose their own mentor, but rarely choose the specific area of study. Graduate students in soft-pure (e.g., anthropology) select their own area of study and chart a more independent course.

Differences exist in **social interaction** when comparing areas of study. Within the hard-pure areas of study, research areas are shared among many people; professional meetings are more frequent and are characterized by intense interaction. Researchers in the soft-pure areas are more individually motivated by their research interests; professional meetings are less frequent and the content of interaction is less intense. Researchers in hard-pure areas tend to be more gregarious and produce publications at a high rate, while soft-pure researchers tend to be individualistic or pluralistic and publish less frequently.

Because they are very often the organizational home of distinct academic disciplines, the academic department might be expected to develop characteristics of a subculture. It is there where the interaction of faculty is the highest and where people of similar training and background are likely to be together.

Current Theory and Research on the Academic Department

Disciplinary-Based Departmental Organization

Department organization according to academic discipline is the dominant form of departmental organization (McDade 1977). Paralleling the emergence of academic disciplines, departments emerged out of necessity as the curriculum expanded to include more information than a single individual could teach. The German influence which emphasized graduate education and the development of electives also supported the development of departments (Anderson 1976).

Anderson argues that an academic discipline is "both a method and a body of knowledge" (1976, 4). Thus, departments are likely to differ in their approaches to

administration, for example, depending on their disciplinary perspective. This author asserts that "[t]he various disciplines have 'built in' conceptual modes and methodologically-related processes for resolving educational issues and policy."

Bowen and Schuster discuss the attitudes and basic values of the members of the academic profession. Despite a degree of homogeneity of values among the professorate, differences among disciplines seem to be greater than those among social or ethnic groups

> These values are derived from long academic tradition and tend to be conveyed from one generation to the next via the graduate schools and also through the socialization of young faculty members as they are inducted into their first academic positions (1986, 53).

Thus, disciplinary differences can result in departmental differences.

Despite the widespread existence of discipline-based departments and an extensive literature on the topic, very little theory describes departmental functions and role the department plays in the organization as a whole.

The Department as the Basic Organizational Unit

Theoretical perspectives on the department. Peterson has described the academic department as the "basic organizational unit" of colleges and universities (1976, 21). Although much has been written about the academic department, he indicates that theoretical analyses of the department have been quite limited. Peterson indicated several types of approaches which could provide useful ways of looking at the department. The **epistemological** perspective recognizes the organization of the department around a particular body of knowledge. The department as a "**social influence or exchange**" organization focuses on

process and structure . . . [which] are seen in terms of the patterns of individual and groups characteristics, activities, values, role expectations, norms and personal interactions, faculty values, needs, norms and expectations, institutional and professional commitment (1976, 23).

Other useful conceptualizations of the academic department include seeing it as a bureaucracy, a political system, and as a technological organization geared to accomplish certain tasks.

Peterson's original contribution adopts a systems approach which conceptualizes the department as an "open, complex social network" (1976, 29). Structures and processes within the department act both on events within the department and those coming from the outside environment.

Functions of the academic department. Trow identifies four basic functions of the academic department. A primary function is to support **graduate education** in a manner which is almost completely autonomous from centralized, institutional control. In this role, the department defines the realm of knowledge and skills of the discipline and the methods by which knowledge is pursued. Trow sees the socialization of graduate students as one of the most important functions of the department because the process supports the development of

a structure of values, attitudes, and ways of thinking and feeling . . . [which provide] an individual with the perspective and orientation that guide a lifetime of academic teaching and research (1977, 15).

Departments are also the "locus of the academic career" (Trow 1977, 19) where decisions are made about the course individual faculty careers are take. The department provides the setting for the recruitment and promotion of faculty members. **Research,** or the discovery of new knowledge, is an important function

of the department. Often, because of the increasing degree of specialization, faculty frequently have few true colleagues within their own local department.

A final function of the academic department is **undergraduate education**. The high degree of specialization of faculty make it more difficult for departments to provide broad liberal education and to connect different areas of knowledge (Trow 1977).

Departmental organization persists despite a variety of functions in a single unit. Andersen (1977) argues that the departmental form of organization discourages interdisciplinary communication and sharing of knowledge. Benezet views departments as "guilds" which facilitate a "restraint of intellectual trade" (1977, 35).

Advantages and disadvantages of the department. Despite many criticisms, departments are remarkably efficient organizations. Andersen argues that the department is the best milieu for the "development, preservation, and transmission of knowledge" (1977, 9). The environment is much like that of a family where individuals share a common basis for communication.

Because of shared professional expertise and knowledge, departments are arguably the best setting for faculty peer evaluations. Finally, because faculty allegiance is greater to the discipline than to the institution at large, alternative organizations to the disciplinary-based department are less likely to succeed (Andersen 1977).

Departments as organizational units have flourished for a variety of reasons. Departments have had increased power because they are the locus for generating

external funding resources. The academic department has been identified as context for the greatest degree of faculty involvement in institutional decision-making (Harrington 1976).

Departments are often criticized because they encourage fragmentation of knowledge and, thus, the increasing specialization of faculty. They are said to discourage inter- and multi-disciplinary endeavors because of difficulties associated with crossing departmental lines. Departmental organization reinforces the tendency for faculty to be loyal to their academic discipline rather than the institution. Because they are often highly structured, academic departments present a major obstacle to change, both curricular and organizational (Harrington 1977; Andersen 1977).

Academic Culture, Faculty Values, and the Department

Despite the known disciplinary differences, there are certain values and qualities which characterize the academic profession as a whole. Although Clark (1987) recognizes some differences in faculty values associated with differing sectors of higher education, e.g., community colleges versus research universities, he discovered some common threads in the value systems of academics, which he referred to as the "ideologies of the profession" (129). These ideologies should be a major part of the fabric of an academic department.

Most members of the professorate share an interest in being in service of knowledge. By this, Clark's interviewed professors expressed desire to create, maintain, and transmit knowledge to others. This value embodies much of what the professorate considers its value to society. The norms of academic honesty are

related to valuing of knowledge and involve the maintenance of intellectual integrity. Violations of intellectual integrity, e.g., plagiarism of another's ideas or using manufactured data, are considered to be cause for severe sanctions such as expulsion. The **ideology of freedom** extended beyond just what was identified as academic freedom, to what could be called personal freedom. Many faculty identified freedom as one of the most attractive aspects of faculty life (Clark 1987, 129-140).

Bowen and Schuster's 1986 study of the academic profession identified the **pursuit of learning, academic freedom,** and **collegiality** as central ideals held by faculty members. In his discussion of the academic department, Bennett describes the related and "long-standing traditions of **professional courtesy** and **academic freedom**" (1990, 72-73) as prevalent. In some cases, administrative activities present a challenge to the complete fulfillment of these values.

Bowen and Schuster addressed the important issue of the perpetuation of faculty values in the following way:

> These values are derived from long academic traditions and tend to be conveyed from one generation to the next via the graduate schools and also through the socialization of young faculty members as they are inducted into their first academic positions (1986, 53).

Common values tying to faculty together are seen as key in maintaining the integrity of the profession and the department. Trow described the integrative role of the department when he stated that academic departments "constitute a kind of **moral community,** centered on powerful norms implicit in the canons of verification and in scholarly and scientific methods and procedures" (1977, 19).[2]

Chairing the Academic Department

Introduction. Many have observed that the department is locus for the essential work of the university (Bennett and Figuli 1990). Pelatson expressed a complementary belief when he observed that "[a]n institution can run for a long time with an inept president but not for long with an inept chairperson" (1984, xi). In addition, the department is also the place where most faculty members have the greatest direct influence on decision making at the institution.

The "inherent ambiguity" of the role of chair. Bennett described the "inherent ambiguity" of the role department chair. He stated that chairs perceive that they "are neither pure faculty members nor regular administrators, and yet are expected somehow to represent both sets of interests." According to Bennett, chairs can chose to present themselves as "just another faculty member" to maximize identification with the faculty, as a representative of the university administration, or as a champion of the academic discipline (1982, 52).

Regardless of which position a chair might choose to present, individuals in this position feel torn between the faculty and administrative demands. Chairs frequently represent "sets of interests that are often competing and sometimes conflicting" (Bennett and Figuli 1990, 2).

As mentioned previously in the section of faculty values, autonomy and freedom are key aspects of faculty life. There are times when a chair must, in the name of the administration of the department, place certain limits or expectations on faculty members. Conceived of from the perspective of organizational culture, the chair is caught between two different sets of values or subcultures: those of the

faculty and those of the administration.

Because of the strength of faculty values, many potential department chairs are sometimes reluctant to show interest in the position fearing that such an interest might be perceived as "selling out" to a set of values different from the faculty mainstream. In fact, after assuming the position of chair, an individual may continue to disclaim an interest or liking for the job. A chair may also be discouraged from seeking support from other department chairs because of the position of competition for funds among them (Bennett 1982).

Chair's relationship with the faculty. As suggested above, assuming the chair of a department, especially if chosen from the ranks of the existing faculty, can present the potential for conflict with faculty. Bennett discusses the "abrupt transition" to the role of department chair which can be highly stressful. For example, on becoming chair, many experience exclusion from various social activities of which they had previously been a part (1982). Assuming the role of faculty evaluator can also create a degree of stress (Bennett 1990).

Chairs have a great deal to do with maintaining the prevailing atmosphere in the department. They are in the position of both monitoring and protecting the faculty and unit under their charge. Creswell et al. describes the dilemma of working with faculty:

> Interaction between chairs and faculty is both a source of satisfaction and frustration. Faculty want autonomy but request assistance, demand quick decisions but belabor issues, seek power and authority but delegate decisions to administrators. Years of academic freedom have bred a workforce of rugged individualists with a wide range of characteristics (1990, 5).

Selection and training of the department chair. Department chairs are

typically picked from the faculty ranks, either from the local institution or from another. Departmental faculty are usually involved in the selection. The criteria used for selection as chair are typically based on the academic qualifications of the candidate rather than the administrative credentials (Bennett 1982).

Establishing oneself as an effective chair requires the use of skills not typically learned in the ranks of faculty (Pelatson 1984). One of the major complaints of new department chairs is that there is little formal training for the job. Most chairs learn what they need to know on the job.

Spicer and Staton-Spicer (1987) discuss the socialization of department chairs in terms of learning both the content of the organization at large and the specifics of the role within the department. For these authors, communication style of the chair key is this process. They see that the role of chair is negotiated through a series of interactions with key people. Stories, metaphors, and myths play a role in providing the developing chair with information. Through this process, the role of the chair is constructed and the initial uncertainty is reduced.

Power of the department chair. Even though chairs are selected based on their academic credentials, their expertise level in the things required of the department chair are frequently underdeveloped. "Unlike professors, chairs are not experts in a specific area and have no special credentials to cloak them in authority" (Bennett and Figuli 1990, xiii). The power of chairs comes more often from persuasion than position.

Tucker (1984) characterizes the chairs as leaders without authority who, unlike many higher-level administrators, must live with the consequences of their decisions

on a daily basis. The department operates much like a family: interaction is high and members have common goals, backgrounds, and values.

Literature on chairing the academic department. Over the past ten years, a department management literature has emerged offering advice to department chairs on effective leadership. Two works typify this management literature specifically focused on the academic department. These manuals on "how to run an academic department" are substantially based on the personal experiences of the authors and on surveys of particularly effective department chairs.

In **Chairing the Academic Department** (1984), Tucker emphasizes the increased role chairs play in university decision-making, the chair selection process which often utilizes academic rather than managerial criteria, and the role of the position of chair as training ground for higher administrative positions.

Tucker's work enumerates strategies which seem to be most effective in managing the categories of responsibilities overseen by the chair. These areas include: departmental governance, instruction, faculty affairs, student affairs, external communication, budget and resources, and office management.

In **The Academic Chairperson's Handbook**, Creswell et al. (1990) offer strategies to aid the department chair in adjusting to a new, sometimes ambiguous role. These authors emphasize the importance of self-awareness and professional development for the chair. Chairs are charged with the goal of establishing a productive work environment with an emphasis on helping newcomers to adjust to the new work milieu.

The Academic Department: Subculture Within the

Organizational Culture

Weaving Concepts of Organizational Culture into The Departmental Literature

As the past sections have demonstrated, departments can be conceived of as somewhat self-contained social units which operate within the larger organizational culture of the college. Common training, values, missions, and goals serve to bind the department into somewhat coherent subcultures. The work of Biglan and Becher illustrates how viewpoints on knowledge and methodology can result in different cultures among the various academic disciplines.

Many of the strategies for effective departmental management are consistent with the goal of shaping the culture of the department. One important goal of the department is to orient and socialize graduate students into the discipline where they are familiarized with the "values and attitudes regarding what knowledge is and how to best pursue it" (Trow 1977, 14). Hiring the right full- and part-time faculty and orienting them appropriately is an important role in shaping and strengthening the department (Hynes 1990; Biles and Tuckman 1990).

Becoming department chair can be thought of as moving from the relative safety of a discipline-oriented group to acting as a liaison between the faculty and external administration. This "abrupt transition" to a new role (Bennett 1982) can be described as a time when the chair has to adopt a different value system in order to function in a new culture. The chair is in the unenviable position of representing both the discipline and the administration, two interest groups who, at times, hold disparate values on certain issues which arise.

Conclusions

Two basic conclusions follow from the information presented in this section. First, the value of seeing the academic department as a subculture within a larger organizational culture has been demonstrated. A case will be made in the following sections for need to study organizational subcultures in the context of more global theories of organizational culture as they are applied at the institutional level.

Second, examples of recommended strategies for effective management of the department have been interpreted in terms of their impact on the culture of the department. One way to validate the utility of theories on organizational culture is to determine if greater coherence can be given to the departmental management literature by reinterpreting it in terms of theories of organizational culture.

The next sections present a case study design which will allow the researcher to evaluate the usefulness of theories of organizational culture to (1) understand the organization and activities within a single academic department, and (2) to summarize and explain the current literature on departmental management.

Chapter 2 Notes

1. For the purpose of this discussion, the term "chair" will be used to designate the head of the academic department. Despite the obvious problems with usage of the term "chair", the author felt that its use in this way is more appropriate than to utilize the gender-specific term "chairman" or the awkward "chairperson."

2. Emphasis on particular terms in this section is mine.

CHAPTER 3

Selection of a Case, Research Questions and

Hypotheses and Methodology

Research Questions and Hypotheses

Introduction

The primary focus of this project is the presentation of an in-depth case study on the organizational culture of a department of biological sciences at a large, metropolitan, doctoral-granting university. This study evaluates the usefulness of Chaffee and Tierney's (1988) model of organizational culture in understanding the academic department's organization, decision-making, value system, and social structure. Other cultural concepts, e.g., saga, myth, heros, and rituals are utilized, and the role these play in the department is discussed.

A secondary analysis is conducted on two major works describing methods for effective departmental management (Tucker 1984 and Creswell et al. 1990). The goal of this analysis is to determine if the content of these works can be comprehensively explained in terms of Chaffee & Tierney's model of culture and leadership. This analysis will further support the usefulness of concepts of culture in organizational analysis.

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Research Questions

There are a number of relevant research questions guiding the current research

design. These research questions include:

- Can theories of organizational culture comprehensively describe and explain the organization and activities of a department of biological sciences?

- More specifically, can Chaffee and Tierney's (1988) dimensions of institutional culture (structural, environmental, and values dimensions) be applied to an individual subculture, the academic department?

- Do the activities of the chair and other departmental leaders conform to Chaffee and Tierney's strategies (linear, adaptive, and interpretive strategies)?

- What roles do the symbolic aspects of culture (e.g., saga, stories, heros, rites, and rituals) play in the day-to-day life of the department? Do the chair and other leaders act to manage and shape the culture? Do the symbolic aspects provide cohesion to the value system and serve as ways to socialize new members into the organization?

- Does a department of biological sciences demonstrate cultural and social characteristics consistent with Biglan's (1973) and Becher's (1984, 1987) research on hard, pure, life disciplines? Are initiation rites (e.g., socialization of graduate students) and social interaction patterns consistent with theory?

- Do the systems of Chaffee and Tierney and Schein (1985) provide a useful and comprehensive heuristic device to assist in understanding the departmental management literature, specifically works by Tucker (1984) and Creswell et al. (1990)?

Specific Hypotheses

Several hypotheses follow from the research questions above:

- The theories of organizational culture will prove useful in describing and explaining the organization of the academic department. There is a need to expand the theory to apply to subcultures and to describe and explain the relationships among subcultures and between the subculture and the organization at different levels.

- The pattern of organization in the Department of Biological Sciences will be consistent with that predicted by Becher (1984, 1987) for a hard, pure, life science: graduate students (and faculty as graduate students) will have chosen their own mentors but not their particular area of study; there will be a high degree of collaboration among faculty and graduate students in research activities; the area of knowledge and the tendency to work in collaboration will result in a relatively gregarious faculty and graduate student group.

- The department chair and other departmental leaders will consciously and unconsciously shape and maintain the culture of the department by using symbolic dimensions like stories, myth, rituals, and rites. They should engender cohesion in the group by interpreting ("making sense") events to members of the department.

- The literature on effectively running the academic department (specifically, Tucker, 1984 and Creswell et al., 1990) can be usefully understood in terms of theories of organizational culture with some modifications.

Conclusions: Review of the Research Design

This study was designed to address the research questions and hypotheses outlined above and has two parts: (1) a case study of a department of biological sciences, and (2) a review and analysis of two works on managing the academic department. The purpose of conducting the case study was to test the theories in a bounded case (Merriam 1988) and determine their value. Although the case study is largely descriptive, certain hypotheses were tested against the data. The review and analysis of the literature will provide an additional way to evaluate the usefulness of organizational culture theory as it applies to the academic department.

Research Design and Methodology

Introduction to the Current Study

This section describes the methodology and analysis procedures used to complete a comprehensive study of the organizational culture of a department of biological sciences in a large, urban university. A qualitative case study design proved itself to be the best design to address the research problem identified.

Qualitative designs have enjoyed more popular acceptance in educational research in recent years (Bogdan and Biklen 1982). This growing acceptance is largely due to the value of qualitative studies in addressing complex problems in education which have not been adequately addressed using what Keller (1986) has called the "social-science view," the emphasis of which focuses on experimental design and control of variables.

Bogdan and Biklen (1982) have identified five features of qualitative research. Qualitative research utilizes a "natural setting as a direct source of data and the researcher is the key instrument" (27). The product of a qualitative study is often descriptive narrative gleaned from various data collection methods, e.g., interviews, field notes, photos, personal documents, or memos. Although both are important, process is emphasized over product. Data analysis is inductive; theory arising from the application of inductive reasoning to the data is said to be grounded theory. Because "[m]eaning is the essential concern to the qualitative approach" (Bogdan and Biklen 1982, 29), the ways participants make sense of their experience is of paramount importance.

Case Study Design and the Selection of a Particular Case

Qualitative case study design. The **qualitative case study** is the most common research design to analyze culture in organizations. Geertz (1973) advocates the use of **ethnography** in the study of culture, many principles of which have been transplanted to the study of organizations. He describes ethnography as a type of "**intellectual effort**" which should result in what Ryles calls "'thick description'" (5). Ethnographers' data are that which they construct about what their subjects, embedded in the culture, have constructed about the meaning of their experience. The researcher must sort out what is significant and determine what truly reflects the underlying culture.

In an outstanding review of case study methods and assumptions, Merriam (1988) indicates the essential value of using case studies with a **bounded system**, or a specific phenomenon. The qualitative case study is a "design chosen precisely because researchers are interested in insight, discovery, and interpretation rather than hypothesis testing"; this design allows for looking at the "interaction of significant factors characteristic to the phenomenon" (10).

Qualitative case studies focus on a particular phenomenon, describe and interpret it, develop improved ways of understanding it, and allow for the development of concepts based on the data observed. Thus, Merriam concludes:

> the qualitative case study can be defined as an intensive **holistic description** and analysis of a single entity, phenomenon, or social unit. Case studies are **particularistic, descriptive,** and **heuristic** and rely heavily on **inductive reasoning** in handling multiple data sources (1988, 16).

The product of a case study is usually a detailed narrative which has elements

of interpretation or evaluation. **Descriptive** case studies provide a "detailed account of the phenomenon under study" which is not guided by any particular hypotheses (27). **Interpretive** case studies allow for the development of "conceptual categories or to illustrate, support, or challenge theoretical assumptions prior to the data gathering" (27-28); these studies produce abstract and conceptual data above the level of description. **Evaluative** case studies "involve description, explanation, and judgment" (28). The current study utilizes a combination of a descriptive and an interpretive case study.

Case studies are particularly valuable in situations where the object of study is a social unit of high complexity with a number of important variables in action. The target department of biological science fits this description. The case study design is often limited by the amount of time and expense it requires and on the heavily reliance on the integrity of the researcher (Merriam 1988). Because the **researcher is the primary instrument**, great care must be taken that preconceptions and biases do not unduly influence the study.

Selection of a particular case. A sizable academic department of biological sciences at a large, metropolitan doctoral-granting institution was identified as the selected case for this study. Such a department meets the criterion of constituting a **bounded system** which provides the primary unit of analysis for the study. The choice of this department conforms with what Merriam (1988) calls **purposive sampling**, that is, the selection of a case based on particular criteria which allow certain goals to be met.

The **biological sciences** are what Biglan (1973) would call a **hard, pure, and life**

discipline. Because applied science often has pure and applied aspects, the selection of a pure science would theoretically allow for few layers of complexity in the analysis of culture. Hard disciplines typically have a single major paradigm guiding all or most research; soft disciplines, like the social sciences, have numerous paradigms, again adding layers of complexity.

The selection of the particular department was based, in part, on its size, influence, and reputation within the university. Housed in a College of Sciences, this department has a large faculty including 26 full-time faculty members, three clerical staff, and several support staff and lab technicians. In addition to providing instruction for major courses and general education courses at the undergraduate and graduate level, the department has an active research program. The department was headed for 21 years by a very strong administrator with a generally excellent reputation for effectiveness. In 1990, consistent with a university policy of rotating chairs, a new chair was selected. In general, the Department of Biological Sciences is perceived by the University[1] community to have a relatively strong program of research, scholarship, teaching, and service.

Analytic Context for Case Studies on Organizational Culture

Artifacts provide the basis for analyzing culture. The following section discusses examples of artifacts which reflect underlying culture. A discussion of Schein's levels of culture follows, providing the link between artifacts and culture which provides the conceptual and analytic basis for this study.

Key artifacts. Fundamental to study of organizational culture is the analysis of the symbolic manifestations of culture. Organizations provide an abundance of

symbols for the researcher to analyze. Masland (1985) refers to these symbols as "windows" into the culture. These symbols are a representation of "implicit cultural values and beliefs" which are made concrete (162). **Organizational saga, myths, legends, stories, heros, rites, rituals, and metaphors** are common artifacts from which cultural analysts derive information about underlying culture.

Using Schein's levels of culture as a guidepost. Schein's distinction between the **levels of culture** provides a handy guidepost for the researcher in making the distinction in her data between surface manifestations and the actual deep, often unconsciously-held, assumptions which make up organizational culture. **Artifacts** provide the most surface and concrete data. Artifacts may or may not clearly reflect the underlying culture, thus, the observer must analyze each carefully and look for consistent underlying patterns.

Values are largely consciously held by participants reflecting a sense of how things should be. Like artifacts, values can be helpful to the researcher in that they can reflect underlying assumptions. Again, the observer must be careful making conclusions about the meaning of values.

Assumptions are held below the level of consciousness and are the reality with which organizational participants operate on the world. These assumptions are potent and are difficult to uncover. However, these assumptions and the **cultural paradigms** they form, are the ultimate object of study for the student of organizational culture.

Methodology

Introduction

The goal of applying the methods outlined below was to conduct a qualitative case study on an academic department which will allow the researcher to evaluate the usefulness of Chaffee and Tierney's (1988) model of organizational culture in understanding departmental organization, decision making, value system, and social structure.

In general, qualitative case studies involve a number of different methods. Researchers need to use **multiple sources** of data and methods to uncover basic elements of culture. **Interviews** with organizational participants are a primary source of data on culture. However, Masland (1985) warns that many things about culture cannot be obtained by directly asking an interview subject. According to Schein (1985), interviews can provide valuable information about how the organization solved both internal and problems and how the solutions gradually became part of the values and assumptions making up the organizational culture.

Interviews provide the opportunity to identify what Schein calls **critical incidents** in the life of the organization. During a critical incident, the organization is faced with a particularly serious problem, and the responses to that problem reveal the leaders and the ultimate assumptions of the organization.

Observation and **document analysis** are valuable techniques for studying culture (Masland 1985). The use of **questionnaires and surveys** is more problematic; few authors (e.g., Thelin 1986) find value in surveys, although at least one analyst (Schein 1985) finds some minor use for such data in cultural analysis.

Data analysis should use **triangulation** of data from several sources obtained by various methods (Masland 1985; Schein 1985), and theories developed with data early in the data collection and analysis should be tested with subsequent data. The analyst should look for trends and engage in what Masland calls **thematic analysis.**

Initial Research Foci

Despite the great emphasis on the use of inductive reasoning in case studies, a few theoretical categories of information will guide initial data collection in this study. As data collection progressed, new categories and conceptualizations emerged to determine new directions of data collection. Thus, the research design continued developing well into the data collection phase to allow the researcher to take advantage of unanticipated opportunities the data present.

A key element in establishing the usefulness of Chaffee and Tierney's theory at the departmental level was to observe and evaluate the **role of the chair** in the life of the department. The **role of other influential individuals** are of interest also. An analysis of the **department's formal and informal organization** allowed an assessment of the structural, environmental, and value dimensions of culture.

Part of maintaining cohesion within the culture involves **selecting faculty** and **socializing new members** into the value system; given this assumption, socialization activities were expected to involve graduate students and new faculty members. Academic life and how individual faculty and groups of faculty accomplish research and scholarly activities reveal much about the underlying value system.

Constant scrutiny is necessary during data collection to ensure that **symbols of culture** are identified and pursued. Examples of these include rites, rituals, stories,

myths, and heros. Asking respondents to identify critical incidents in the life of the department should reveal much about the value system.

Fieldwork: Case Study of a Department of Biological Sciences

Introduction and phases of data collection. Data collection took three basic forms in this study: interviews (or oral histories) of current and past departmental faculty members and administration, observations of departmental activities, and analysis of the written record relating to the department. These three forms are discussed in the following sections.

Data collection proceeded according to four major phases. **Phase I** involved **initial interviews and observations** with faculty members and observation of key departmental meetings. Initial interviews were loosely-structured (as outlined below) and were largely consistent across respondents. **Phase II** involved detailed **analysis of documents** and **analysis of transcripts of interviews** conducted in Phase I. **Follow-up interviews** were designed from analysis in Phase II to address particular research foci and were conducted in **Phase III**. **Final analyses and write-up of results** were conducted in **Phase IV.**

Oral histories/interview methodology. Merriam defines an interview as a "conversation with a purpose" which allows the researcher to gain particular information and the perspective of the respondent (1988, 71-72). Interviews can vary from highly structured, composed of scripted questions, to totally unstructured.

This study used **semi-structured interviews** as a primary source for data on organizational culture in the department. All interviews were conducted by the researcher who took detailed notes during each interview. She reviewed and

expanded upon the interview notes as soon as possible after completing the interview. Typed transcripts, including interviewer's comments, were produced for later analysis.

Subjects. Several groups of individuals were interviewed for this study: the current and former department chair, all faculty members, former and current deans, the provost's staff, and the clerical and support staff within the department. In all, 25 individuals participated in 33 separate interviews.

Interview protocols. Initial interviews, completed in **Phase I**, with faculty members utilized a **general protocol**. Included in this protocol was an invitation for the faculty member to discuss their personal history with regard to their **education and professional experience**. Faculty were asked to discuss their **initial contact** with the University, the **interview process**, and their **expectations** of working there, and how their early experiences matched their expectations.

The interviewer focused the discussion on the **faculty member's history** with the university and the department and asked each to **identify any critical incidents** in the department during their time there. Faculty members' **responses were probed** to encourage each to identify any **perceived mechanisms** underlying key events. They were asked to describe their **tenure preparation and evaluation process**. Senior faculty were also asked to comment on **how tenure procedures and criteria have changed** over the years.

Faculty members' **perceptions of the chair and his leadership** were probed. They were asked about the decision of the former chair to step down, the **selection process and criteria for the new chair**, and the appointment of a new chair. Faculty

members were invited to comment on the **similarities and differences between chairs.**

A final area of interest was future directions of the department as seen by the faculty member. The interviewer asked the faculty members to **anticipate future events affecting the department,** whether internal to the department, within the university, and factors coming from outside the university.

During the course of the Phase I interviews, opportunities to probe additional areas of interest were provided by the responding faculty. In most cases, the interviewer followed up on these opportunities and generated additional data. Particularly fruitful areas became part of the protocol in subsequent interviews.

Phase III interview protocols were developed as a function of data analysis and the need for the interviewer to follow up on particular analysis areas. Each follow up interview protocol was individually designed for each particular respondent dependent on the knowledge of the respondent and the information needed by the interviewer.

Merriam's guidelines for interviewing. Merriam's (1988) advice on being a good interviewer was used as a guideline for conducting interviews. According to Merriam, good interviewers do not bias or argue with respondents: they pay attention to verbal and non-verbal cues, listen more than they talk, and reflect the expressions of the respondent back to them for validation. Questions may be asked about behavior, experiences, opinions, values, feelings, knowledge, sensory experience, and the respondent's background. The researcher may: (1) ask hypothetical questions, (2) questions about what the respondent considers an ideal

situation, (3) play the role of devil's advocate, or (4) ask respondents for their interpretation of events.

Observations. Observations of departmental activities, both formal and informal, were conducted. Merriam's (1988) suggestions for the researcher doing observations were used as guidelines in the observation process. These suggestions state that an observer should pay attention to detail and to the site as a whole. She should look for key words and pay particular attention to the first and last parts of conversations. The researcher should expand her field notes as soon as possible after the observation; these notes should describe the setting, the participants, and what is occurring. She should include any comments that may be relevant during data analysis.

The researcher attempted to observe at least one meeting of each of the standing departmental committees. A special emphasis was place on the role of the executive committee, thus, all but one meeting occurring during the academic year were observed. A written record made of each observation. Observations included: eight executive committee meetings, at least one meeting of each standing committee, three full faculty meetings, a day-long faculty retreat, and a number of other informal and formal activities within the department.

The written record of each observations was reviewed in detail and expanded. A typed transcript complete with observer comments was produced for later analysis.

For the most part, the researcher was strictly an observer. Because of the possibility that the presence of the researcher would potentially affect the content

of the observation, the researcher informally polled several faculty members to determine whether the course of meetings observed had been affected by her presence. Each faculty member asked felt that the meetings were largely unaffected by the observer's presence and that meetings unfolded in the same manner they would have had she not been present.

Document analysis. A final type of data collected which was relevant to development of a picture of the organizational culture of the biological sciences department were **documents.** Unlike interviews and observations, documents typically already exist in the environment and are not produced for the sole purpose of research. They can provide decent data at relatively low cost to the researcher.

Documents vary in how valuable they are in providing relevant data. The researcher must evaluate their authenticity, completeness, and accuracy. Also, she must determine the motivations for the production of the document and what biases are held by the author (Merriam 1988).

The researcher gathered and analyzed a wide range of departmental documents, but is dependent upon the respondents, particularly the department chair, for access to these documents. Some documents for review include: chair's correspondence to departmental faculty, university correspondence to the department, grant proposals, recruitment materials for students and faculty, the physical layout of the department, and the use the space allocated to the department as indicated by building floor plans.

Criteria of completion. Data collection and the design guiding it emerge during the process of data collection as new and interesting opportunities present

themselves. However, data collection must conclude at some point. Many researchers indicate that a point of **saturation** is reached when much of the new data they are getting is redundant and that few new insights are being gained. This method of determining completion was utilized in this study.

Theoretical Analysis of the Literature

In addition to using the qualitative case study to evaluate the usefulness of Chaffee and Tierney's theories of organizational culture at the departmental level, an analysis of two recent works on chairing the academic department was conducted. Tucker's **Chairing the Academic Department** (1984) and Creswell et al.'s, **The Academic Chairperson's Handbook** (1990) provided the raw data for analysis against current theories of organizational culture.

Data Analysis Procedures

Introduction

Because of the nature of qualitative case study research, data analysis begins at the outset of data collection. The researcher must continually interrogate her data during the data collection process to organize the information she is obtaining, to identify key themes in the data, and to develop future directions in the data collection process. It is this sense that the research design in a qualitative case study is said to be emergent.

The raw data for this study includes: (1) typed transcripts of interviews; (2) transcripts of observations; (3) actual documents for analysis and/or notes from documents reviewed; and (4) Tucker's (1988) and Creswell et al.'s (1990) books on

chairing the academic department.

Separating Fact and Fiction

Researchers must constantly evaluate the quality and veracity of the data which they are collecting. A respondent may actively and consciously mislead the researcher. Van Maanan (1979b) suggests that people lie about the things which are most important to them. Such behavior can be motivated to hide personal or organizational failures, to shield the organization's "rotten apples," or to maintain collective secrets of the organization.

Another way researchers are mislead by their subjects has to do with the fact that people often are poorly informed or are motivated to mislead themselves. People are also naive or unaware of the unconscious motivations underlying their behavior and thus underrepresent or misinterpret their motivations to the observer. Van Maanan concludes his discussion about ethnographic research:

> The results of ethnographic study are . . . mediated several times over -- first, by the field worker's own standards of relevance as to what is and what is not worthy of observation; second by the historically situated questions that are put to the people in the setting; third, by the self-reflection demanded of an informant; and fourth, but the intentional and unintentional ways the produced data are misleading (Van Maanan 1979a, 549).

Despite these concerns, the data collection in the Department of Biological Sciences appeared to be directly and truthfully presented.

Data Analysis

Data analysis involved looking for patterns of culture in the artifacts encountered during the course of data collection. The method of **triangulation** played an important role in the analysis. Categories of information relating to the

culture were established. Schein's (1985) levels of culture were used to guide analysis from the levels of the artifact, values, and to the basic assumptions which are the content of culture. In addition, the culture of the department as a whole and in parts was evaluated against Chaffee and Tierney's (1988) model of organizational culture.

Merriam (1988) discusses several **strategies for deriving meaning** which provided a conceptual basis for data analysis. The process of data analysis in qualitative research is not always linear or logical; much of it requires a reliance on the **intuition** of the researcher. Both **inductive and deductive** strategies are used. Much of the process is idiosyncratic to the data and the researcher.

Merriam discusses in detail Miles and Huberman's strategies to assist in the analysis of qualitative data. **Counting** the frequency of a certain event or pattern is a legitimate source of qualitative data. Noting the **relationship between variables** is essential. **Evaluating plausibility** requires that the researcher pay attention to patterns in the data and interrogate subsequent data in relation to its place relative to the initial pattern identified.

This research used the technique of **clustering** as an way to arrive at analysis categories. This process involves grouping things together that were similar on some dimension. Categories were shifted and subsumed and rearranged throughout the process of analysis, however, initial clustering was responsible for getting the data analysis "off the ground." In a similar vein, **splitting variables** may become necessary to acknowledge a degree of descriptive and explanatory precision.

Miles and Huberman (as cited in Merriam 1988) suggest that the researcher

should **develop and use metaphors to describe**, summarize, and illustrate meaning derived from data analysis. **Building a logical chain of evidence** allows the researcher to develop higher-order patterns from the established categories. At the highest level of analysis **making conceptual/theoretical coherence** requires sophisticated analytic and integrative abilities. This activity should result in substantive theory building.

Transcripts of the 33 interviews and the observations were coded according to topical areas identified as key elements relative to the theoretical categories presented by Chaffee and Tierney. Transcripts were then parsed and sorted into analysis groups, e.g., chair leadership, faculty leadership, curriculum reform. The resulting data were analyzed and organized in terms of the theoretical framework.

For an element to be considered relevant for mention in the narrative analysis as representing a **key** departmental value, it must have been expressed by at least one-half of the respondents in the standard interview. Other values of note were mentioned in the narrative with appropriate qualifications, e.g., "a few faculty members felt . . ."

An important aspect of the researcher's agreement with the department included guaranteeing anonymity and confidentiality to the respondents in the context of interviews and observations. Because of this agreement, the researcher elected not to use pseudonyms, and in only rare instances identified any finding with any particular individual or role. This strategy was considered appropriate because common beliefs and assumptions **among** faculty members were considered to be the relevant focus of the study; diverging perspectives and opinions were noted as such.

Although it was hypothesized that Chaffee and Tierney's model would provide a somewhat adequate way of describing departmental functioning, additional theory emerged from the data to describe the department's functioning internally and within the larger environment of the university. Great care was taken by the researcher to maintain an open mind about theory: both evaluating the adequacy of Chaffee and Tierney's model while leaving open the possibility of developing a completely new model of organizational culture appropriate at the departmental level.

Chapter 3 Notes

1. Because of the agreement of anonymity and confidentiality made with the respondents in this case study, the institution at which the study was done will be referred to simply as "the University."

CHAPTER 4

The Discipline and Setting: The University and

the Department of Biological Sciences

The Academic Discipline of Biology

The Evolution of the Biological Sciences

The study of living things dates to ancient times. Systematic, scientific study of life began in the sixteenth century during the scientific revolution, when the first dissections allowed for the development of the area of **anatomy**. As the experimental method became more widely used in the early seventeenth century, **physiology**, or the study of biological processes, emerged with the study of circulation of the blood.

The chemistry of living things, or **biochemistry** began with the study of the chemical processes necessary to support life and growth. The invention of the telescope and its natural variant, the microscope, at the first of the seventeenth century carried the power of human vision to a new level and resulted in the development of the area of **microbiology**.

The early eighteenth century brought with it the move to classify living things. The field of **taxonomy** identified particular species and resulted in the familiar Linnaean hierarchy of life: kingdom, phylum, class, order, family, genus, and species.

Soon, interest turned to explaining the basis of the observed order. A look at the fossil record and comparisons of similar organism gave rise to **comparative anatomy**. Theories explaining observed relationships abounded during the eighteenth century, although it took until the mid-nineteenth century for the development of the current **theory of evolution**.

The nineteenth century saw the recognition of the importance of gases on life and resulted in the development of the fields like **plant physiology**. With the discovery of organic compounds like lipids, proteins, and carbohydrates and their role in life processes, **biochemistry** underwent more systematic study. Supported by the use of the microscope, areas such as **histology**, the study of tissues, and **cytology**, the study of cells, gained breadth and depth. As interest in the origins of life increased, the development process, or **embryology**, identified such things as fertilization. **Comparative embryology** affirmed the concept of the unity of life and its processes.

Darwin's **theory of evolution** dominated the final third of the nineteenth century and underlies basic assumptions in the field at the end of the twentieth century. Darwin was a naturalist whose greatest contribution was his description of the mechanisms supporting evolution: the natural selection of organisms which display the characteristics most adapted to the environment. This theory, as described in The Origin of the Species brought new life to the study of taxonomy, embryology, anatomy, and paleontology. The actual basis of heredity and the transmission of characteristics to following generations were subsequently developed with the study of chromosomes and processes like mutation.

The nineteenth and twentieth centuries brought areas such as **bacteriology** and supported the fight against germ-based disease. The study of the **nervous system** helped to understand organisms' behaviors. Studies of the blood led to identification of the importance of **hormones** and the bases for **allergies**. Developmental biology began having widespread applications (Asimov 1964).

During the end of the nineteenth century in America, a major battle was waged between two camps within biology which reflected differences in what was considered the best methodology to apply to the study of life. Although the experimentalists dominate a large portion of the field today, the naturalist perspective still has some following in areas of **anatomy, ecology, and embryology**. **Naturalists** relied to a great extent on observation and description of biological processes. **Experimentalists** had the desire to manipulate conditions to observe reactions of living things. This latter tradition has a very large emphasis on quantitative data and sees the study of biology on equal footing with the other natural sciences (Allen 1979).

The Organization of Knowledge in the Field of Biology

Flannery (1989) describes several useful ways to organize knowledge in the field of biology. She presents the view that humans need to organize things they experience in the world. The discipline of biology offers numerous principles on which to base our observations of the field. Flannery's distinction of **taxonomic** order versus **hierarchical** order is the most relevant in the current discussion. It is this distinction which will underlie differences in values and perspectives with regard to undergraduate curriculum in the Department of Biological Sciences in the case

study to follow.

Taxonomic organization of knowledge in the field of biology tend to focus on distinctions which are based in the Linnean system of classification. From this perspective, kingdom, phylum, order, etc. provide the basis of distinctions made. Thus, plants and animals are seen as fundamentally different. Order in this case is "aggregational" - orders combine to make phyla, and phyla combine to make kingdoms, etc. Flannery asserts that this type of order is primarily one of convenience (1989, 318).

Another useful system of identifying order is hierarchical, which looks at various levels of organizations. An illustration of this perspective would focus on the levels of cells which make up tissues, organs, organ systems, organisms, and then groups of organisms. These organisms in relation to other species are relevant in describing a niche and are the focus of the study of ecology. Distinctions between kingdoms, i.e., plants and animals, are of less importance than levels of organization.

The hierarchical view of organization supports the concept of emergence which emphasizes that the combination of factors at a lower level can lend an explanation for phenomena observed at the next higher level of organization. For example, principles learned at the cellular level may have emergent properties which are observable only at the next level, that of tissue.

Flannery observes that curricula are often organized at particular levels of organization, e.g., biochemistry, cell biology, organ systems, ecology. She argues that the teaching of biology should be

. . . more effective when facts are related to teach other . . . [thus] it makes sense to emphasize the hierarchical structure of biology, to use a structure based on interrelationships in stressing the connectedness of biological information. This is using the very structure of biology to make biology more comprehensible (1989, 319).

The Academic Life of Biologists: "A World in Motion"

The area identified as biology in current times has been a part of the curriculum in higher education in America since its inception. Until the turn of the twentieth century, when experimentalism over took strict observation and description, the discipline was known as natural philosophy.

Biology has always been a field with great diversity, with scores of subspecialities. Clark (1987) notes that any professional associations or academic organizations above the level of the subspeciality are by necessity "confederations." In larger colleges and universities, the biological sciences are often divided into separate departmental units. For example, a single institution may have a departments of organismic biology and cellular biology. Biochemistry departments are often developed as organizational responses the diversity in the field.

Biology is also characterized by a very rapid pace in the discovery of new knowledge. In his discussion of his deanship at Harvard, Rosovsky notes that biology is "world in motion." He observes that

[m]odern biology . . . has been exploding with new knowledge ever since the cracking of the genetic code by James Watson and Francis Crick in the 1950s. Its practitioners tell me that to remain abreast of current findings, even in their own narrowly defined fields is almost a full-time occupation (1990, 162).

Along the same lines Clark indicates

[b]y the early 1980's, biology had virtually taken first place among the sciences as the locus of exciting science, laying an array of fascinating and promising

specialties before undergraduate and graduate students (1987, 192).

In his discussion of faculty values, Clark emphasizes that biologists tend to value autonomy and freedom greatly, perhaps in part due to the diversity in fields which make up the discipline. In addition, he observes that individuals pursuing academic careers in biology find that a research Ph.D. is not sufficient; a post-doctoral appointment is almost always required (Clark, 1987).

The University Setting and the Department of Biological Sciences

The department of biological sciences chosen for this case study is in a doctoral-granting, regional university located in a metropolitan setting. The University was established in the 1930's as a two-year branch campus of a neighboring college and became a four-year college in its own right by the early 1960s. The institution attained University status in 1969 and established its first doctoral program in 1971 (Sweeney 1980). The University offers programs in the liberal arts, business, education, engineering, and the sciences and health sciences.

The growth and development of the Department of Biological Sciences facilitated the emergence of the University as a maturing research-based institution. The research emphasis of the department begin emerging in the 1960s and plays a key part in hiring faculty and in the awarding tenure at the University.

The Department of Biological Sciences functions within a college of sciences. The primary facility, a three story building with a fourth floor animal facility, is shared with a department of psychology. Several satellite research locations are maintained. The department employs 26 faculty and several support staff. It

maintains a variety of laboratory facilities and a number of vehicles and boats used for teaching and research activities. The department and University have a cooperative agreement with the local medical school. A few medical school faculty are adjunct faculty in the Department of Biological Sciences and several department faculty have research space at the medical school.

CHAPTER 5

Organizational Culture of the

Department of Biological Sciences:

Overview of Structural and Environmental Dimensions

Introduction

Overview of Chapters 5, 6, and 7

Chapter 5, Chapter 6, and Chapter 7 comprise the main body of the results of the case study on the organizational culture of the Department of Biological Sciences. Chapter 5 will provide an overview of the general applicability of Chaffee and Tierney's (1988) theory of organizational culture to the case study department in terms of the structural and environmental dimensions. Chapter 6 will review the organizational saga of the department and other related value systems. A more detailed analysis and application of the theory into particular realms within the department will be provided in Chapter 7. There, particular analysis areas will be identified (e.g., succession and selection of the department chair, curricular reform) and the interaction of the structural, environmental, and values dimensions of culture will be discussed.

In Chapters 5-7, the application of the theory of organizational culture will be made both in the time frame of the case study and in terms of the historical context

provided by interview subjects and the historical documents of the department. Primary data sources for these analyses include (1) interview transcripts of 26 faculty members; (2) the department's Policies and Procedures Manual; (3) transcripts of observations made of faculty meetings, the faculty retreat, and executive committee meetings; (4) supporting documents from the topical areas covered (e.g., departmental correspondence, faculty meeting minutes, correspondence from sources outside the department, annual reports, and planning documents).

In the final analysis, the researcher utilized approximately 80 percent of the interview and observational data collected and about 15 percent of written documents gleaned for the study. Actual interviews and observations provided more detailed data about the culture of the Department of Biological Sciences than the written record of the department. The written record (e.g., faculty meeting minutes dating to the early 1970s, the chairs' correspondence) was not as well geared to capture critical elements of culture as were the interviews and observations. However, these documents did provide important historical context and were essential in the final analysis.

Review of Concepts and Examples

Chaffee and Tierney's theory (1988) of organizational culture and its application to the operation and leadership of the university at its highest level was discussed in detail in Chapter 2. This study was designed to evaluate this theory and to determine its applicability to the understanding of the academic department.

To review, Chaffee and Tierney suggest there are three levels or dimensions

of culture. The **structural dimension** includes the basic policies and procedures which facilitate many of the educational and operational tasks of the organization. Much of the structural dimension is described in organizational charts and policies and procedures manuals. Examples of structural aspects include academic programs, governance systems, and formal and informal decision-making mechanisms. **Linear strategy** involves those activities in which an organization engages itself which help it address the structural dimension.

The **environmental dimension** has to do with the organization's relationship to what it perceives to be its environment. The emphasis is on perceived environment because it is the organization's perceptions which guide the strategies it uses to adapt to the environment. Organizations are involved in **adaptive strategy** when they attempt to adjust aspects of the organization to fit its perceived environment.

The **values dimension** involves the beliefs, assumptions, and norms about what is and is not important to the organization which are shared by organizational participants. **Interpretative strategy** is said to affect and represent the values dimension of culture.

The values dimension and interpretive strategy have a profound impact on the structural and environmental dimensions, and their concomitant linear and adaptive strategies. Values affect the form the structural dimension takes. For example, the degree to which an academic department values student development relative to other missions will affect the degree to which it allocates resources to form an advising and counseling center within the department. In this example, the values dimension had an influence on the form a linear strategy takes. In many cases

values are revealed by the linear choices made when resources are limited. By emphasizing advising in its departmental structure, a department is creating a something that is symbolic of its value it places on student development. The physical manifestation of this emphasis communicates the value to various external environments. The values dimension can also affect adaptive strategy. Values will guide what a department perceives its environment to be. For example, a highly specialized department like mechanical engineering may consider only those alumni who graduated as majors from their program to be a part of its relevant environment outside the University. An English department, which at one time or another teaches most students, may consider the entire alumni base as a part of its external environment.

The Structural Dimension and Linear Strategies

Introduction

In general, the data collection in this case study revealed the Department of Biological Sciences to be an expensive, labor- and equipment-intensive operation to manage. In addition to providing substantial instruction to its own majors, the department provides service courses not only to the general education program of the University, but to several health sciences major programs. Because the Department of Biological Sciences was among several departments to take the lead in establishing substantial research programs over the past two decades, considerable departmental effort and resources have been placed in establishing research programs, providing equipment and other resources, and sustaining a

research infrastructure.

One could argue that the basic support needed for the delivery of instruction and for sustaining research programs would vary depending upon the nature of the academic discipline. Thus, management of a philosophy department might be assumed to be different than a biology department. For example, to conduct an introductory philosophy class, an instructor is likely to need little more than a classroom and a chalkboard or overhead projector. In contrast, an introductory biology instructor will not only need the classroom and the chalkboard, she will need a laboratory, a cadre of teaching assistants, a collection of living and preserved animal specimens delivered to her at a precise time during the semester and in the appropriate condition, various chemical solutions, instruments and laboratory equipment, and disposable materials used by the students. A similar degree of complexity accompanies the successful running of most biology research laboratories. Viewed in another way, the Department of Biological Sciences requires an elaborate set of structural processes and linear strategies to meet its basic instructional and research missions.

Much of the structural dimension of the Department of Biological Sciences is documented in its Policies and Procedures Manual.[1] Additional information is gleaned from the University Catalog: 1990-92, and the University Faculty Handbook: 1991-93. The department's first policies and procedures manual was developed during the 1970-71 academic year and has undergone several revisions since then. The 1984 version was most recently updated during the 1991-92 academic year. The development of such a guide to operations and procedures not

only documents much of what Chaffee and Tierney (1988) define as the structural dimension of the department, it provides a perspective on the department's perceived environment and reveals the common values which bind members of the organization to a common culture.

The structural areas identified in the <u>Policies</u> and <u>Procedures Manual</u> include: (1) **roles of individuals holding administrative posts; (2) faculty groupings; (3) faculty evaluation procedures; (4) the departmental committee structure; (5) academic programs and curricular policies; (6)** the activities and responsibilities of **research centers.**

Administrative Roles

Several administrative roles have been established for a number of years in the department. A large portion of the operational, linear, and bureaucratic tasks are coordinated by individuals holding these posts. The roles for most are explicitly defined in the departmental <u>Policies</u> and <u>Procedures Manual</u>.

Department chair. Linear tasks associated with the role of department chair are summarized as "the development of quality programs in instruction, research, and professional service." Specific areas include:

(1)   administration of university and college policies

(2)   departmental long- and short-range plans

(3)   the definition of the role of the discipline and department in the college and university and of its relationship of the needs of the community and state

(4)   curriculum development

(5)   maintenance of an advising system

(6)   prepare and administer the departmental budget

(7)   oversee departmental office, facilities, and supervise and evaluate staff

(8)   leadership in faculty development teaching, research, and professional service

(9)   faculty evaluation in teaching, research, and professional service

(10) promote affirmative action/equal opportunity

(11) supervise the faculty recruitment, reappointment, review for tenure, and salary increments

(12) maintenance of liaison with other academic and administrative units, and with appropriate external agencies (Policies and Procedures Manual, 16)

This description reflects most major categories of structural tasks required of the department chair observed during the interview and observation phases of the case study.[2] Examples of particular linear strategies expected of the chair include supervision and evaluation of faculty, supervision of the advising and instructional missions of the department, and management of the departmental budget, and acting as chief departmental planner.

This description of the responsibilities of the department chair defines and acknowledges the various environments which are considered relevant to the Department of Biological Sciences and suggests the adaptive strategies in which the chair should engage. For example, item (3) above charges the chair to define the relationship between the department and the college, the university, and the region which it serves. Item (12) specifically charges the chair to represent the department to various levels of the university environment and to external environments. These descriptions generally define the perceived environment of the department but do

not suggest any particular adaptive strategies.

Assistant chair. At the suggestion of the faculty, the position of assistant chair was established during the 1974-75 year to deal with growing administrative duties within the department. The individual in this position deals with student, operational, and facilities issues. The assistant chair assumes the chair's responsibilities in some areas.

Chief departmental advisor. The University established a departmental designation of chief departmental advisor during the early 1980s. The Department of Biological Sciences utilizes the chief departmental advisor to screen students for undergraduate degree programs, review transfer work of students for credit, and coordinate the overall advising process for undergraduate students. The current assistant chair serves as chief departmental advisor.

Graduate program director. A graduate program director is appointed for the masters program and each of the doctoral programs. The program director advises incoming graduate students and responds to students questions about financial aid, registration, and requirements and deadlines of the program (Policies and Procedures Manual, 52). All graduate program directors serve on the Graduate Committee (see discussion below).

Fiscal and secretarial operations. Fiscal and secretarial operations are conducted by staff members in the main departmental office. Secretarial work associated with classroom responsibilities takes precedence other requests from faculty members. Fiscal operations such as ordering supplies and equipment and monitoring budgets are accomplished with the assistance of a senior fiscal

technician. Forms supporting numerous departmental operations are included as an appendix to the Policies and Procedures Manual (28, Appendix).

Support facility. Instructional and research services are provided by a support facility. The Department of Biological Sciences conducts a highly equipment- and supplies-dependent instructional program. Chemicals, equipment, and organisms are required to conduct the large number of laboratory and field sections offered each semester. Staff members in the support facility assist primarily with classroom-related needs of faculty. Only rarely do they provided biological preparations for research projects (Policies and Procedures Manual, 30-32).

Faculty Groups

The Department of Biological Sciences formally recognizes two broad disciplinary groups within the faculty: those individuals associated with the **biomedical sciences** and those associated with **ecological sciences**. A number of the biomedical sciences faculty are associated with the reproductive medicine program at the local medical school. A number of the ecological sciences faculty have primary expertise in marine ecology, consistent with an overall University theme in marine sciences. The biomedical and ecological groups became an explicit part of the departmental identity approximately 1975 when graduate programs in these respective areas were initially considered. In addition to these two groups, a couple of faculty members who teach introductory and/or survey courses are also identified with **general biology**. As theories of organizational culture would predict, faculty members in these respective groups have differing values and perceptions; these differences will discussed in the Chapter 6.

Another distinction made among faculty finds its origins in late 1960s: that of **research faculty** and **teaching faculty.** As the department began a substantial research program, faculty who conducted research in addition to assuming teaching were differentiated from the existing teaching faculty whose sole focus had been on teaching. Despite growing emphasis on research over time, certain faculty members have retained the functions of primarily teaching courses with large lecture sections. Expectations for research productivity these individuals is substantially different. Some assumptions and values of teaching faculty contrasted those of faculty who are focused on research. Values and traditions associated with faculty work and functions in the department will become a key analysis area in later sections.

Another key faculty group distinction not recognized as part of the formal structure of the Department of Biological Sciences is **faculty generation.** Interview and observations made during the case revealed some important differences in background and values among faculty members according to their age and the era in which they came to the University. The distinction among faculty according to generation will be discussed in detail in the next chapter.

Faculty Evaluation Procedures

According to the written policy faculty members will be evaluated with regard to their position as a research or teaching faculty. Teaching faculty are evaluated on teaching and service; research faculty evaluation includes teaching, research, and service.

Teaching criteria include: actual teaching performance as determined by student and peer evaluations; instructional innovations; development of educational

grants; and efficiency in the classroom. Professional service performance areas include committee memberships, advising, departmental administrative assignments, disciplinary professional society (e.g., serving as officer), volunteer educational outreach activities.

Research evaluation criteria include number and types of publications, grants and research contracts, and current research activity. Expectations for teaching and services may vary depending on degree of research productivity. Detailed evaluation procedures are outlined in the Policies and Procedures Manual (18-26).

Departmental Committee Structure

The Department of Biological Sciences has developed a complex departmental committee structure to involve faculty members in departmental decision-making in areas considered appropriate for their input. The evolution of this structure from a loosely-organized system will reveal important aspects of the departmental culture and will be discussed in some detail in Chapter 7. Explicit rules about committee responsibilities, composition, and length of membership were outlined in some detail by faculty members in 1987. All committees are considered advisory to the department chair who is acknowledged to have the right to final determination on most issues.

Executive Committee. The Executive Committee reviews policies and procedures of the department, identifies key issues facing the department, and keeps the faculty informed of theses issues. This committee appoints the membership other departmental committees and members to college and university committees, receives and directs issues to various committees, and reviews the overall committee

structure. Representatives from the Undergraduate, Graduate, Operations, and Budget and Finance committees, and an at-large member sit on the Executive Committee. The department chair and the assistant chair are **ex officio** members (Policies and Procedures Manual, 8-10).

Awards and Student Affairs Committee. The Awards and Student Affairs Committee identifies and nominates students for awards and review student concerns (Policies and Procedures Manual, 7).

Budget and Finance Committee. The Budget and Finance Committee makes recommendations to the chair concerning allocation of departmental funds for convention and field trip travel and major equipment purchases. Emphasis is placed on balanced representation to ensure fair allocations along teaching and research dimensions and sub-disciplinary dimensions of biomedical and ecological sciences (Policies and Procedures Manual, 8).

Undergraduate Committee. The Undergraduate Committee reviews curricular and degree requirements, reviews new courses, identifies recruitment policies, and assists in the development of literature to promote departmental programs (Policies and Procedures Manual, 14).

Graduate Committee. The Graduate Committee reviews faculty credentials to certify them for teaching graduate classes, makes graduate teaching assistantship appointments, reviews policies for graduate recruitment and admissions, reviews curriculum and course offerings, and maintains information on program graduates (Policies and Procedures Manual, 10).

Operations Committee. The Operations Committee reviews the use and

upkeep of space in the department's primary facilities and makes recommendations for their use. This committee also determines the departmental support facility's duties, oversees computer purchases, discusses issues of safety, regulates the use of vehicles and boats (Policies and Procedures Manual, 11).

Overhead Committee. The **Overhead Committee** is in charge of allocating part of the departmental overhead funds recovered from grants and contracts received by the Department of Biological Sciences. Primary allocations are made to fund reprints of scientific and scholarly publications (Policies and Procedures Manual, 11).

Seminar Committee. The **Seminar Committee's** purpose is to "organize, promote, and host a series of scholarly seminars for the enlightenment and intellectual stimulation of the faculty and students" in the Department of Biological Sciences. Representation from faculty groups is considered important in this committee (Policies and Procedures Manual, 12-13).

Tenure, Promotion, and Continuance. The membership of the **Tenure, Promotion, and Continuance Committee** includes all tenured faculty in the department. This committee provides recommendations concerning reappointment of non-tenured faculty and applications for promotion and tenure. The department chair is not a member of this committee. Promotion to full professor rank is considered by only faculty holding that rank (Policies and Procedures Manual, 13-14).

Academic Programs and Curricular Policies.

The Department of Biological Sciences offers academic programs and courses

at the bachelors, masters, and doctoral levels. In addition to providing courses to its program majors, the department contributes a number of service courses for majors in health sciences programs, e.g., nursing, dental hygiene, and medical technology. Also, a number of courses in the department provide the opportunity for students of all majors to meet the University's general education requirements.

Baccalaureate programs. The Department of Biological Sciences offers a bachelor of science (B.S.) degree in biology, with concentrations in botany, ecology, microbiology, marine biology, zoology, and concentrations preparing students for professional education in medicine, dentistry, and veterinary medicine (University Catalog 1990-92, 116). An option is available to majors to earn secondary education certification concurrently with the B.S. in biology. Students also have the option of pursuing a bachelor of science in interdisciplinary studies with and emphasis on cytotechnology (analysis of cells) or histotechnology (analysis of tissues) (Policies and Procedures Manual, 38-49).

Masters programs. A master of science degree (M.S.) in biology is offered with tracks in physiology, biomedical science, ecology, marine biology, systematic biology, microbiology, botany, and zoology. A master of science with a biotechnology concentration is also offered. The College of Education jointly offers a master of science in education with a biology major (University Catalog 1990-92, 116-117).

Doctoral programs. There are two doctoral programs in the Department of Biological Sciences. The doctor of philosophy (Ph.D.) in Ecological Sciences emphasizes academic and managerial experience for individuals wanting to assume

careers as ecologists, in research or applied areas (Policies and Procedures Manual, 63-73). The doctor of philosophy (Ph.D.) in biomedical sciences is offered in conjunction to a local, part public/part private medical college. The program requires emphasis broad course work in the biomedical sciences and the development of a research program addressing particular problems in specialized area (Policies and Procedures Manual, 74-80).

Research Centers

There are three primary research centers operating from the Department of Biological Sciences. A center focusing on **male fertility problems** is run jointly with the medical school. A **biotechnology center** develops practical applications and produces life form technologies. A center for **applied marine research** coordinates interdisciplinary marine research projects and provides technical support to University faculty and to external agencies.

The Enacted Environment and Adaptive Strategy

Introduction and Overview

Popular culture often characterizes academic institutions as "ivory towers" or enclaves separated from the "real world." Contrary to this view, recent changes in the economy and changes in student demand have illustrated the need for many colleges to engage in adaptive strategy in order to survive. However, colleges and universities do not attend equally to all aspects of the environment. Chaffee and Tierney (1988) use the term **enacted environment** to describe the organization's tendency to focus on certain dimensions which it considers relevant. Adaptive

strategy is applied by the organization to the enacted environment, and for an organization to be effective, adaptive strategy must be sensitive to relevant environmental changes.

Members of departmental culture might be expected to share a common enacted environment which identifies what is relevant beyond departmental boundaries and what should be ignored. The academic department not only has to adapt to the world outside, but to the University environment where its needs must be weighed against those of many other units. This section will outline the general parameters of the department's enacted environment and how it has changed over the past decade.

The Department of Biological Sciences is one of 42 academic departments at the University. Within the department there is a diversity of interests among the faculty and a number of administrative roles which are necessary for the operation of the department. As one might expect, there is some variation among faculty members' perceptions of the enacted environment based on the faculty groups to which they belong and whether or not they have a role in the administration of the department. In this case study of the Department of Biological Sciences, both faculty and the department chair will be seen to engage in adaptive strategy, that is, providing the necessary adjustments to keep the department in line with its perceived environment.

Clearly, the department chair has the most well-developed concept of the department's enacted environment because of his primary role advocating for the department to external constituencies. The degree to which the chair involves

faculty in decision-making seems to have affected faculty members' perceptions. During the early 1980s, several faculty felt that the chair "insulated" them from the environment, and that he did so in order to allow them to "do their thing." At the time, many felt this was a good idea. As the composition of the faculty changed during the mid-1980s, younger faculty began to express the desire to be more informed and involved in decision-making. The resulting committee structure involved most faculty in some aspect of governance and expanded their concept of the department's relevant environment. This process will be discussed in detail in Chapter 6.[3]

It is apparent from observing the Department of Biological Sciences and the various environments with which the department must contend, that faculty members' awareness of the environment is particularly heightened when the departmental values are in conflict with those in its environment. In some cases, the department may choose to ignore certain kinds of external demands placed on it; while other times they choose or are forced to engage in some form of adaptive strategy to accommodate.

University Environment

Academic administration. In the course of its operations, the Department of Biological Sciences must deal with several layers of academic administration: the dean, the provost, the president, and sometimes, the board of trustees. Historically, the department has viewed the administrative environment in terms of its role in: (1) overseeing academic policies; (2) evaluation; and, perhaps most importantly, (3) providing resources and fiscal controls to the department. Dealing with

administration is a daily task for the department chair.[4] Depending on various roles played by faculty members, they also must deal with the administration.

Faculty members and the chair alike acknowledge the role of the president in shaping outcomes for the academic department. Because of the number of senior faculty, several individuals in the case study have served under as many as six presidents since the late 1960s. During the early years as an independent institution, little attention was given to the development of the University's research potential by the first president; little attention was paid to biology at that time. When the second president assumed his responsibilities in 1969, he was charged with transforming a teaching institution into a research University. Although the biology department at the time had a small core of researchers, the second president found it very difficult to establish a research effort University-wide. Over the years under subsequent presidencies, the Department of Biological Sciences has kept pace with the demands for research productivity.

For the most part, the department chair deals directly with the dean in most administrative matters. In general, both department chairs (current and former) and faculty members have expressed the preference for decentralized control of the department. The former chair worked under four deans during his 21 year tenure. Widely perceived to have excellent command of his department's affairs, the former chair stated a definite preference for a dean "who did not spend much time with the department," a style which left the department chair better able to deal with other problems than when a dean is highly "devious and controlling". Thus, the former chair felt better able to engage in appropriate adaptive strategy when he had a great

degree of discretion in departmental affairs.

During the course of the case study, a general theme or philosophy relating to adaptive strategy with regard to administration was expressed by a number of respondents. This philosophy was mentioned in several contexts when the department was anticipating or adjusting administrative demands. The former chair expressed his strategy in this regard as, "making decisions yourself before someone else can make them for you." This viewpoint is echoed in a number areas when faculty members are dealing with administrative demands, e.g., the mandate for student outcomes assessment. A prudent strategy identified by respondents was to get ahead of an anticipated demand to allow for maximum input into the process.

Operational support areas. The Department of Biological Sciences, like most academic departments at the University, is affected by and dependent upon offices which make up the administrative infrastructure of the University. These offices become relevant aspects of the department's enacted environment to the degree they are necessary for the department to accomplish its mission. Because of their separation from the academic mission of the institution, values conflicts between administrative offices and the academic department are relatively common: each side cannot always understand the other's priorities. Despite these differences, running the Department of Biological Sciences requires frequent interactions with these areas to support many of the linear and adaptive tasks presented to the department. The following discussion will provide a few illustrations.

The **enrollment services** areas of the University, including admissions, financial aid, and registration, are essential to providing services to students applying to and

enrolled in the department. Procedural difficulties in the processing of graduate applications for admission created particular problems during the time of the case study.

The instructional and research programs of the Department of Biological Sciences require constant access to animal and plant specimens, chemicals, equipment, and other materials. Substantial effort is made by faculty, teaching and research assistants, support facility staff, and the departmental fiscal assistant to guarantee timely delivery of materials and equipment. These processes require coordination with **purchasing, accounts payable, and physical plant areas.**

Because of liability associated with running laboratories and field trips and with the use of various types of hazardous material, the University **legal counsel** is a relevant aspect of the environment with which the department must contend. Because of demands made from the University environment as a whole, the legal counsel is not always responsive to the department's need for his interpretations.

The **personnel office** becomes most relevant when the department is forced to hire or lay off clerical and support staff. Delays in recruiting for a support position and policies making it impossible to establish an adequate salary for the market resulted in considerable inconvenience in maintaining the department's animal facility. Executive committee members felt that the personnel office was being inflexible, even though it is charged by the University to maintain state policies and procedures for hiring individuals into the state civil service system.

These are only a few examples of the numerous aspects of the University environment to which the department must adapt. They provide ample opportunity

to examine how values and assumptions of different areas can result in conflict. Because the Department of Biological Sciences is dependent on these areas, it must develop adaptive strategies in order to accomplish its mission.

Students. Potential and actual students require that the faculty and the department chair adapt the instructional and advising programs to their needs. A few advanced undergraduates and all graduate students are also involved in faculty research programs. Some faculty who have been at the University a number of years observed a change in students over time. Some feel that students had grown more passive and less likely to question authority, while another felt that students suffer more from a failure to learn morals and ethics from the family unit. Depending on the faculty member's experience and perception, accommodations to student needs are necessary.

Other academic departments. As a major provider of service courses to the general education program and to health sciences departments, and the coordination of teacher certification program with the College of Education, the Department of Biological Sciences has a number of natural connections with other departments in the University. Primary contact appears to be in terms of academic advising and curriculum reform and approval.

Because of the presence of other University departments which engage in marine-related research and/or provide instruction and research in areas which overlap with biology, a degree of inter-departmental competition has occurred from time to time. The department of Oceanography, originally a sub-discipline within the Biology Department of the 1960s, conducts marine-related research; cooperation

among the departments on research agendas is essential to avoid duplicate applications for grants and contracts from the University to the same agency. Friction among the departments has occurred concerning the marine science and ecological sciences curricula. In general, the departments have resolved disputes in the present time.

In 1976, the department chair expressed dismay when the Department of Chemical Sciences developed a bachelor's degree program in biochemistry without consulting Biological Sciences. The departments subsequently offered the degree jointly for a number of years, when it was moved, with the approval of the Department of Biological Sciences to Chemical Sciences. The chair of Biological Sciences endorsed Chemical Sciences' name change to the Department of Chemistry and Biochemistry under the condition that the newly-renamed department did not encroach on the existing programs in the department. In his correspondence, the chair reiterated to the dean that biology had offered courses in biochemistry for 20 years and wanted to maintain it as a concentration.

The Physical Environment

There are at least two dimensions of the physical environment which are relevant to the Department of Biological Sciences at the University. One dimension is the physical environment necessary to conduct research and instructional activities on-campus and in the field. Unlike most academic disciplines, many types of biological research (especially among the ecologists) must be done in particular geographic regions. Because of its proximity bay and oceanic areas, the University has emphasized research areas (e.g., marine biology,

oceanography) which capitalize on its geographic location. Many biologists choose to come to the University based on its location. To some extent, research programs are vulnerable to changes in the physical environment, however many programs have adapted to incorporate human-made environmental intrusions, e.g., pollution, into their research.

Classroom, laboratory space, and other facilities is another aspect of the physical resources needed to support an program of instruction and research. During the early tenure of some of the senior-most faculty in the department, physical facilities and their maintenance for the department were abysmal. During the early 1960s, the department shared the science building with several other departments . Gradually, as the faculty grew in number, research programs developed, and other facilities were constructed, the department took over most of the building and began using additional space in university-owned houses. The entire decade of the 1970's was spent promoting and justifying the need for a life sciences building which would house the Departments of Biological Sciences and Psychology, which finally opened in 1981. According to one senior faculty member, reuniting most faculty into a single facility had a positive effect on morale and increased research productivity and collaboration.

Over the past several years, increased emphasis on research expectations for faculty has resulted in a severe shortage of space in the department. Although a number of ecologists' research programs are field-based, the need for space within the building appears to be a major limiting environmental factor for the department. Certain adaptive strategies, such as maintaining offices and research labs away from

the life science building, provide some relief, but serve also to separate the faculty from each other. In summary, space shortage and adaptive strategies to deal with them will play a central role in the shape of the instructional and research programs of the Department of Biological Sciences over the next decade (Annual Report 1990-91).

The Environment Outside the University

Research agencies and scholarly organizations. During the 1990-91 academic year, the Department of Biological Sciences was awarded $1.34 million in external research grants and contracts from 22 agencies. These agencies represented several categories of organizations: local (e.g., hospitals), state (e.g., technology center), federal government (e.g., Centers for Disease Control, National Science Foundations, National Institutes of Health), private foundations (e.g, EarthWatch, Rockefeller), and private business (e.g., a biotechnology enterprise).

In general, individual faculty members act as principal investigators when applying for research funding and act directly with the agencies without significant intervention from the department. Faculty members learn the characteristics of various funding agencies and develop their own adaptive strategies on applying for research funding. Some faculty choose to maximize the number of applications they submit, while other develop relatively few proposals and invest more time in each.

Most faculty members are involved in regional, national, and/or international scholarly organizations and attend professional meetings in the United States and around the world (Annual Report 1990-91). Consistent with Clark's (1987) observations discussed in Chapter 4, faculty members belong to numerous societies

representing the many sub-disciplines within the area of biological sciences in addition to participating in more general scientific organizations. These individual societies provide faculty development opportunities and play a role in shaping research and professional values.

Some examples of meetings or organizations associated with the range disciplinary specialties within the Department of Biological Sciences include the International Society for the Study of Social Insects, the International Crustacean Conference, the Society of Wetlands Scientists, the Association of Limnologists[5] and Oceanographers, ant the International Congress of Aracology.[6]

Organizations and meetings associated with larger areas within the discipline include the Ecological Society of America, American Society for Microbiology, and the Tidewater Naturalist Society. The most general associations which some faculty members are involve include the Association of Southeastern Biologists and the Virginia Academic of Science. Because of the breadth of the field and disciplinary subspecialization, Clark (1987) refers to some associations as confederations.

High schools and transfer colleges. In recent years, the Department of Biological Sciences has received a growing number of transfer students as majors. The faculty have the perception, backed up by some empirical data, that transfer students, especially those not taking introductory biology at the University, are more likely to be unsuccessful as biology majors. The faculty acknowledge the role of pre-college preparation and the quality of the prior college instructional program in determining student success.

Faculty members are seriously concerned about the adequacy of biology

courses taken at other institutions prior to coming to the University and whether these courses should be accepted for credit toward a biology degree. A complicating factor in this process is the University's established articulation relationships with the state community college system and the University's president's public agreement with the local community college that all academic credits will be transferrable to the University. This problem illustrates how differences in department and institution perceived environments and adaptive strategies can come into conflict.

Should the Department of Biological Sciences require transfer students from the community college to take additional course work to become biology majors, it would come into conflict with the president's desire to ensure easy articulation between institutions. Thus, departmental regulation of transfer credit would represent an adaptive strategy to conditions outside the University which potentially bring it into conflict an important internal aspect of the environment to which it must consider, the presidents mission for the University. It is clear that departments have to consider all aspects of the environment before formulating adaptive strategies.

Regulation. In addition to the demand originating on the Department of Biological Sciences from the administration, various forms of regulation come into play in the operation of the department. Federal directives and regulations, like affirmative action and occupational health and safety, frequently come to bear on the department via central administration. Perhaps the most critical issue in this regard occurring during the period of this case study has do with the chemical

hygiene plan, which found its way down through many channels of administration.

The department chair received the **chemical hygiene plan** from the University's office of Risk Management. The plan was written by the federal Office of Occupational Health and Safety as a generic plan for the work place, to ensure that employers provide the correct training and protection for their employees working with potentially dangerous materials. Because it did not address the college and university environment, the chair and faculty members found it very difficult to apply to the instructional and research setting. One faculty member commented, "The . . . plan fits academia like a ten dollar suit."

During the past few years, the department has demonstrated in concrete ways its cognizance of the **affirmative action** concerns. During the past four years, two women faculty members were hired, to bring the total of women faculty to three. One of the recently-hired women is the department's only African American. Efforts to recruit minority and women graduate students to the Department of Biological Sciences have also been made and have received both positive attention and funding from the Provost's offices. These efforts are being coordinated by the two new women faculty members.

Liability issues. Issues relating to liability were in the forefront of many discussions among faculty members during the course of the case study, in part because of the OSHA chemical hygiene plan, but also because of the nature of instructional delivery in the biological sciences. A large part of the curriculum delivered to students by the Department of Biological Sciences require laboratory and field trip experiences. Laboratory risks involve the use of potentially hazardous

chemicals and opportunities for injuries. Field trips involve the use of vans and sometimes hiking for land-based labs. Students involved in marine field trips or research ride in and sometimes operate in University-owned boats in area waterways. In the discussion of the use of the department's Policies and Procedures Manual, some concern was expressed that the documentation of policies and procedures may create liability concerns for the department. Some consideration was given to including a disclaimer in the manual, although it was concluded that this would not ensure protection from legal action.

Accreditation. Although none of the programs offered by the Department of Biological Sciences is individually accredited, the department is not entirely insulated from the impact of accrediting agencies on the institution. Because of the role it plays in certification for secondary school teaching, the department is involved in review by National Council for the Association of Teacher Education. Because it supplies basic service courses to support programs in the health sciences, some scrutiny by their respective accrediting groups would be expected.

During a recent site visit by the regional agency which accredits the University as a whole, the chair of the Department of Biological Sciences seized the opportunity to exercise adaptive strategy in a way address a departmental need he alone could not address. He indicated that the University has a major needs to make long-range plans for safety. He argued that, under current circumstances, departments could not address all safety needs without diverting a significant amount of funding from their academic programs. By pointing out a serious concern to the accrediting team, the chair was try to get the team to make a

recommendation that would force central administration to provide support for safety concerns centrally.

Chapter Summary

This chapter has presented a discussion of structural and environmental dimensions of the Department of Biological Sciences and the linear and adaptive strategies utilized by the department to address these dimensions. The next chapter will focus on the value system of the department and discuss the role of organizational saga in shaping and perpetuating the organizational culture of the department.

Chapter 5 Notes

1. Because of the confidentiality agreement made with the Department of Biological Sciences, citations of complete references are omitted. Instead, titles of printed documents will be referenced by a generalized title.

2. Detailed discussion of the specific linear tasks necessary to sustain the Department of Biological Sciences will be avoided due to their sheer volume. Particular illustrations will be provided, especially in Chapter 7 as specific areas of analysis are highlighted.

3. This example could also be discussed in terms of a shift of values of the department arising from the succession of faculty. Thus, changed values caused resulted in a change in what the faculty in the department considered their enacted environment.

4. Faculty attitudes toward administrators and administrative tasks in the next chapter will reveal the degree which values of faculty members differ from those of the administration. In general, the Department of Biological Sciences faculty members have a low opinion of administrators and the administrative process. These values of particular interest because of the number of individuals in the department who have served in various administrative positions over the years.

5. Limnology is the "scientific study of physical, chemical, meteorological, and biological conditions in fresh waters. (Webster's New Collegiate Dictionary)

6. Acracology is the study of arachnids, a group of invertebrates which include spiders, scorpions, mites, and ticks. (Webster's New Collegiate Dictionary)

CHAPTER 6

Organizational Saga, Faculty Groupings, and

Other Values in the Life of the Department of Biological Sciences

Introduction and Overview

During the course of conducting a case study on the Department of Biological Sciences, it is became abundantly clear that faculty members share some very strong values including the sense that the department is unique in the degree of harmony and cooperation among members of the department who represent diverse interests and backgrounds. This "collective understanding of unique accomplishment in a formally established group" is what Clark (1972, 178) referred to as **organizational saga.** The following section illustrates that this collective perception of the department fits Clark's criteria of organizational saga, which include: a sense of **unique accomplishment,** a degree of **public expression, a basis in actual fact** although sometimes embellished by participants, and the expression of which usually **evokes strong emotion.**

Despite the existence of a strong organizational saga relating to faculty harmony and cooperation, **distinctive groups of faculty** did emerge within the department. The disciplinary specialty, i.e., an ecological emphasis or biomedical emphasis, was associated with differences in values and perspectives. The length of time in the department was also associated with certain kinds of training and

experiences and with certain perspectives on how the department's system of governance should function. These faculty groupings are discussed in the second section of this chapter.

The final section in this chapter discusses other values shared by the department which are of interest to this study. These include departmental and University values with regard to the research mission of the institution, individuals who are considered heroes to some or many department members who reflect key values, attitudes toward administration outside and inside the department, and perceptions of the differences between medical school environments and that of the Department of Biological Sciences.

Organizational Saga: An Environment of Harmony and Cooperation

Introduction

Members of the University community hold the Department of Biological Sciences in high regard. It is seen to be one of the stronger, most productive departments in the institution in accomplishing both its teaching and research missions. Faculty members in the department agree that there is something unique about the department both within the University and among biology departments at other institutions.

A strong organizational saga seems to have its roots in an earlier era of the department, a time when an extensive research program was being established under difficult circumstances. Faculty members' descriptions of this era of building can be characterized as doing "science on a shoestring." The first part of this

section discusses the organizational stories associated with this time. The latter part of the section describes the elements of organizational saga and the dimensions of the department and the faculty it encompasses.

"Science On A Shoestring"

Faculty members coming to the University prior to the 1980s almost universally described the difficulties they encountered establishing their research programs given limited physical and financial resources of the department. A core of faculty remains at the University who came in the early and mid-1960s. During this era, a conscious effort was being made by the department and the University to increase the expectations for faculty to include research productivity. One senior faculty member indicated that biology was the only department in the sciences doing research when he came. Even then, active research was being done by only a couple of faculty members. Despite all the hardships experienced, the faculty expressed pride in being able to produce good "science on a shoestring," and many felt the basis for the current departmental success found its roots in this era.

During these early days of the University, the Department of Biology was housed in a two-story building with the sciences (physics, chemistry, and geology) and engineering. Biology had the end of a hall on the second floor. Between three and four faculty members shared an office in some cases. Closets were being used as offices and labs.

Most new faculty members did not realize how difficult the conditions were until they actually got to the University. "The bitter truth [was that there were] very Spartan conditions . . . the labs were in terrible shape" according to one senior

faculty member. Another faculty member was told the situation was "temporary," although poor facilities plagued the department until the 1980s. A biomedical sciences professor remembers washing test tubes in the men's room across the hall early in his tenure.

Faculty tell stories about this era which reflect their commitment to the department and their unwillingness to completely tolerate the conditions of the facilities. Faculty members contributed their time, effort, and sometimes their own materials, doing renovations. Three faculty members got together and built a new greenhouse to replace an inadequate facility in which all of the plants had frozen to death. Another faculty member built needed counters in his lab. He used surplus orange and black paint, which earned his area the name of "the pumpkin lab."

A lack of adequate equipment for research parallelled the conditions of the facilities. A lot of "scavenging" had to be done for equipment. One faculty saw some equipment on his interview which he discovered was not in working order when he started at the University. Because of the lack of equipment, he started his research program by sending his research samples back to his advisor in graduate school for analysis since he could not do basic techniques with what he had to work with at the University.

Some faculty hired during this time did not remain with the University. While considering a move the University, a faculty member was told by his predecessor not to come to the University -- the conditions were just too bad. This faculty member did not heed his colleague's advice. He came and remained -- a fact he attributes

to his graduate education being completed at what was basically a "bootstrap operation" like the University.

The department chair and faculty members have always been active advocates for the department. There are a number of stories frequently told which emphasize the difficulty under which the early research and teaching efforts were accomplished. These stories also illustrate the lengths to which faculty and the chair would go to to make a point to the administration.

A favorite story of at least five of the case study respondents concerned how the department was able to demonstrate the poor and infrequent maintenance of the building. Knowing that the new president was going to tour the building, faculty members stripped and waxed an area on the linoleum floor and washed a single window. When the president toured, they were able to illustrate how poorly the building was maintained by showing him the difference between the cleaned and uncleaned areas.

A second story illustrates the lengths to which the then department chair was willing to go for the improvement of the department. When the very small animal facility had become inadequate to support the numbers of rats, mice, and other animals, the department chair made an attempt to justify improvements for the facility in the budget process. When the president, provost, and the budget officer toured the campus to review departmental needs, the chair invited them in to visit the animal facility. The tour occurred on a warm day and the smell of the room became overpowering. The chair stood between the president and other visitors and the door and gave a particularly long talk on the need for the new facility. The

former chair recounts that there were literally "tears in their eyes" by the time the visitors left the facility. Needless to say, funds were granted in the budget process to expand the animal facility.

Despite all of the difficulties experienced by the Department of Biological Sciences during the early years, many department members believe that it was the degree of collegiality and comraderie among their fellow faculty that made their efforts worthwhile. Some faculty credit the congeniality of the department for their willingness to stay at the University. It is likely that the degree of cohesion developed among faculty members during these difficult times became basis for the saga which binds the department together even today.

"All in One Boat Rowing in the Same Direction"

The core of the Department of Biological Sciences' organizational saga is the belief that the department is particularly distinctive because of the harmony and degree to which faculty members of different interests work together for the good of the department. Most faculty participating in interviews indicated that the department was unusually harmonious.[1]

Faculty members describe the atmosphere in the department in various ways. A senior faculty members says "it has been an extremely stable department. There is less in-fighting than one would imagine." Another goes further to say, "we have no unresolved conflicts; we are "in the same boat, rowing the same direction." Still another acknowledges a few rough spots from time to time, but states that things get resolved over time.

The perception that there is something special about the department is not

limited to senior faculty who survived the rough years as a research operation in poor facilities. Junior faculty members also sense "something different" about this particular Department of Biological Sciences. One younger faculty member, attracted by the strength of the department's programs, was also taken by the "harmony among the faculty." Another observed that "no issues have moved to the point of contaminating personal relationships . . . there are not real hard feelings - - we can see others' positions." He continued to describe the department has "having as sense of keeping peace." Yet another commented, "I have gotten support -- they are good to new people."

The perspectives of several faculty members illustrate a key element of organizational saga -- distinctiveness. One person captured the idea succinctly:

> I have been at [a number of schools] and I see how departments interact. Most have been cut-throat, maybe nice within a camp, but tear each other apart otherwise. This problem is absent here. I was told that, and I didn't believe it. But it was absolutely the truth. Disagreements are cordial, and we work with each other.

Others confirm that problems exist in other biology departments. One person indicated that his experience during his post-doctoral appointment ("post-doc") was particularly contentious. Another made the observation that most acrimonious departments seem to be the "big buck" departments, which are always fighting for money. This faculty member expressed some fear the University might be moving in a similar direction with its increased emphasis on externally funded research.

Most faculty members went beyond saying that everyone gets along well and works together. There were a number of concrete examples given as illustrations. During his initial year at the University, one faculty member sensed the positive

atmosphere, describing it as colleagues' willingness "to share equally of ideas, time, and space." Although a number of years have passed since this faculty came, he still feels strongly that this atmosphere has been preserved over time.

One strategy which illustrates the departments cohesion, was discussed by a faculty member who acknowledged that there was a debate over issues from time to time. This particular faculty member represented the department on a committee outside the department. He indicated if there was a disagreement among members of the department, a discussion would be held behind closed doors. In the course of this discussion, a decision how to proceed would be made. As the department's representative, this faculty member would advocate for the department, even though some others on the outside committee chose to be neutral. He stated that the "department provided him with the necessary information, and he used his position to support the needs and the desires of the department."

Perhaps one of the most dramatic examples of cooperation among areas involves the use of perpetually-limited equipment funds over the years. Both ecological and biomedical research can require acquisition of very expensive equipment. Thus, decisions concerning the use of the departmental equipment budget have the potential for some disagreements. Despite this potential, in two recent years, one group has been willing to forgo its equipment needs for the entire year to allow the entire equipment budget to go to an expensive item for the other group. Several years ago the department purchased a scanning electron microscope, most useful to the biomedical faculty, which would realistically be used by around one-third of the entire faculty. More recently, the faculty voted to use the vast

majority of the equipment budget to buy a boat, engine, and trailer for use primarily by the marine ecologists.

In general, faculty members were not able to fully explain exactly why the department was so successful at getting along. Some attributed their success to luck or to the particular personalities of the individuals in the department. One faculty member suggested that the faculty were able to "vent steam", e.g., at departmental retreats, which helped to reduce conflict. Another said that reasonably fair distribution of resources supported harmony. He went on to suggest people also were less competitive due to the diversity of interests of the faculty members; because each had "their own turf," harmony was more likely.

The more cynical faculty suggested that dissent was actually stifled by deflecting issues or simply keeping only the faculty who "went along with the program." Despite the apparent enjoyment of a fairly conflict-free environment, not all faculty agreed that a total lack of dissent was good for the department. To some extent, some may feel reluctant in expressing their opinion in this environment. Despite reluctance on the part of some to express concerns, there are a few faculty members who might be considered **designated dissenters**. There are few faculty who are vocal on certain types of issues. Other faculty seem to expect their dissent and respond alternately with serious concern and amusement.

There is some early indication that faculty harmony within the Department of Biological Sciences is slowly moving toward becoming a myth. A number a faculty indicated a very negative effect on faculty morale of the recent and severe budget cuts to the University. Increased stress and a greater degree of competition for

resources were seen to endanger continuing good relations. The events leading up to and the implementation of a new departmental governance system which is more inclusive of faculty participation suggests a new mood in the department. Another move among a few faculty to suggest the creation of a department of cell or molecular biology signaled disunity to some. Several faculty members suggested that an increased emphasis on externally-funded research on the part of the University, has the potential to have divisive effects on the department.

Faculty Values and Perspectives: "Faculty in the Mist"

Despite the unifying perspective provided by the values making up the organizational saga of faculty harmony and cooperation, distinct faculty groups exist within the Department of Biological Sciences. Perhaps the most conscious and public distinction among faculty in the department is made between with those with primarily **ecological** versus **biomedical** interests. A secondary, and not completely unrelated difference, which emerges on closer inspection of the data gathered in faculty interviews is **faculty generation.** Another distinction is made between **teaching and research faculty.** Each of these groups have distinctive characteristics with regard to the values and assumptions. The following sections will discuss each of these groups.

Biomedical and Ecological Faculty Groups

In general, most faculty perceive that the faculty disciplinary distribution among the biological sciences is fairly broad-based with most fields represented. A diversity of values and interests characterize the faculty.[2] One faculty member

observed that it was unusual for a department of the size of this one to have such breadth. According to the former chair, long-term plans had the department develop a fairly general curriculum for undergraduate and masters students. Specialization was designed to occur with the doctoral programs, should the student select something with a biomedical or ecological emphasis. Programs were designed to complement the major programmatic themes established for the University by the board of trustees during the early 1970s.

Not all faculty are totally enamored with the breadth of the department. One faculty referred to the department as a "stamp collection" and questioned its viability in its current form. A major problem identified with this diversity is the difficulty in reaching a "critical mass" in terms of number of faculty in any particular research specialty for the purposes of collaboration. This fact is complicated by the dispersion of many biomedical faculty between the University's research facilities and those at the downtown medical school.

The origin of the use of the distinction between ecological and biomedical faculty for the promotion of the department dates to around 1974. The department had a strong history in ecology which had been used previously to promote the programs in the department. Several faculty theorized that the department began with an ecological emphasis early in part because of the relative cost of running many ecological programs compared to biomedical programs. Many ecologists use the outdoors as their primary laboratory (although they still require lab space within the building), and in general, biomedical labs and equipment are more expensive. Thus, cost shaped the composition of the department to a great extent. More of the

senior faculty tend to be ecologically-oriented, thus some differences among faculty groups are associated both with disciplinary interest and age.

According the former chair, the ecological/biomedical distinction became important with the establishment of the medical school and the development of a joint doctoral program in biomedical sciences. In the previous decade, the department had a hand in the development of several allied health programs. The nursing program began in the department, which later became a department of its own within the School of Sciences. The department also brought a hospital-based medical technology program in which was retained in the Department of Biological Sciences for at least 10 years until the sciences and health sciences were divided into separate colleges in 1986. Although the department maintained the biomedical emphases after the separation of the college, few members within the department felt that the separation of the colleges was a particularly critical event in the Department of Biological Sciences.[3]

Each of the emphasis areas, ecological and biomedical, have a doctoral program as a focal point for the faculty. Although most faculty, as was mentioned in the last section, are generally supportive of both emphases, some conflicts emerge among the factions. One faculty member indicated that most differences are pronounced when the allocation of departmental resources is done according to disciplinary lines. Some competition for resources occurs, although the strength of the culture of the department currently prevents open warfare between the groups. Moves to separate the biomedical faculty into a separate department have been discussed but never pursued. According to one faculty member, such a move, it was

concluded at a faculty meeting, would "have a negative impact on the department."
Thus, the strength of the confederation held the department together.

Despite this decision to stay together under a single roof, the biomedical
faculty sometimes feel that their efforts have less of a focal point than those of the
ecological faculty. Virtually all the ecological faculty have their lab based in the life
sciences building. Some of the biomedical faculty have labs at the medical school
and do more collaboration with medical school personnel. Other biomedical faculty
who do not collaborate with the faculty at the medical school feel somewhat
isolated.

Given the difference in the content of what the biomedical and ecological
faculty study, the types of funding they receive, and how they have been trained, it
is not surprising that their values differ somewhat. In general, the disciplinary
specializations have a different perspective on the levels of organization on which
they focus in their research. Ecologists tend to study things at the level of the
population, or all organisms living in a particular system, while biomedical focus on
lower levels of organization, e.g., the cell within the organism.[4] Some of the
biomedical faculty were trained at medical schools, while the ecologists were trained
in a traditional graduate school much like the Department of Biological Sciences.
Values differences were repeatedly noted between medical schools and more
traditional graduate programs. In general, medical schools were perceived to be to
more high-pressure and "cut-throat." It is important to note, that a number of the
biomedical faculty had the choice to work in a medical school environment, but
chose to teach and do research in what they perceived to be a more congenial

environment.

The degree of cohesion in the face of great faculty diversity suggests that the Department of Biological Sciences functions as what Clark (1987) calls a confederation. Such a confederation involves developing a common sense of mission among the diverse research interests to mutual support for the advancement of the cause of all members.

The next section discusses differences between identifiable generations within the department. It turns out that age is a fairly strong predictor of who on the faculty will interact and socialize.

Faculty Generations and Values

One remarkable thing about the Department of Biological Sciences is the substantial number of faculty who have been with the department for a very long time. Eight faculty members have served from 24 to 31 years. Seven more have served from 16 to 21 years. Only three faculty members have been hired in the past five years. As was suggested earlier, in general, older faculty tend to be a little more likely to be ecologists, thus generational and disciplinary differences are not completely independent.

For the most part, faculty members in the Department of Biological Sciences are fairly conscious of age differences and are able to articulate what they believe to be the substance of the differences. As one might expect, faculty tend to associate informally with similarly-aged colleagues, although few measures of this were included in the study.

There appear to be some patterns in the backgrounds of faculty by age group.

Prior to entering college teaching and research, five of more the mature faculty members had earned secondary school biology teaching certificates, and most had taught in high schools during or prior to pursuing an advanced degree. More mature faculty were slightly more likely to pursue their graduate education a little later in life than the younger faculty.

Graduate education in the biological sciences has changed in the past 30 years. Many younger faculty were trained in larger departments with a greater emphasis on research and seeking external grants and contracts. These schools tend to allow graduate students to be more involved in departmental activities, and thus, when individuals going through their programs join a faculty, they have higher preparation and expectations for participation in the life of the department. One faculty member indicated that "these new faculty come from other places which had done things differently." With regard to faculty compensation, a conflict has been identified between rewarding the legacy of senior faculty while generating sufficient salaries to attract and retain qualified new faculty.

Younger faculty express concern about the priorities of the senior faculty and vice versa. Younger faculty suggest that senior faculty are resistent to change and are unwilling to update ways of doing things, e.g., the curriculum. The older faculty say the younger have no sense of history. The newer faculty have been particularly upset by the current budget situation at the University; mature faculty have seen these times come and go.

Senior faculty are concerned that younger faculty do not share the same educational values with which they themselves were raised. They know that the

younger generation did not share the early, difficult experiences associated with "science on a shoestring," and thus, do not appreciate all of the advantages they have had upon entry into the department. To the credit of the younger faculty, some are conscious of the need to understand the history of the department in analyzing current issues. There are instances when they have explicitly turned to the senior faculty to ask for guidance in faculty meetings.

Both mature and younger faculty are thinking about the implications for the Department of Biological Sciences of the probable retirement of a number of senior faculty over the next few years. They recognize the potential for a shift in the emphasis of the department. Individuals who will be more likely to have active research programs will probably be hired and, as a result, space problems in the life sciences building are likely to increase and affect the course of the development of the department.

Although no one appears certain they know what direction the department might take following the anticipated retirements, several faculty look to the changes with an optimistic viewpoint. However, some of the more mature faculty who have invested a number of years in the department have a genuine concern about maintaining the traditions of the department once they are gone.

Teaching and Research Faculty

Although there is little explicit discussion of the distinction between **teaching and research faculty**, brief mention is made of this distinction in the Department of Biological Sciences' Policies and Procedures Manual in the context of discussing faculty evaluation.[5] It is clear, however, that a large portion of the department's

instructional productivity, as measured in student credit hour production, is concentrated on a few faculty members. In fact, fifty percent (50%) of all student credit hour production is associated with three faculty members who teach introductory biology and anatomy and physiology courses. No other single faculty member even approaches the student credit hour production of these three individuals.[6]

In general, teaching faculty are more vocal about student concerns, have different expectations for research productivity, and are advocates of good advising. These faculty are almost universally valued by other members of the department because of their contribution to the accomplishment of the instructional mission and the freedom they allow other faculty members to teach upper division and graduate courses and to pursue research interests.[7]

Other Values of Interest in the Department

Introduction

During the course of the case study other types of values became apparent at various points in interview, observations, and in review of the written record of the department. The areas to be discussed here include the faculty members' impressions on the types of values biologists tend to hold, attitudes toward administration, the university research and teaching ethic, and various departmental values that cause individuals to be considered departmental heroes.

Values of Biologists

A couple of faculty members discussed the types of people that tend to become

biologists. In general, the view was that biologists were fairly well-suited for academic life. A senior faculty commented that biologists tend to be "task-oriented" and "committed to work." They love what they are doing, and many are drawn to academic life because of it. The need for a degree of independence was indicated by another faculty member. Biologists who needed a lot of structure in the department tended to fall "by the wayside."

Attitudes Toward Administrative Tasks and Administrators

For the most part, faculty members in the Department of Biological Sciences generally expressed disdain for administrators and the administrative process outside the department. An item in the faculty/student newsletter announced the discovery of "the heaviest element: ad administratuium." The observation that faculty members do not hold the administration in positive regard is particularly interesting in light of the fact that faculty members tended to be quite knowledgeable about administrative processes and that a number of them had been in administrative positions both inside and outside the department at various times.

In general, no one wanted to look like they are interested in assuming an administrative role. An amusing example of this faculty value is a ritual that displayed itself in the initial meetings of the departmental governance committees, where committee chairs were to be selected. In most cases a ritual occurred, one most aptly called the "You do it. No, you do it," ritual. Getting someone to agree to be committee chair was difficult. No one came in saying they wanted it, or even that they were willing to do it. In the end, some chairs were "railroaded" or elected if they were not present at the meeting.[8] No one seemed thrilled to have been

elected.

Even department chairs are reluctant to act as if they sought to be an administrator or liked anything about it beyond being able to do something for the department. One chair said he had eschewed any administrative task offered to him, e.g., program director, until just a couple of years prior to his becoming chair. In a report to the faculty on his activities for the year, the chair focused primarily on his research and scholarly activities. In his cover letter, he stated that he assumed that the mundane tasks of administration were of no interest and "would be too troublesome to list and boring to read." Instead, he mentioned what he considered to be "professionally significant," i.e., his considerable research, scholarship, and service contributions.

Comments made by faculty in various contexts graphically illustrate the general feeling about administration and those who conduct it. Some comments were understated: "administrative work is low on the list of an academic." Frustration on having external individuals making decisions about the department was expressed in a faculty members response to some red tape as a "primal scream into the administrative abyss." Another faculty member expressed relief that a certain decision would be made in the department and not left up to a "bumbling administrator."

Interestingly, faculty members rarely blamed the department chair for having to accomplish administrative tasks. There appeared to be the implicit assumption that the chair engaged these things in service to the department. Even department chairs were frustrated by upper level administration. One chair described his role

as "constant confrontations with bureaucrats who say 'no.'" Another description given as an interpretation of a decision maker's action as "sleight of hand."

As part of his responsibilities, the department chair had to bridge the gap between the values of the faculty and those of the departmental support staff. In general, the expectations for faculty and support staff vary considerably. A degree of misunderstanding is often mediated by the chair, who recognizes that the perceptions of these two groups are quite different. In some cases the faculty deals with difficulties, in others he refuses to. In many cases, by refusing to mediate, the chair is using interpretive strategy to communicate to faculty and staff alike the message, "This is not important enough to merit my time."

Research and Teaching Values

A common topic of interest among faculty in the department is the relative importance given to teaching and research in the Department of Biological Sciences and at the University. Several faculty members felt that a good balance for teaching and research was a major factor in choosing to come to the University. One faculty stated that "I wanted to go [somewhere] without teaching responsibilities so great that one could not do research."

According to others, the activity of teaching is grossly undervalued by the University. One faculty member commented, "teaching and advising should be relevant in the reward system." Many faculty feel that the greatest motivation of the University is to have departments that generate extensive funds from external sources.

Some faculty members do not agree that the value of external funding is the

best thing, "[the University] does have an overemphasis on applied and big money research." Another described it as a "real" and "scary" demand from the University which "does not have a beneficial effect on people." A few faculty members have likened themselves to "commissioned salesmen" in this environment. One faculty member, nostalgically recalling earlier days at the University, "if I got 250 dollars I was considered well-funded. If I published, everyone was surprised. I taught classes, but I was not responsible to support the University."

One faculty member indicated that a special type of research -- that which can get lucrative external funding -- was what was primarily valued. He indicated that certain types of scholarship being done in the department did not require large amounts of external funding to be of high intellectual quality and to make a significant contribution to the field and to the University.

Two faculty members made a point which illustrates the impact on the department of conflicts in values of the University on the faculty. One of these faculty members stated that, "there is a philosophical problem here with the administration: making faculty expectations far greater than necessary for the kinds of students we have." This inconsistency is seen to be a "source of frustration and conflict" among the faculty. "Why do people who can't get in anywhere else in [the state] need to have research faculty?" This position, by no means, was considered popular with many other faculty, who are supportive of the department's and University's research mission.

Heroes in the Department of Biological Sciences

The frequent mention of particular individuals and their positive qualities reveal a considerable amount about what the department feels is important. Heroes embody certain values for people, and if mentioned frequently, it is likely these values are central to the culture of the department.

The former department chair was mentioned fairly consistently as having been a champion of the department during his 21-year tenure as chair. Although support for him was not universal, most individuals expressed appreciation of what they identified as his outstanding record in acquiring resources for the department. His personal qualities were frequently mentioned: several individuals described how he made them feel good even when he was registering a complaint with them or saying no to their request. An administrator said that the former chair had a way about him when he was asking for resources for the department that made the administrator feel like saying, "Please, please, take more!" This chair and his tenure as department chair have taken on a "larger that life" quality, and even most of those who had some differences with him, recognize his contributions to the department.

Another senior faculty member who has made significant contributions to building the Department of Biological Sciences has also attained the status of hero among his colleagues. This faculty member acted as research mentor to a number of faculty member seeing that they get their research programs started. He is also identified as a person who "took people in to the organization . . . he built groups." In addition, department chairs have depended on his perspective in a great number

of decisions about the future of the department, with one strategy "he is tremendous source of good advice and experience."

Department faculty also recognize the contribution of individuals who are particularly good teachers. A senior faculty member who is responsible for coordinating introductory biology for majors is given a tremendous amount of credit for her ability to prepare students for upper-level courses in biology. Despite having a colorful personality, this faculty member is widely recognized and acknowledged as providing a very basic and essential service to the department.

Another faculty member, still held in esteem by the department despite their retirement from full-time teaching in 1986, is remembered as representing an era of quality teaching in the Department of Biological Sciences. One faculty member who had this faculty member as an instructor, describes how she helped "mold the direction of my career." She also is remembered for her activities to protect the campus environment. A senior faculty member recalls "one particular incident [involving] protecting a redwood tree about to be felled by a bulldozer." Together, they were responsible to protecting much campus vegetation.

Chapter Summary

This chapter provides a detailed discussion of the origin and function of organizational saga in the Department of Biological Sciences. In addition, it provides an historical perspective needed to understand changes in the department over time.

Chapter 7 discusses organizational culture, and its structural, environmental,

and values dimensions across several analysis areas which are identified during data collection. These areas will provide illustrations in how the concepts of organizational culture can be applied to the academic department.

Chapter 6 Notes

1. Soon after beginning interview process with faculty members in the department, following completed interviews of six to eight respondents, the degree of consistency among responses led the interviewer to initially suspect collusion among her subjects. There was such consistency in what they were saying, that it was hard to believe that they had not met and agreed what to tell the interviewer. Gradually, the interviewer began to realize that she had uncovered a very basic belief which is a fundamental part of the value system of the department, a major tenet in its organizational culture which helps to provide cohesion among group members.

2. One faculty member observed that there even two creationists among the faculty.

3. Only one faculty member stated that the separation of the colleges was a critical incident in the life of the department. It appears that the biomedical faculty of the Department of Biological Sciences did not identify the medical technology program as strongly a part of the biomedical emphasis, although medical technology faculty at the time probably perceived it to be so.

4. This distinction is essentially identical to that made by Flannery (1987) in Chapter 4.

5. Curiously, this section of the Policies and Procedures Manual (1991) makes mention of the faculty in the Medical Technology Program, who have not been part of the department since 1986. No real discussion about how the faculty evaluation system applies to the remaining faculty in the department whose responsibilities focus primarily on teaching.

6. These figures are derived from reports in the University's institutional research office.

7. See the discussion on heroes in the next section.

8. Members of a couple of committees suggested (tongue-in-cheek) that the observer should be the chair.

CHAPTER 7:

Organizational Culture of the

Department of Biological Sciences:

Application of Theory to Analysis Areas

Introduction

Chapter 7 will take the concepts of organizational culture discussed in previous chapters and apply them to various analysis areas of interest in the case study of the Department of Biological Sciences. The process and activities surrounding the succession of chairs, selection of a new chair, and the transition to the administration of a new chair are the topic of the first section. In the second section, the particular strategies used by the department chair and the faculty are discussed. The department's history in managing instructional workloads is covered in the third section. Section four discusses the move for undergraduate curricular reform in the department over the past decade.

Chair Succession, Selection, and Transition

Introduction

This section discusses the history of chair succession in the Department of Biological Sciences and the mechanisms underlying succession. In large part, the

attitudes and support of the faculty are considerably influential in placing a person in the role of chair and for that person remaining in that position. This section discusses in some detail the most recent chair succession and will outline how the procedures of selecting a new chair manifest the basic values of the department and its organizational saga.

Chair Succession Prior to 1990

In 1959, a chair came to the department who, according to faculty at the University at the time, saw himself as a professor "in the European tradition." He tried to maintain ultimate control over the department and seemed more interested in promoting his own marine science agenda than running the department. The faculty described him as "aloof." When he was away on research leave, he returned to find that his temporary replacement had become permanent chair. Accounts differ on exactly what happened, but faculty dissatisfaction had existed and many were pleased that he was no longer in charge of the department. He later served as the founding chair of the oceanography department, but ultimately left that position when the emphasis in the department shifted to physical oceanography.

A second chair assumed his duties in the mid 1960s. One faculty member described him as a "placid, relaxed giant." Others saw him as "too laid back." Ultimately his passivity became an extreme problem for the faculty. Two faculty members made the effort to advise the chair, to keep him on track, and to improve his position politically. The final blow as chair came when he was losing space and badly needed renovation money for the department due to his lack of action. One faculty characterized the era, "we needed leadership -- we were missing

opportunities." Another said, "we were losing money and the department was falling apart." Faculty members approached the chair, and when faced with the problems, the chair capitulated easily and called for the election of a new chair. Again, faculty opinion, influence, and action played an instrumental role in chair succession.

The long-time department chair featured in much of this case study, assumed his role as chair in 1969 after a vote among the faculty members was accomplished by secret ballot. One faculty member stated that he "came in the nick of time" because he was able to preserve much of the renovation money almost lost. He began a 21-year tenure as department chair and made acquisition of resources for the department a primary focus of his administration. His initial goals for the department were to engender growth in faculty, research, and academic programs. His strategy, to be discussed in the next section (see page 123), using enrollment growth to support increases in faculty and facilities.

Recent Chair Succession

The former department chair relinquished his position in 1990 after a career in which he was widely recognized one of the finest chairs in the University. In an interview with a University newspaper, he said "after 21 years, I decided that it was time to direct my interests more to other areas and provide an opportunity for new leadership in the department." His lengthy tenure represented the longest in the history of the University.

Several respondents, while recognizing the contributions of the former chair, cited reasons why term limits should be placed on the chair. One senior faculty stated that over time, department chairs develop habits of doing things and faculty

grow accustomed to a particular style. Fewer innovative idea are likely to emerge over a period of time without change.

Another senior faculty described the former chair as follows, "During his initial tenure [he] was highly democratic. Slowly the faculty let him start taking care of things. Gradually he took care of most things." Younger faculty, more recently hired tended to see him as being autocratic, although another senior faculty said their understanding was somewhat limited because they did not know the history of how the position had evolved. Some characterized his tenure as "a benevolent dictatorship."

Several factors appear to have entered into the former chair's decision to step down. As was discussed in Chapter 6, the composition of the faculty had changed under the former chair's leadership over the years. The younger faculty came in with different backgrounds and expectations. They had been successful at bringing about some changes in the department, e.g., a change in the committee structure. However, one junior faculty likened the former's chair position to that of Gorbachev in the Soviet Union: he had strengthened the department and its faculty, who in turn wanted more input into the running of the department.

Another factor in his decision may have been the recent enactment of a policy limiting the number of terms a chair can serve to two consecutive three-year terms. In general, there was a sense among many of the faculty that the time for a change had come; many faculty were careful to state that it was not a specific concern and it was not a personal attack on the chair. There had been a particularly unpleasant disagreement among the faculty with regard to a tenure decision four or five years

prior to the chair succession, the effect of which were still being felt in the department.

One year after his final reappointment, two years before the end of his term, the former chair decided "it seemed time to give up the chair." A senior faculty member speculated that the former chair had experienced "burnout" in the role. Also, in light of pending budget cuts, he felt that the former chair "did not want to be the architect of the destruction of what he had built." Despite the desire for some individuals to see new leadership, most felt gratitude for his contributions to the department.

Process for Selecting a New Chair

A number of individuals, including the one who was to become chair, cited the advantages of bringing in a new chair from the outside the University. It was felt that an individual without a history with the organization would be most likely able to bring about the greatest amount of change in the department. From the perspective of organizational culture, some who shared fewer of the assumptions or values of the organization would be better able to change those values in the direction the administration desired. Despite these perceived advantages, financial constraints and the desire of the dean resulted in the selection of a new chair from the ranks of the senior faculty within the department.

The management philosophy of the dean at the time of chair selection was to provide as much departmental autonomy as possible. As a result, he asked the department to provide him with nominations for department chair, among whom he would select. Given the value system for autonomy, many faculty appreciated

the opportunity to meaningfully participate in the selection of a new chair. The department's first task was to develop the best method for arriving at with the nominations for chair. The faculty established a linear strategy, which several faculty described as highly democratic, reflecting the value system of the department. The dean designated the assistant chair as the record keeper for the procedures as they developed.

An initial secret ballot was taken to select a group from among all tenured faculty members. Once the pool was narrowed down to five candidates, each was asked to submit a statement of their "ideas and philosophy concerning the role of chairperson." Most faculty indicated that "lots of thought and discussion" went into the deliberations and that most faculty participated in the process. Faculty cast a final ballot ranking their choices. The names of the top three candidates were advanced to the dean, who interviewed each.

When discussing the basis of the choice for department chair, several people cited the successful candidate's statement of philosophy as a basis for their choice. According to one faculty member, the successful candidate "had such passion on the educational process and students." Another faculty member felt that "he had the best statement on leadership and goals." A number of faculty indicated that there was great unanimity in the selection of the present chair for the position. The top candidates were advanced to the dean, who made the selection according to the recommendation of the department.

Transition Into the Role of Department Chair

One of the initial realizations made by the new chair was that there is really

no formal training or socialization for assuming the position of chair. The chair is placed in a situation where the values of the University come into play with those of the department. Even faculty members realized that grooming faculty for assuming the chair would make for a smoother transition.

Perhaps the single-most complicating factor faced by the new chair, was substantial budget cuts at the University -- a fact that most faculty acknowledge as creating hardship for the new chair. Faculty almost universally praise the new chair's handling of very difficult circumstances. Most feel that he has done a good job to protect the department. The chair, as will be discussed in some detail in next section, "solicits input on lots of stuff. [The former chair] did what he understood to be the feeling." The new chair is "whole-heartedly supportive of the tendency toward democracy."

Strategies of Department Chairs and Faculty

Introduction and Overview

Although Chaffee and Tierney's (1988) theory focuses on the strategies of organizational leaders, this case study of the Department of Biological Sciences revealed that in the collegium of the academic department, both the chair and the faculty engage in linear, adaptive, and interpretive strategies. Frequently, these strategies were used in combination, that is, to address more than a single dimension of the culture at a particular time.

Because of the seemingly limitless ways both faculty and the chair can engage in these strategies, this discussion is limited to the areas largely associated with

governance and decision-making within the department. The first section provides a general overview of the former and present chairs and how each fit the particular time in the history of the department. The second section focuses on the activities of the chair and relate them to the respective strategies. The final section discusses the ways various faculty members behave which are influential in how the chair is perceived and in how mechanisms for governance have been altered over time.

Strategies of the Department Chair

General description of department chairs' strategies.

The types of strategies chosen by the department chair appear to be a function both of internal characteristics of the individual in the position and of the environment in which the chair is functioning. This case study of the Department of Biological Sciences is bounded by the respective terms of two department chairs: the **former chair** who served during a 21-year period of growth and the **current chair** who took over the reins just two years ago at the beginning of severe budget cuts.[1]

Most faculty members, regardless of the length of tenure at the University recognized the importance of the chair in setting the overall tone for the department. They recognized a dimension which became the crux of discussion of the former and current chairs's styles. In addition, many faculty members recognized the importance of style relative to the particular point in the evolution of the department a particular leader has taken over in the department.

During the tenure of the former chair, the institution went from a fledgling University to one which has a number of prominent doctoral programs and a significant amount of external funding for its research programs. The growth of the

Department of Biological Sciences paralleled the growth of the University. The hallmark of the former chair's administration and strategies was the acquisition of resources for the department. This chair is held in especially high esteem throughout the University and is spoken of by most faculty members in the department with a great degree of respect. His tenure as chair has made in "larger than life" in the eyes of many members of the University community.

In general, the former chair was perceived to maintain fairly tight control over the governance of the department. Faculty members' opinions on what was perceived as a fairly centralized governance system varied, to some extent on the generation of the faculty. Senior faculty are more likely to view the former's chairs administration in the context of era of building which occurred. One faculty commented, that the chair "was an absolute dictator who tolerated little dissent. As a result, he did more for the department than many could have had," while another stated, "in building, dictators are better than democrats . . . building requires the sacrifice of a certain amount of freedom." By some, the chair's strategy is interpreted as taking care of mundane tasks while faculty did the "real work" of the department: research, teaching, and service.

Although he was active in running the department, his manner in dealing with people was almost legendary. One faculty member commented, he was always "a gentleman . . . [exerting] strong but quite pressure." Many indicated that even when he was denying a faculty member's request, he always made them feel good regardless of the outcome. He was able to be firm, but said "no" "in his charming way."

Younger faculty were more likely to be critical of what they perceived to be tight reins on the department held by the chair. Near the end of the former chair's tenure, a new system of faculty governance was installed in the department which guaranteed a greater degree of faculty involvement in decision making. When the department chair changed hands, an additional change in the structure completed a process of democratization. These changes in the governance system will be discussed in the section on faculty strategy (see page 135, below).

The former department chair resigned his position around the time of the beginning of a one-and-one-half year period of severe budget cuts.[2] As indicated in the previous section, the present chair assumed his position with wide support from his fellow faculty members, who have acknowledged his skill at dealing with the budget cuts under the most difficult of circumstances. Most faculty acknowledge an increased involvement in the faculty's role in governance under his administration and see the chair as being fair and straightforward. He is described as being "up front," the type of person who would tell you if you were not going to get what you want. "He does not seem to have preconceived ideas . . he takes things in and then decides."

Despite his willingness to involve the faculty, the current chair is cognizant of fact that, in some areas, the chair must be highly directive, as will be discussed below. In the final analysis, the conclusion will be made that perhaps the most important difference between the current and former chairs is their differences in the use of interpretative strategies to assist the faculty members in understanding the things which happen around them.

Maintenance of departmental growth. When the former chair assumed his position in 1969, he very consciously developed strategies to capture the opportunity to guide the department through a period of growth associated with that of the University. His initial goals were to increase the number of faculty in the department, support a growing research emphasis, and expand the program base. The chair seems to have rarely missed an opportunity to gain additional resources for the department. One senior faculty commented, "It seemed we got favored treatment."

In the process of trying to justify a new building for the department, the chair expanded the department from its original quarters to put faculty members in some old houses owned by the university. Enrollment growth was supported by these additional faculty, even though the general conditions of these houses remained marginal, and the increased enrollment finally justified a new building completed in 1980.

Another adaptive and interpretive strategy used by the former chair involved how things were named and how they were talked about. At the beginning the growth phase of the department in the early 1970s, the chair and the faculty changed the name of the department from Biology to Biological Sciences, to broaden its appeal and to signal to the agencies accrediting the medical technology program the diversity within the department. Soon after the opening of a local medical school, the chair identified the two separate groups of faculty in the department: biomedical and ecological. Even though the numbers of biomedical faculty were quite limited, the faculty and the image created by the naming process

were sufficient to support the development of a successful joint Ph.D. program with the medical school.

In the process of successfully competing with other University departments, the chair learned a strategy that helped in his success. He believed that it was very important not to win every battle. He indicated that he lost a few intentionally saying, "you will have no friends if you win all the time."

Chairs' strategies in dealing with central administration and the University at large. In general, the most relevant aspect of the Department of Biological Sciences' environmental dimension, is the central administration, in the form of the dean's office and the provost's area, and other aspects within the University. A chair engages in an adaptive strategy when he[3] writes to the new president, reviews the accomplishments of the department, and invites the president to visit to see the department for himself. Another form of adaptive strategy (with interpretative elements) comes into play when the department competes with other departments in the University for faculty positions. In a recent executive committee meeting, the chair described how he carefully picked the area within the biological sciences for their request. In developing the faculty position description, he maximized the department's chances to receive the position by matching the departmental needs with values held and promoted by the University.

Personal communication style can take on symbolic qualities. The current chair has chosen to deal in a very personal and direct way with those relevant individuals in the environment: to the extent possible, he talks face-to-face with people. He avoids the use of memoranda if at all possible. This type of

communicates reflects an interpretive strategy which conveys an open and direct approach to negotiating with the outside environment."

There have been a number of instances in the past six to eight years when there have been movements for reorganization within the University. In each case, the chair of the Department of Biological Sciences identified the key people in the decision-making process and express the opinion of the department. For example, the former chair engaged this adaptive strategy to affect changes in the distribution of faculty purchased release time, the running of centers and institutes at the University, and the organization of sciences and health sciences. He made an unsuccessful attempt in this effort to prevent the separation of the health sciences, including medical technology which was in the department, into a separate college. Medical technology was moved out, representing a significant loss of resources. In a recent effort, the chairs of the College of Sciences were successful at discouraging the senior administration from merging the sciences with engineering or with arts and letters.

In many cases, the chair has to take the part of the central administration and represent and enforce its wishes at the level of the department, even when the outcome goes against the wishes of some individuals in the department. For example, the University passed a policy to ban smoking in public areas. The chair was the focal point for complaints from smokers and non-smokers alike.

In another example, faculty members are concerned about transfer students' ability to achieve without taking introductory biology at the University, to the extent that some did not want to accept their transfer biology courses. When the president

made a public agreement with the local community college to allow students to transfer all of their academic credit, the chair indicated that his and the department's policy had to be in line, on some level, with the University president's. The chair stated, I "would like to know my marching orders" before we make a final decision on this matter. "I respond to his priorities." With these statements, the chair used interpretative strategy to emphasize his determination and obligation to consider the central administration's wishes in departmental decision-making.

A chair must be vigilant with regard to the happenings in other departments. When the Chemical Sciences department requested permission to broaden its offerings, the department chair asked the dean to review the situation for potential duplication. In a subsequent year, the same department wanted to change its name to Chemistry and Biochemistry. The chair again wrote the dean expressing agreement to the change in name with the requirement that the department not encroach on any programs in the Department of Biological Sciences. He also reminded the dean that his department had been offering biochemistry for 20 years and wanted to maintain it as a concentration.

How a chair handles departmental resource problems provides an opportunity to use adaptive and interpretive strategies. When the state coordinating board encouraged the department to begin a program in nuclear medicine technology for which there was high demand, the department chair declined to implement the program citing the lack of resources. By refusing a potentially popular program, the chair was able to make a strong statement about how the department functioned in times of poor resources. When the recent and severe budget cuts were

implemented, the chair wrote to the dean to convey

> the dismay and disappointment of the faculty . . . [that] the educational mission of my department has been significantly compromised by previous budget cuts . . . a lack of immediate protest sends the wrong message to the state government.

This impassioned statement sends a clear message about the impact the cuts have had in the department and suggests interpretative strategies the University could take to protest the actions of the state.

A highly successful adaptive strategy used by the chair can be getting himself placed in positions in which he could benefit the department. In 1983, the former chair headed the search for a new academic dean for the college. In 1986, he was appointed to a state-wide committee which was in charge of allocating money to the state colleges and universities for scientific equipment. By the end of the allocation process, the Department of Biological Sciences had well over $1 million worth of new equipment.

Leadership within the department. A very important responsibility of the department chair is his or her leadership of the research and scholarly activities in the department. The maintenance of an active research program has been a commitment of the chair of the Department of Biological Sciences over the past two administrations. The former chair "led by example. He never lost funding for research and had a national and international reputation in his field." The current chair symbolically signals the importance of research productivity by his use of time and space. He spends two days a week away from the departmental office in his research lab and tries not to be involved in departmental business during these days.

Thus, the importance of research and scholarship are communicated by the chair via his or her actions.

Both department chairs recognized the importance of socialization of faculty to the values of the department. One stated that "guidance to people is important in establishing common goals." Much of his early tenure as chair involved "infusing ideas." The faculty retreat, instituted in 1974, is often seen to be the time when the faculty review the things of key importance to the department.

The department chair not only is leader to the faculty, but is manager to the large support staff of the Department of Biological Sciences. As previously mentioned, the running of the large research and instructional operation of the department is highly labor-intensive and uses large amounts of equipment and supplies. One of the first things the current chair of the department did was to meet with the departmental support staff to learn what they did. From the perspective of a faculty member, he had no idea how complex and essential their jobs were until he became chair. After the initial meeting he utilized interpretive strategy in a letter to the support staff, reinforcing their role in supporting the faculty. He wrote, "availability to the faculty and their needs is an essential element of all our jobs."

Despite attempts to bridge the gaps between faculty and support staff, differences in values and expectations emerge in the form of conflict. The two groups differ in background, responsibilities, and expectations. For example, staff members work a standard "8 to 5" work week, while faculty members come and go according to their own schedules. Interestingly, for the most part, neither chair has

allowed himself to be embroiled in faculty-staff conflicts. Perhaps with the special knowledge and values the position of department chair confers, the chairs sees the concerns of both sides and is unwilling to resolve differences in favor of one group or another.

However, in terms of relative value of faculty and staff as resources to the department, the current chair was presented with the requirement by the dean to cut two staff positions and one faculty position during the worst of the budget cuts. His decision, following consultation with a number of senior faculty, was to offer two staff positions in place of one faculty position, resulting in a loss of four staff positions. The rationale behind such a decision involved the need to maintain the breadth of the department's instructional offerings, which would be damaged should a faculty position be lost. In the final analysis, the department lost only three staff positions. This decision sent the message to the faculty of the centrality of their role in the functioning of the department.

The current chair sees faculty involvement in departmental decision-making as essential, and as a result, has actively used the department's Executive Committee in an advisory capacity. In general, faculty get a high degree of involvement, usually via the departmental committees (as listed in Chapter 5, page 72) or faculty meetings, in allocation of travel and equipment money, evaluation, promotion, and tenure, and the running of the department seminar program. In general, the chair promotes the committee structure via interpretive strategy, stating his confidence in the committees' abilities to make sound decisions for the department. In an Executive Committee meeting, when the Committee chair was late, the department

chair began presenting items to the Committee. When the Committee chair arrived, the department chair indicated that he had "let the committee know that this way your [i.e., the faculty's] committee." This statement acknowledged that the chair knew his role on the Executive Committee was ex officio and that he, in no way, was trying to supplant the role of the Executive Committee in the decision-making process.

Despite the faculty's desire for input, they also expect that there will be certain areas where the chair will justifiably exercise his prerogative. Areas such as assignment of faculty workload, resolving disputes relating to space, and the method of assigning faculty salary increments are a couple of areas where the chair has asserted his prerogative for decision-making. The chair makes it clear to the department he will assume full responsibility for decisions and when he will share decision-making. In the discussion of faculty strategies below, we will see that faculty generally approve of the new chair's assuming a leadership position in the department and make an effort to publicly confer power to his position.

Dealing with the world outside. A growing responsibility of department chairs is the role they play in helping the department and the University adapt to external demands whose origins or contacts are outside the University. For example, central administration began involving academic departments in fund raising activities for the University. This has manifested itself in asking faculty to call alumni to ask for donations and having graduate program directors identify corporate sources who can be approached. In general, it appears difficult to involve faculty in these direct fund-raising efforts.

Individual faculty members have the most direct contact with external research and funding agencies. Some efforts have been made by the chair to establish a working relationship between a local botanical gardens and the Department of Biological Sciences for future research and instructional collaboration. Consistent with a growing entrepreneurial spirit among University administrators, department chairs were responsible for identifying all the business contacts each faculty member outside the University. A total of 18 of 26 faculty had contacts of some kind.

Strategies of the Departmental Faculty

Introduction. Chaffee and Tierney's (1988) view of organizational culture focused primarily on the leader's strategies. This case study on the Department of Biological Sciences revealed the important role the faculty play in shaping the direction of the department in the structural, environmental, and values dimensions.

Departmental committee structure and functioning. One of the biggest changes inspired by faculty input was the formalization of the departmental governance system in the form of the current committee structure. This move came about when several faculty members, largely younger, felt the need for increased faculty involvement in departmental decision-making. The original motion to create a Committee on Committees was approved during the 1986 faculty retreat. This committee established guidelines for the committees as described in Chapter 5, with the exception of the Executive Committee, and the departmental committee structure began functioning.

Even after its establishment, the committee structure continued to evolve. A few months prior to the new chair entering office, the faculty voted to convert the

Committee on Committees to an Executive Committee. Although the former chair did not use this committee regularly, it has become a mainstay in the administration of the new chair.

Faculty legitimizing leadership role of the chair. An important way for a chair to establish power is by receiving the endorsements of faculty leaders. On a number of occasions during the data collection phase of the case study, the observer saw instances where senior faculty conferred power to the chair by public endorsements of his role and position. The public display make these interpretive strategies particularly meaningful.

In executive committee meetings, the degree to which the chair shares decision-making with faculty was discussed several times. One senior faculty member who is highly-respected, indicated that the chair "has the sound support of the faculty" in his decision-making and leadership. He indicated that the department had chosen him as chair and "they will support him in this effort". In another meeting this same faculty member outlined the role of the departmental committees relative to that of the chair: "everything we do is advisory . . . we chose you as chair and we want leadership . . . do what you have to, and we will support it." Faculty members acknowledge that the chair's role is to integrate all needs of the department. He is "the only person charged with the overall well-being of the department."

Senior faculty members also made an effort to commend the chair on his accomplishments under difficult budgetary circumstances in the faculty retreat. With regard to the chair success in a project with the dean relating to faculty

workload, a senior faculty member stated that the chair had "done an admirable job" for the department, and that he this had been the first time he had known of that the central administration was listing on this particular topic.

Along the same lines, the former chair spoke in support of the current chair's accomplishments. He indicated that the current chair had given very little attention to some accomplishments in his discussion of the budget during the retreat. The former chair said, "These were major accomplishments, and I would like to commend [the current chair] on saving the budget." In these public displays of support, senior faculty engage in interpretive strategy to confer power and support to the chair.

Student recruitment. With regard to student recruitment, faculty members have the opportunity to engage in strategies to improve their programs. A graduate program director, in a review of his Ph.D. program, discussed the role of faculty in recruitment. He stated, "we need to get our name out there . . . we are own best advertisements."

Adequate graduate student stipends have been identified as a key problem in student recruitment. A graduate program director gathered comparative data on student support from other institutions to be used to justify additional support for graduate research and teaching assistants. This effort was rewarded both by increased attention to the problem outside the department and by recognition of the faculty member within the department.

Curriculum changes. Another area where faculty have been particularly instrumental in engendering discussion, if not action, is that of the curriculum. The

role of the faculty in this area is summarized in a section below (see page 141).

Faculty strategy on future change. A number of faculty members indicated that engendering change in the department was difficult and time consuming. On faculty member indicated that "change-makers get burned out if they meet with continual resistance," and that some activists are "withdrawn." Even though faculty may not be actively working on an issue, they do not give up easily on areas of change. One faculty member indicated that the desire for change on the part of some faculty was based in the desire to make the department better and not just to be engaging in "a power play."

It is clear from talking to faculty members, that they learn from their experiences and make plans to change their strategies in response to their degree of effectiveness. It appears that in some areas, quiet efforts will be used in place of more confrontational methods tried in the past.

Managing Instructional Loads

Providing instruction is a crucial part of the linear tasks of the academic department. The Department of Biological Sciences is one of the most productive departments at the University in terms of student credit hours, a measure of instructional productivity.[4] During the early 1960s and during the years prior, the then Department of Biology had a primary mission of instruction. A number of the faculty from this era were did not have doctoral degrees, and only three or four actively engaged research. Teaching loads were fairly high compared to today's standards.

Beginning the mid- to late 1960s, the University began hiring primarily faculty members who showed promise in being able to do research, especially funded research. During the 1970s, the then new chair of the department guided continuing growth of the instructional program in three areas providing courses for: **majors in the biology department, service courses for health science majors, and general education courses** in the sciences for other University majors. Because resource allocations to the department were partially based on student credit hour productivity, the rationale for this planned growth in departmental offerings was to provide resources for a growing research program. At the same time, externally funded research increased.

The last faculty member to do primarily teaching for the department was hired in 1973.[5] Faculty hired since then have had the expectation for a degree of research productivity as a necessary criterion for receiving tenure in addition to some teaching. In the academic year 1991-92, 60 percent of the gross instructional productivity is done by five faculty members teaching introductory courses and service courses for health sciences majors. Three of these faculty members are in positions where they do primarily teaching. Two additional faculty, hired in the past six years, have research responsibilities in addition to substantial teaching responsibilities.

The University has a now long-established trend toward emphasis on research productivity as a criterion for hiring and retaining faculty, although most faculty are expected to do some teaching. The Department of Biological Sciences has responded to this pressure by attempting to cover high productivity classes with

individuals who also have research expectations placed upon them.[6]   When the senior faculty in primarily teaching positions retire, it will take more junior faculty in the high teaching-researcher positions to cover the same amount of instruction.

One way to interpret this dilemma is in terms of a conflict in the values and expectations of the University as a whole with the structural tasks of the academic department.   Without some change in the hiring and tenure policies of the University, the Department of Biological Sciences will be unable to meet its instructional responsibilities.

Three potential solutions to this dilemma present themselves. The University could allocate more positions to the department for high-teaching/research positions -- an unlikely outcome given the current fiscal condition of the University. A second alternative, met with some resistance from a number faculty, is to team-teach some of the introductory courses. A third alternative is to petition the University for a certain number of slots for faculty members whose primary responsibility would be for teaching these courses allowing for some greater flexibility in research requirements.

In summary, the Department of Biological Sciences appears to have reached a point that the requirements for providing a full instructional program have come into conflict with the University's desire to gain a national and international reputation in research. Because of the heavy demands in the high teaching-research positions, individuals who have strong research interests may be difficult to attract to such a position. In the near future, the department might well be advised to begin discussing these difficulties with various levels of the administration and begin

to make long-term plans to address these problems.

Curriculum Review and Reform

Introduction

Much like the efforts associated with major changes in the system of governance for the department, a number of faculty members in the Department of Biological Sciences have been interested in restructuring the undergraduate curriculum in the department. Since the 1984-85 year, the topic of curriculum reform has been discussed in detail by the department on at least three different occasions. Despite several attempts over the past six to eight years, substantial change has not been implemented.

The failure to adopt the proposed curricular changes appears to be related to values differences associated with both faculty generation (See Chapter 6, page 105) and faculty group (see Chapter 6, page 101). Individuals advocating change are typically, younger faculty members, and largely, but not entirely, associated with the biomedical rather than the ecological sciences. More mature faculty, including the former chair, have vocally opposed changes in the curriculum, although the pro-change faculty have been successful at keeping the discussion going, if not overtly.

Basic Arguments and Underlying Values

Review of the documents produced during the discussion of curricular reform and of the transcripts of interviews with faculty members, several observations emerged. Individuals advocating reform tended to be, but were not exclusively, in the younger half of the faculty. The greatest resistance was given by the senior-most

faculty. The most obvious, and perhaps most relevant difference between these two groups, is the relative recency that these individuals attended graduate school. To some extent, the senior faculty tend to be more ecologically-oriented as a whole.

Much of the basis of the argument for curriculum reform was based on younger faculty's perception that changes in the structure and volume of knowledge making up the biological sciences had changed since the early 1970s when the current curriculum was implemented. Cast in terms of Chaffee and Tierney's (1988) theory of organizational culture, the younger faculty had identified where the structural dimension (the undergraduate curriculum) was not in line with current conceptions of the discipline of the biological sciences in the outside world, a perception which was probably derived in their socialization into the profession during graduate education and post-doctoral training. Thus, the reformers were proposing an adaptive strategy which they believed would help to better adapt the department and its bachelors graduates to the environment outside the University.

Specifically, faculty reformers were concerned that the current curriculum was adversely affected by: (1) an increase in volume and complexity of information to be taught, and (2) the way in which the knowledge was organized and presented to students. With regard to the first difficulty, one faculty member referred to "a problem in sciences . . . an information explosion" where faculty could no longer include all available information in courses. He suggested that different ways of organizing the material and delivering it to students was indicated.

The second concern, more frequently expressed, addresses a very basic difference in how various groups of faculty view the organization of knowledge in

the biological sciences. The two basic ways of viewing the field advocated by faculty in the department largely conform to the distinction between taxonomic versus hierarchical order as discussed by Flannery (1989) as reviewed in Chapter 4. Apparently, there is some diversity among the faculty in terms of how knowledge is perceived.

Several faculty argue that "we need to look at the level of organization rather than the kingdom . . . to give coherence to the curriculum." Rather than developing courses around the separation of plants and animals, a newer way of looking at the field suggests that the level of organization is the most relevant, e.g., the molecular level, the cellular level, the organismic level, the ecosystem level. Basic to this argument is that there are important similarities between plants and animals at the molecular level, and thus, the level of organization is the most coherent unit of study rather than the particular organism's category. Several faculty feel strongly that a revision of how information is presented to students will provide a more coherent curriculum and increase the number of students who are retained in the biological sciences major.

Other, more practical concerns have been identified with regard to the current curriculum. Currently, undergraduate students can take any advanced course in the Department of Biological Sciences after taking the two-semester introductory course. Some students, particularly students who have transferred from other institutions, do not seem to have adequate preparation for the advanced course. Having students who are unequally prepared for the advanced courses, creates problems in adequately instructing these students.

Proposed Reforms

Given the identification of these problems, curricular reform proposals have advocated basically the same type of things over the past few years. Fundamental to the proposed reforms was the initiation of a series of sophomore-level courses to be taken after the introductory series, but prior to taking advanced courses. These courses would focus on different levels of organization, e.g., molecular and cellular, structural and functional, organismic and taxonomic, and ecological and environmental. Reformers reasoned that course of this nature, because of their breadth, would necessarily need to be team-taught. Upper level courses would be organized to allow for some specialization of undergraduate majors.

These proposed reforms met with considerable resistance and arguments against the changes were based primarily in environmental or adaptive terms. Senior faculty felt there was no evidence that curricular reform was necessary, and that, in fact, GRE and MCAT scores were sufficiently high to demonstrate the effectiveness of the current curriculum. From the perspective of department funding, there was fear that curricular changes could alter student credit hour enrollment patterns, the basis on which much funding comes to the department. Team-teaching was seen as unacceptable because shared loads made it difficult to calculate an individual faculty member's workload. Finally, in the most recent round of reform attempts in 1991, it was argued that changes in the curriculum are particularly risky in times of budget cuts, and the department would not want to appear to be manipulating the system.

Perhaps most interesting in this particular curricular debate was the lack of a

rebuttal on the part of the senior faculty to the reformers' suggestion that the Department of Biological Sciences' concept of biological knowledge becoming out of step with that in its environment. This observations indicates that the perceived or enacted environment of the senior faculty does not include this change in perspective that has evolved over the past couple of decades. In terms of Chaffee and Tierney's (1988) perceptive, the reformers are attempting to force the department to engage in some adaptive strategy. Apparently, before they can be successful at this task, they will have to convince the majority of faculty that the new way of perceiving the environment is more valid than the old.

Conclusion

This chapter reviewed several applications for Chaffee and Tierney's (1988) theory of organizational culture. Unlike these authors' emphasis on leaders as primary users of strategy, it is clear that the chair and the faculty members are all instrumental in the use of linear, adaptive, and interpretive strategies. Faculty members have been shown to play a strong role in the succession and selection of the chair, in empowering the chair's leadership role, and in promoting change in the undergraduate curriculum.

The next chapter will review two works on the academic department in light of Chaffee and Tierney's theories. An attempt will be made to recast these works in terms of organizational culture.

Chapter 7 Notes

1. The researcher discovered in the course of conducting this case study that chair strategies, especially those which fall in the category of interpretive strategies, were much easier to detect in the course of observations, e.g., of faculty meetings or committee meetings, than to extract in interviews or from the written record of the past. Differences in detecting of strategies varied on the ability of the respondent to make conscious and to articulate respective strategies.

2. Faculty respondents to the case study interviews were very concerned that the effects of the budget cuts would have a negative impact on the quality of this study. In general, it appears that the budget cuts **did** have a profound effect on the department during the study and their effect were considered in the data analysis process.

3. The pronoun "he" is used here only because the two chairs and the president are male.

4. Student credit hours produced is a function of the number of credit hours earned by each student in a particular course times the number of students in the course. For example, a student in an introductory biology course with a lab earns four hours of academic credit. If there are 50 people in that particular class, the overall instructional productivity is 200 student credit hours.

5. Another faculty position was received in 1980, as a function of the retirement of a tenured administrator. This faculty member now provides a significant part of the instructional productivity of the department.

6. Faculty members in these positions find the conflict between teaching and research responsibilities very stressful. Despite assistance from teaching assistants, these faculty have a very high degree of student contact.

CHAPTER 8

Applying the Concepts of Culture to the Existing

Literature on the Academic Department

This chapter will discuss the applicability of concepts of organizational culture

to two books which focus on chairing the academic department. These two works

are Tucker's (1984) Chairing the Academic Department: Leadership Among Peers

and Creswell (1990) et al.'s The Academic Chairperson's Handbook.

Tucker's discussion begins with acknowledging the "paradoxical nature of

chairing the academic department (1984, 4). This perspective emphasizes the shift

a new department chair must make from being strictly a faculty member to being,

at least in part, an agent of the administration. Tucker's also discusses the fact that

there is little training provided for the new academic department chair. In part in

an attempt to fill this void, virtually all of his work focuses on the linear tasks (in

Chaffee and Tierney's terms) which must be accomplished by the chair and is

replete with linear strategies presented in minute detail. A cursory review of the

table of contents reveals a large number of chapters on various linear tasks, e.g.,

delegation of responsibilities, faculty evaluation, budgeting, and making faculty

assignments.

Closer examination of Tucker's book reveals some appreciation of what

Chaffee and Tierney call the environmental and values dimensions of cultures. With regard to the environmental dimension, he states that

> [The department chair] must deal with the expectations and desires of the students in the department, the personal and professional hopes and fears of the departmental faculty members, the goals and priorities of the college dean, the often perplexing and -- from the department's perspective -- sometimes shadowy priorities of the central administration, the sometimes naive and sometimes jaundiced views of the alumni, and the bureaucratic procedures of accrediting agencies (1984, 5).

Sections in the book discuss avoiding legal concerns, dealing with the dean, and knowing the university context.

With regard to the values dimension, aspects of the cultural perspective are embedded in much of what Tucker has to say. His awareness of the academic department as a subculture to a larger organizational culture is revealed in his description of the nature of department life:

> [The] intimate relationship [of the academic department] is not duplicated anywhere else in the college or university because no other academic unit takes on the ambiance of a family, with its personal interaction, its daily sharing of common goals and interests (with frequent contention over how those goals are to be pursued), and its concern for each member. No matter how large the department, no matter how deeply divided over pedagogical and philosophical issues it may be, its members are bound together in many ways: they have all had the same general preparation in graduate school; their fortunes generally rise or fall with the fortunes of the discipline to which they all belong; and they share the same general value system of their profession.

Other aspects of Tucker's sensitivity to culture are revealed in sections dealing with faculty conflicts and morale, departmental accomplishments and goals, and bringing about change. For example, in the section on bringing about change, there is an emphasis on dealing with fear of change and resistance to it. A discussion of faculty conflict suggests but does not emphasize the role of values differences in

conflict.

Despite occasional glimmers of comprehension of organizational culture and interpretive strategy, Tucker's primary emphasis is on the linear and adaptive strategies of department chairs. Interpretive strategy does not get a whole lot of conscious treatment. In general, there is little said about shaping the values context of the department.

Where Tucker is highly analytical, Creswell et al. (1990) address more humanistic types of concerns. Of primary interest is the support of the personal and professional development of both the department chair and the faculty. Creswell et al. discuss the "culture of professionalism" and the creation of a positive working environment for faculty. They identify the "strategies" of the most excellent chairs which they interviewed.

A discussion of Creswell et al.'s strategies reveals a considerable emphasis on the values dimensions as discussed by Chaffee and Tierney (1988). The need for shared commitment with comparable "goals, aims, and . . . objectives" (1990, 3) is part of one initial strategy.

Key elements relating to culture fall in a section on the role of the chair as academic leader. Creswell et al. advise the chair to "establish a collective vision or focus" and "develop faculty ownership of the vision" (20-22). Allowing faculty the opportunity to shape aspects of vision is considered important. In terms of management of faculty, Creswell et al. emphasize the need to "listen to faculty needs and interests" (34) and to "set goals collaboratively" (35).

Adaptive and interpretive strategies are suggested by "represent faculty to

colleagues and senior administrators" (39). Chairs are often seen as "buffers" between faculty and upper level administration and often "take the heat" for differences in perspective. Values can be transmitted by the chair when she or he is "serves as role model and mentor" (40).

Creswell et al. express great concern with regard to socialization of new faculty members into the department. "[t]hese new staff will need to establish a sense of identity, ownership, and belonging in the department" (47). Part of this strategy is the discussion of faculty needs and expectations and guaranteeing that faculty are aware of the support offered. Monitoring the faculty's adjustment is essential.

Suggestions of improving teaching and scholarship are also highly interactive and developmental in strategy. Monitoring and bringing along individuals who seem to becoming detached from the departmental is also an important strategy.

Creswell et al. close with a section on building an agenda for the department. Here they emphasize the importance of understanding the institutional context (values and environment) and the institution's stage of growth. They also point to the need to understand values of the particular academic discipline of the department.

In general, Creswell et al., more than Tucker, discuss certain elements of Chaffee and Tierney's dimensions of culture either directly or indirectly. Despite these acknowledgements of linear, adaptive, and interpretive strategies, a work which more directly discusses the strategies of the chair and faculty would be of considerable value.

CHAPTER 9

CONCLUSIONS AND IMPLICATIONS

This case study of a the Department of Biological Sciences has illustrated the value of applying theories of organizational culture to the level of the academic department. This final section will discuss: any remaining methodological questions, the results in terms of Chaffee and Tierney's (1988) theory, findings in terms of the hypotheses established in Chapter 3, and the implications and future directions suggested by the study.

Design and Methodological Considerations

In general, the selection of a site and the subjects for this study turned out to be an excellent choice. The faculty members were knowledgeable and supportive of the project and demonstrated their willingness to ensure that the results obtained were valid. They were particularly responsive to interpretive questions and provided valuable insights in understanding the data. In general, most respondents did not feel that the researcher's presence in the department affected how the department functioned.

The choice of this particular department turned out to be particularly fruitful with regard to the study of a distinctive culture. Those things which led the

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researcher to select the site are probably correlated to what she later found there. The Department of Biological Sciences is seen to be one of strongest departments in terms of instruction and research at the University. Part of this impression reflects the strength and relative coherence of the culture and the presence of an organizational saga which unified people's thoughts and actions relating to the department. The organizational saga, and its underlying values of unique accomplishment and cooperation, no doubt contributes strongly to how individuals outside the department perceive it.

Although the study of organizational culture has proven to be an extremely valuable endeavor in understanding how organizations function, the methodology used to conduct such studies is extremely labor-intensive. In the beginning of the study, the researcher expected to be able to rely heavily on written documents to extract information about the dimensions of culture and the strategies of individuals in the department. Although the written record was valuable in terms of learning about the structural and environmental dimensions of the department, it was extremely difficult to extract from it information about the values dimension and interpretive strategy. Most data relating to these dimensions were extracted primarily from observations and interviews. In future studies, the researcher will likely invest less of her time gathering documents and more talking to individuals and conducting observations.

The researcher's commitment to assuring anonymity and confidentiality to the subjects of this study had a profound effect on the final written document about the organizational culture of the academic department. The researcher had to be

extremely careful to avoid revealing sufficient information about the University, the department, and its faculty to allow for identification of individuals. In some cases, the observer was party to essential information relating to the study, which could not be included in the written document because it could be particularly damaging to the department or would cause embarrassment to individuals within the department. The researcher made attempts to address the relevant issues in other ways in the document, without exposing the department to any risks.

A final concern felt by the researcher and the subjects of the study related to the existence of a series of budget cuts beginning approximately one year prior to the study. Most interview respondents cited the budget situation as having a profound effect on departmental morale. It appeared that these budget cuts had dampened the faculty's enthusiasm concerning planning for the department. However, the strength of the value system and degree of commitment to the department still emerged and led to the expectation that changes and activities would likely resume when financial conditions improved.

Discussion of Chaffee and Tierney's Theory

In Light of Study Results

Introduction

As anticipated in the initial sections of this document, Chaffee and Tierney's (1988) theory of organizational culture and other associated concepts of culture have proven to be highly applicable the study of the academic department. This section will discuss this applicability and provide suggestions concerning the

extension of the theory to adequately describe the functioning of the department.

Dynamic Equilibrium and Change

In their discussion of organizational culture at the university level, Chaffee and Tierney (1988) introduced the concept of **dynamic equilibrium**, the process of keeping the organization's culture, strategies, and leadership in line with its identity. When changes occur, for example, in the environment, strategies must be implemented in order to establish equilibrium among these elements.

Chaffee and Tierney describe several states of organizations with regard to their equilibrium. Most relevant to the case study on the Department of Biological Sciences is the state of **culture and change**, where gradual changes over time afford the organization an opportunity to gradually maintain equilibrium by keeping the identity of the organization in line with strategies, culture, and leadership.[1] Over the past 20 years, the Department of Biological Sciences has undergone considerable growth in size, programs, and faculty composition. To date, when changes have occurred, the department has been able to adapt, largely by maintaining a strong sense of identity and values embodied in what has been called organizational saga. The challenge for the future will be to maintain this strong identity in face of anticipated changes.

A number of changes are facing the Department of Biological Sciences in the future. The **gradual change** in faculty composition with retirements and subsequent hiring of new faculty will continue to alter the value system of the department. Even though many new faculty say they came to the department because of the degree of harmony and cooperation, gradual shifts (and the possibility of continuing

budget difficulties) may affect this characteristic of the department. Chapter 7 illustrated how the organizational saga of the department was rooted in the senior faculty's early experiences in the department where excellent programs were built in the context of very limited resources ("science on a shoestring.") As this collective experience is diluted by faculty retirements, departmental leaders (in the form of the chair and the faculty) will need to use interpretive strategies to perpetuate a common value system and to continue the feeling of unique mission, and to engender cooperation for the good of the department.

Another gradual change which has affected the department and will probably continue to do so, is the pressure for faculty members to obtain external research funding. Among faculty members, this pressure is widely believed to decrease the emphasis on quality teaching, increase competition among faculty members, and shift the department's research focus toward the applied. Again, the interpretive strategies of departmental leaders will play a role in shaping the culture in such a way to maintain a strong organizational saga and a sense of common purpose.

Additions to Chaffee and Tierney's Theory

Discussions in Chapters 5, 6, and 7 illustrated the value of looking at the academic department in terms of its structural, environmental, and values dimensions. Linear, adaptive, and interpretive strategies were illustrated numerous times in the activities of the faculty, staff, and departmental leadership. Conflicts among dimensions and resultant resolutions demonstrate the processes of dynamic equilibrium at work in the department.

Despite the apparent applicability of Chaffee and Tierney's theory of

organizational culture at the level of the academic department, there remain a few refinements which need to be made. These include: (1) broadening the concept of leadership and strategy within the organization, and (2) elaborating on the levels of the environment and adaptive strategy to better fit the organizational situation.

Much of Chaffee and Tierney's (1988) emphasis is placed on the leadership strategies of the president of the organization. In the process of translating their theory of organizational culture to the level of the department, one might assume the chair would function with the department in the same way as a president does with an entire university. The data collected with the Department of Biological Sciences reveal this to be a somewhat inaccurate analogy. As might be expected in the review of faculty values in Chapter 2, faculty asserted themselves and played a significant role in the governance of the academic department. At various times, faculty members took leadership roles within certain domains. Collectively, the faculty were successful at implementing significant changes in the committee structure and established a new basis for the interaction of the faculty and the department chair. Groups of faculty members have also asserted their influence in curricular matters, although radical reform has not been accomplished to date.

Chaffee and Tierney's (1988) treatment of the environmental dimension and adaptive strategies focused entirely on the environment outside the university. Because academic departments are embedded within the university organization, one must elaborate and differentiate Chaffee and Tierney's concept of environment. As was illustrated in Chapter 5, within the University, the Department of Biological Sciences had to deal with deans, other academic departments, administrative

support areas, policies imposed by central administration, policies and regulation originating outside the University, and the physical environment which supports much of its research and instruction. Each of these elements of the environment have a different dominion over the department and each suggest a different course with regard to the adaptive strategies formed by the department.

Review and Evaluation of Central Hypotheses

A review of the research questions and central hypotheses outlined in Chapter 3 of this discussion is appropriate. The following discussion will address the degree to which each hypothesis was confirmed by the data and analysis in the study. The research questions will be reviewed, as well as the specific hypotheses.

- **Can theories of organizational culture comprehensively describe and explain the organization and activities of a department of biological sciences?**

Although, the analysis in the particular case study was not comprehensive with regard to all aspects of the department, there is good reason to believe that much of the theory is transferable to most aspects. The distinctions of structural, environmental and values dimensions allow three different perspectives on the department which provide relevant information and a framework with which to analyze organizational difficulties.

- **More specifically, can Chaffee and Tierney's (1988) dimensions of institutional culture (structural, environmental, and values dimensions) be applied to an individual subculture, the academic department?**

- **The theories of organizational culture will prove useful in describing and explaining the organization of the academic department. There is a need to expand the theory to apply to subcultures and to describe and explain the relationships among subcultures and between the subculture and the**

organization at different levels.

Because of its emphasis on values and assumptions, the concept of organizational culture can be applied to subcultures of an organization at large. Many things observed and discussed during data collection were meaningfully analyzed using Chaffee and Tierney's (1988) framework. As was discussed in the section above, certain additions and enhancements to the theory were necessary to allow for appropriate fit to the level of the department.

- **Do the activities of the chair and other departmental leaders conform to Chaffee and Tierney's strategies (linear, adaptive, and interpretive strategies)?**

The chair and other departmental leaders were found to actively engage in linear, adaptive, and interpretive strategies on a regular basis. Although the chair maintained certain domains for his exclusive control, faculty input and suggestions were frequently instrumental in the formulation of strategy.

- **What roles do the symbolic aspects of culture (e.g., saga, stories, heros, rites, and rituals) play in the day-to-day life of the department? Do the chair and other leaders act to manage and shape the culture? Do the symbolic aspects provide cohesion to the value system and serve as ways to socialize new members into the organization?**

- **The department chair and other departmental leaders will consciously and unconsciously shape and maintain the culture of the department by using symbolic dimensions like stories, myth, rituals, and rites. They will engender cohesion in the group by interpreting ("making sense") events to members of the department.**

The most important finding in this case study of the organizational culture of the Department of Biological Sciences was the delineation of a very strong organizational saga that played a significant role in the cohesion of the department over time. Many stories illustrated the strength of this saga and newer faculty

members asserted that the strength of the department and the degree of cohesion and harmony played a part in their decision to come to the University. The existence of heros (e.g., excellent teachers) and rituals (faculty eschewing administrative roles) gave insight into the value system of the department.

- **Does a department of biological sciences demonstrate cultural and social characteristics consistent with Biglan's (1973) and Becher's (1984, 1987) research on hard, pure, life disciplines? Are initiation rites (e.g., socialization of graduate students) and social interaction patterns consistent with theory?**

- **The pattern of organization in the Department of Biological Sciences is consistent with that predicted by Becher (1984, 1987) for a hard, pure, life science: graduate students (and faculty as graduate students) will have chosen their own mentors and but not their particular area of study; there will be a high degree of collaboration among faculty and graduate students in research activities; the area of knowledge and the tendency to work in collaboration will result in a relatively gregarious faculty and graduate student group.**

A couple of factors made the complete evaluation of this hypothesis difficult. After some considerable discussion of the research mission of the department with faculty members, it was apparent that the University's emphasis on external funding had a major effect on the types of research which was being done. A number of faculty members expressed the concern that research was becoming too applied in the department and that much good scholarship could not generate big grants external to the University. In addition, the degree of diversity in expertise within the department made collaboration take a different form than it might have in another department which had several faculty members within one specific area. Collaboration did occur, but not at the rate expected, because of the diversity in research interests.

There were some discussions on the socialization of younger faculty, e.g.,

preparing them for tenure review, having them serve on faculty senate committees.

A relatively new faculty member has been instrumental in reviving a graduate

student organization for the express purpose of socializing graduate students to the

ways of the academic department.

- **Do the systems of Chaffee and Tierney and Schein (1985) provide a useful and comprehensive heuristic device to assist in understanding the departmental management literature, specifically works by Tucker (1984) and Creswell et al. (1990)?**

- **The literature on effectively running the academic department (specifically, Tucker, 1984 and Creswell et al., 1990) can be usefully understood in terms of theories of organizational culture with some modifications.**

Tucker's work addresses the structural dimension in considerable detail and

discusses the role of the environment and suggests some adaptive strategies.

Although some cognizance of a values dimension was implicit in some of the

discussion, little is said of interpretive strategies. Creswell et al.'s work is more

generally more humanistic and developmental in emphasis. The role of the chair

in socializing new faculty to the department and the need for the chair to be

sensitive to institutional values in the planning process reveal a more conscious

acknowledgement of the importance of culture. Still, a more comprehensive work

is indicated, which acknowledges the contributions of these authors, but goes on to

discuss the department as a group of individuals tied together by common values

and assumptions.

Conclusion

This case study of the Department of Biological Sciences provides an

illustration of the value of using the method of cultural analysis to understand the

academic department. This particular case revealed a department which has a strong central value system, which was developed in the context of difficult times and which provides the basis for continuing stability in this department. The impact of environmental pressures on continuing integrity of the value system will be of central concern in the years to come.

It is important to note that the primary value of this study goes far beyond the particular findings in this individual academic department. More important is the demonstration of the value of this particular method and perspective as a tool in organizational analysis. Concepts such as organizational saga, values, and strategy can be meaningfully applied to a variety of settings and yield significant results. Department chairs, as well as faculty, can benefit from the concepts of culture in understanding the functioning of the academic department.

Chapter 9 Notes

1. One alternative pattern discussed by Chaffee and Tierney **culture and continuity,** where relatively few changes occur over time. The environment is stable and the culture is strong and coherent. Strategies tend to be well-established and consistent. The **culture and identity** situation can occur when there are very strong and differing elements within the culture or when the organization is strongly out of line with its environment. Typically institutions of this type are characterized by a degree of imbalance. Organizational members frequently lack a shared feeling of identity.

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