

**MACHIAVELLIANISM, SOCIAL INSIGHT, AND POWER OF DEPARTMENT
HEADS**

by

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DEDICATION

Este trabajo se dedica a _____, a
_____, y a Patricia Anne, los tres más queridos y leales ami-
gos que tuviera una mamá, y a su papá, el
_____, sin el cuál nada de ésto hubiera sido.

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Chapter I

THE UNIVERSITY DEPARTMENT HEAD AND FACULTY DEVELOPMENT

Staff development has become a major concern of university administrators in the struggle for institutional survival in times of change. Many factors have contributed to this concern, among them--rising administrative and instructional costs due to double digit inflation and decreasing federal support for education (Schuster, 1982); shifts in study trends of undergraduates as the labor market adjusts to social and technological impacts (Dearman & Plisko, 1980, Chapter 3); changes in the composition of the traditional student body of 17 to 25 year olds as more adults over 25 return to school (Dearman & Plisko, 1980, p.105); stabilization of teaching personnel as faculty mobility decreases in a declining market for traditional career teaching; and stagnation of tenured personnel (Gaff, 1975, pp. 1-3).

Survival for senior colleges truly means adapting to meet the needs of the times, because, in sharp contrast to the rising number of two year colleges, the number of four year colleges has dropped in the 70's. In fact, twice as many private colleges closed during the last decade than opened ("Two Hundred Small Colleges," 1980). As public and private universities tighten up organizational procedures to

recruit new students from a decreasing and highly competitive market, faculty members are facing administrative demands for innovation in teaching and curriculum design, and ever-increasing excellence in research and service (Gaff, 1975, p.2). Staff development is one of the key administrative strategies for effecting the necessary innovations and maximizing fully the institution's human resources (Gaff, 1975, p.3).

However, initiating staff development programs in the university means encountering the usual problems of effecting change in people and organizations. There have been many problems associated with attempts at innovation, and particular resistance has been met by administrators at the university level as illustrated by Warren Bennis in The Leaning Ivory Tower (1973, p.90). In the present study the university is the organizational unit of observation, and the role of the department head is examined as the key administrative link to successfully effecting the desired changes through staff development.

THE DIFFICULTY OF INTRODUCING CHANGE IN THE UNIVERSITY

To the extent that universities are highly complex social and administrative organizations, historically, the introduction of innovation into the lifestream of the organizational system has proven, at best, difficult and, at worst, totally ineffective, be it initiated from the "bottom up" or the "top down." In fact, contemporary universities are still among "the most medieval of institutions" in terms of organizational development (Bennis, 1976, p. 95). When analyzing the organizational structure for the key to successful introduction of innovation, it is important to keep this "medieval" aspect in mind. The university, from the time of its inception in the twelfth century, has always been a person-centered, ego-oriented organization in terms of the professoriate. The latter were actually licensed by the pope, emperor, or king (Blackwell, 1966, p.1) to speak "ex cathedra" to their students in their areas of expertise. They were considered truly infallible in their knowledge, just as the Pope of Rome was considered infallible when promulgating Roman Catholic dogma to the "faithful," or royalty was considered infallible when ruling through Divine Right as a doctrine of the State.

An implicit sense of "Divine Right" persists among scholars in universities even today. Evidence of this is

seen in the viewpoint of Harold Stoke (1959) who as a college president stated that:

In the matter of college administration, faculties should have the privileges which Walter Bagehot attributed to the King of England: "the right to be consulted, the right to encourage, and the right to warn." These rights should be "guaranteed" to the faculty by processes which administrators must observe. (p. 88)

This tendency to absolute individualism has fused through the centuries with "realism," defined as knowledge sought as an end in itself (Chabod, 1958, pp. 184-185), to form a monolithic institutional mentality which resists planned change as conceived by contemporary industrial and commercial models of organizational development. In view of its developmental history, any suggestion of change by innovation threatens the typical university community and, especially, faculty adherents to the long-revered tradition of academic autonomy (Smock, 1969).

The resistance to change by the university community, then, is doubly reinforced by the nature of the individual professor's assumptions and expectations as to his role regarding teaching autonomy and the scholar's zealous dedication to the pursuit of knowledge as its own end. Operating on the basis of these assumptions and expectations, the academic community perpetuates the organizational status quo. Organizational change may be a genuine concern of the

administration, but its consideration does not necessarily extend to the academic community as an immediate and felt concern.

In such a personal, ego-oriented, subjective organizational structure, the problem of effecting change in a systematic fashion presents an overwhelming challenge. The inevitability of change in this life has been noted throughout history, and as Heraclitus¹ has succinctly stated it, "There is nothing permanent except change." Universities have not escaped the necessity of adapting to meet these changes, and while not the optimum example of planned change, changes have been induced by both internal and external pressures. Lamentably, in the opinion of some authors, most changes have come about through expediency rather than by planned systematic effort (Gaff, 1975, p.4; Bennis, 1976, pp. 89-91). However, in view of the previous description of the human nature of the academic organizational structure, it is perhaps a bit naive to hope to manage something as sophisticated as planned change from an organizational development approach within higher education as it is today. Organizational change strategies based on the present administrative models of man which underlie those models' planning tactics have had little success to date as

¹ Greek philosopher of the 6th Century B.C.

revealed by Warren Bennis in The Unconscious Conspiracy or Why Leaders Can't Lead (1976).

The traditional administrative models of man are not representative of man the "scholar." A model of man proposed by Ramos (1972), called the "parentetical man," encompasses a new conceptualization of man for public and private administration and is based on the assumption that today's super-developed industrial nations are no longer directing their efforts towards securing basic scarcities but are, instead, tending towards a concern for the individual's social and personal realization. While this may be a comparatively "new" model of man for administrators in government and industry, in academe it is and has been the "essence" of their understanding of man.

The "parentetical man," according to Ramos, has emerged in the past in such great figures as Socrates, Bacon, and Machiavelli. Their greatness or universality has been attributed to their psychological powers of differentiation of ego from inner world and from environment (Lane, 1966, p. 654). These men were capable of abstracting themselves from their respective societies, viewing them critically, ever aware of the historical precariousness of prevailing social realities and definitions. However, according to Lane (1966, p. 654), this type of man is always a product of a flourishing, "knowledgeable" society. Highly developed

societies have produced this kind of person and ours is such a society, for the massive spread of today's technology, with its ensuing liberation from concern for mere survival, has made possible and necessary a new conceptualization of this nation's basic goals of preservation of life, liberty, and pursuit of happiness for all individuals.

The scholar has always perceived and chosen goals which closely parallel those of the "parentetical man." Education, in general, as a social institution in democracy, purports the following goals extracted from the chapter titles of George S. Counts (1952) in his Education and American Civilization: individual excellence, a society of equals, a government of free men, an economy of security and plenty, a civilization of beauty and grandeur, an enduring civilization, a world community.

These goals are not those profit-oriented goals of economic enterprises which have been the bases for developing economic, rational, and social models of man and administrative theories. The utility of such theories and models for the university is now limited. Having conquered the battle for survival, society, generally, in developed nations approaches what has always been the pursuit of scholars--individual growth and realization. Organizational theories of administration are just now taking into account this model

of man and proposing strategies of change based on its assumptions.

To change another's attitudes and facilitate subsequent behavior change is a subtle and strenuous task, and this is the charge of any political ideology or philosophy. Education is one means of implementing such change, but the problem remains as to how to effect change in the educational "changers." How to persuade these theoretically autonomous thinkers to conform to organizational limitations becomes the administrative challenge.

Distinct from groups in industrial and/or commercial settings, the academic department cannot use a profit-oriented, cost accountable, consumer-oriented model of management. In such a highly person-oriented structure, the "who" of an administrative message is most likely to be perceived as more important than the "what." The role will have less import than the personality of the role holder. Power of leadership in an academic organization will certainly deem scholarly intelligence as an important role component. A well-known and respected scholar enjoys a certain status, and status is an essential power instrument in the academic organizational framework.

In terms of successful academic administration for status quo conditions, awareness of status based on scholarly

reputation is most desirable for deriving maximum benefit from interpersonal relations. Recognized status consistency leads to less interpersonal conflict, better task performance, greater personal satisfaction with relationships (Exline and Ziller, 1959), and less desire for a redistribution of power differences (Goffman, 1957). However, such personal "scholarly" status, while obviously an asset, does not guarantee administrative power to change others' behavior by virtue of department head role power, or even assure more than polite relegation to administrative limbo by subordinates and/or superiors. The role incumbent must be additionally skilled in human interaction dynamics as an administrative agent of change. Scholarly status is no guarantee of administrative ability nor the willingness to lead others to change. An organization that requires innovation needs leaders with the talents and desire to persuade others towards organizational goals, i.e., a person who possesses skill in persuasive power strategies and recognizes the use of these, in some circumstances, as the necessary means to effecting change. The administrative representative best suited to this role in the university is the department head.

THE DEPARTMENT HEAD--INTERNAL CHANGE AGENT

In the university community, some 80 percent of all administrative decisions take place at the department chairperson level (Roach, 1976, p. 13). The responsibilities are multifold and the results of their execution paramount in shaping the department and, ultimately, the institution's organizational efficiency. Euwema (1953) has said that:

For the most part, the carefully organized department will manage its own affairs, even those matters which involve its relation to other units of the institution. In short, like every other healthy organism, the department exhibits the processes of metabolism, growth, and reproduction-- plus a degree of self-consciousness and self-criticism not found in the ordinary biological organism. (p. 43)

Due to the peculiar nature of the academic organization with its independent units (departments) largely non-interactive, the most logical administrative power figure to be developed as an internal agent of change for faculty renewal is the department head. Change, in this case, will be best effected from within, for it has been shown that internal change leaders are more effective in helping to shape and influence the culture of a particular group setting (Beer and Huse, 1972).

Perceived Power of Department Heads By Faculty

In a study of the perceptions of the power of department chairpersons (Hill and French, 1967), the chairperson was viewed as the least powerful figure in the hierarchical structure. The professoriate perceived themselves wielding as much or more power as a group in the hierarchy than the department chairperson. In the same study, however, a direct positive relationship was found between perceived chairperson power and level of job satisfaction of faculty.

Power was defined in the study as the sanctions others in a social situation perceive that an individual has available to employ in ways that will affect them. In view of the spirit of autonomy attributed to the intellectual, these findings of power and professorial satisfaction may appear incongruous. However, the nature of the hierarchical structure of the professoriate contributes to a dogmatic approach to organizational matters. A strong central figure has been the historical legacy of the university professor (license to teach was granted by emperor, pope, or king), and admiration for colleagues and/or superiors is based on a strong respect of the perceived power of the individual as scholar, leader. This type of power is best described as referent power or prestige power, by means of which our conscious or subconscious identification with others whom we like and/or

admire shapes much of our social behavior (Jacobson, 1972, p. 163).

While Hill and French (1967) did not find conclusive evidence that sanctions based on interpersonal relations are universally more important than those based on organizational role, they do suggest that where control over formal sanctions is not great, a chairperson's effective interpersonal contacts may contribute to the satisfaction of professors in the department (pp. 563-564). The authors further infer that the power that provides satisfaction to the individual faculty members in the institutions studied (five, four year state colleges in two western areas) is interpersonal, not organizational (p. 564).

The university as an organization is, then, in essence, an aggregate of scholars who perceive themselves as a powerful body in a rather flat institutional power hierarchy. Among themselves, however, the hierarchy is quite clearly defined, as individual rank is assigned on the basis of personal accomplishment. The road from instructor to full-professor is long, arduous, and at times, ego-shattering, for as Thomas Hobbes (1953) wrote in 1651 in Chapter 10 of

THE LEVIATHAN:

The value or worth of a man is, as of all other things, his price; that is to say, so much as would be given for the use of his power, and therefore is not absolute; but a thing dependent on the need and judgment of another... and as in

other things, so in men, not the seller, but the buyer determines the price. For let a man, as most men do, rate themselves at the highest value they can, yet their true value is no more than it is esteemed by others. (p. 79)

As prestige is the medium of exchange and the individual is urged to grow and develop professionally as an individual, there is, much of the time, a more competitive than cooperative work spirit in the academic community. Yet, the academic administration's problem is to develop an organizational orientation to convince the faculty that an orderly arrangement of activity is necessary for an effective functioning of the teaching, research, and service functions of the institution (Duryea, 1962, p. 88). This must be done while preserving the integrity of the intellectual autonomy of the faculty members and avoiding their bureaucratization.

Due, then, to these organizational circumstances, political models of leadership appear more appropriate for developing administrative models of change in universities. A master of the observation of the art of persuasion for change and the administration of political power was Niccolo Machiavelli. Examination of his work The Prince (1952), written in 1513, reveals some of the most penetrating insights into the nature of man in his quest of the political or persuasive leadership of others.

Machiavellianism and Power of the Department Head

The difficulties of introducing change were noted by Machiavelli, to his Prince Borgia, when he wrote in Chapter 6 of THE PRINCE:

There is nothing more difficult to take in hand, more perilous to conduct, or more uncertain in its success, than to take the lead in the introduction of a new order of things. (p. 9)

This observation by Machiavelli holds as true today as in the Renaissance, for the basic socio-economic behavior of man has changed little in comparison to the changes he himself has wrought, through technology, in the environment. It is this universal nature of man which Machiavelli addresses in the political power arena, and it is this aspect of universality that makes him live on among contemporary power theorists.

The university deals with knowledge and man in this same universal sense--changing and molding man's knowledge through education, solving the struggle for basic needs through technology, influencing his political ideologies, and civic artistic sensitivity for a greater perfection towards self-achievement and growth. These are the vital missions of American higher education and it has endured because of its commitment to human growth and development.

As a people product and process organization, an educational organization's power base is one of persuasion and

manipulation, a form of political power. It is in this sense that the university's organizational structure seems more closely parallel to Machiavelli's city-state Princedoms in Renaissance Italy than to contemporary corporate industry. While analogies have been drawn between Machiavelli's views and management (Jay, 1968; Buskirk, 1974), the nature of man at the strategic managerial level of the corporation is the common bond rather than the whole organizational structure itself.

On the other hand, the university's administrative organization, based on academic disciplines and professorial autonomy, really does constitute varying degrees of "princedoms"; i.e., departments, divisions, colleges, etc. While the total organization theoretically produces, through its internal human processes, a generic product--graduates, the latter are ultimately identified by their own credentials in the competitive market. The university gives a diploma as testimony to the end of the process, but gives no written warranty for the future performance of its product.

When Machiavelli undertook a pragmatic examination of the facts of the successful management of political power and gave birth to his precepts for the management of power, political life in Italy under Prince Borgia was one of governing by confusion, conflict, instinct, and luck. Howev-

er, Machiavelli's analysis of the uses of power over men has become, through the centuries, an expression of the crassest of manipulation with a totally pejorative connotation. To be Machiavellian is to be "without morals," totally lacking in ethics and untrustworthy of the leadership of men. This is, however, a confusion of the original intent of Machiavelli, who in his position of exile from his beloved field of politics, devoted himself to the study of what ailed the political structure of his country.

Machiavelli was not a philosopher or theologian concerned with speculation or theory; on the contrary, he was an astute observer of human behavior and was aware of the need to understand human interaction processes as a means to predict and control human behavior. In an unemotional and orderly way, he proceeded to analyze the actions of great leaders in history and their management of political power. From these analyses and his own life experiences, he wrote a handbook for those who would acquire or increase their political power.

Power is the key to change, and if change is the most "permanent" of natural events, then those leaders who are aware of the uses of power and anticipate the directions of change to come will stand the best chances of effecting any planned or systematic change. Power has been defined

through the centuries in countless ways, but certainly some of the earliest, most scientific approaches in written form, are found in the previously cited THE PRINCE written in 1513 by Machiavelli and the THE LEVIATHAN written by Hobbes in 1651. The particular merit of Machiavelli, however, lies chiefly in his previously unexploited method of observation. He attempted what today, in view of sophisticated research methods, would be termed a prima facie analysis of the operational aspects of individual political power.

Guicciardini (1965), a contemporary of Machiavelli, also used a realistic approach to the analysis of the human uses of power in the RICORDI, written in the 16th century. However, he used a more anecdotal style of writing and was not as systematic nor as complete in his analyses as Machiavelli. Hobbes became so involved in his own historical context of the church-state issue that his work is limited in its utility to power theorists today. Machiavelli, however, lives on by having made an invaluable contribution to the understanding of the basic behavioral components of the human interaction processes involved in the uses of power.

Power, in THE PRINCE, is one man's campaign for supremacy over another and/or others by influencing their behavior (in several different ways) towards goals which he, as head of state, elects. The objection throughout the centuries to

this definition is that expediency is considered a primary criterion of judgment, reducing power to an amorality that ignores the moral or ethical consideration of means and/or ends. The moral use of power constitutes fertile ground for semantic, philosophical and political debate for, as beauty is said to be "in the eye of the beholder," the morality of the uses of power is also in the mind of the power holder and those who accept or reject it.

There is also the issue of public and private morality. It is the Prince, as head of state, to whom Machiavelli addressed himself, not a private individual. The specific situational context, then, determines the "beholder's" assignment of morality. It is with an acute awareness of this subjective peril of the human mind that Machiavelli, the behavioral scientist, approached his analysis of reality, striving for the greatest objectivity possible. Morality was not Machiavelli's concern in his political works and, therefore, is the least representative conceptual area of his writings.

If history were as the historian thought it "should be" only (and there is no real guarantee that this is not the case of much of our own individual historical legacy) and not necessarily as it was or is, little of man's accumulated records would be useful to him in his attempts to grow in

wisdom and knowledge. It is in this way, then, that Machiavelli has endured throughout the centuries, for his observations are based on the similarities of the recorded behavior of men over centuries of history of the management of political power (Marriott, 1944, p. 3).

From a Machiavellian perspective, power is best understood and used when analyzed in a specific context. Based on this assumption, the power structure of the academic community should be particularized and analyzed for its idiosyncracies and then exploited for its best possible use. Baldrige does this in Power and Conflict in the University (1971). In the present study, the basic academic unit to be examined was the department, with its principal power figure, the department head.

To be a successful persuader is to have power over other's behavior: to secure their willing compliance in the face of initial resistance without the aid of an absolute power base or other forms of overt force. It is a personal influence tactic. In dyadic or multi-interpersonal dealings, the power balance is determined by the attributes each individual imputes the other (Thibaut and Kelley, 1967, p. 122). The perception of the individuals will ultimately determine the power dynamics. When one attributes another more power than oneself, power over oneself and one's ac-

tions are given to the other person. To lead without sufficient formal or hierarchical power, then, is to use personal influence to persuade, and this is what the department head must learn to do when encountering faculty resistance to change. Persuasion is a form of manipulation and a form of everyday people management. Education is essentially people management, and it is always helpful and sometimes imperative to be skilled at certain types of manipulation. Machiavellianism was viewed in this study in this non-pejorative way; i.e., it is a tactical skill of human management made necessary by the contingent power circumstances of the university's organizational structure.

According to Christie and Geis (1970, pp. 285-313), in competitive laboratory experiments involving games, persons with high Mach scores (those who most agree with Machiavelli on views and tactics dealing with power over others) consistently beat persons with low Mach scores in the lab games by using manipulative strategies. The conditions in which these behavioral strategies are used successfully are as follows: (a) face-to face interaction ; (b) latitude for improvisation, i.e., there is sufficient ambiguity of structure in the situation to permit creative manipulative behaviors and there is the opportunity to control situational outcomes ; (c) irrelevant affect, i.e., when involved in

laboratory win/lose situations or in discussions about value-laden issues, high Mach subjects remain objective and rational. The value of this particular behavior is that it provides subjects with greater tactical advantage over their more emotionally involved low Mach opponents. When situations involve these emotional aspects, high Mach subjects are in control of their opponents and the outcomes.

In laboratory experiments, the behavioral interaction of the high Mach subjects suggests that they rely on a cognitive and analytical style of social interaction. They remain calm and cool in situations that others perceive as emotionally charged (Christie and Geis, 1970, p. 285). By remaining detached and analytical, a high Mach person is able to select strategies which afford the opportunity to convince others to act in a desired manner. In some instances, the resulting behavior induced in the low Mach, by the high Mach's tactics, is actually to the disadvantage of the low Mach opponent in the win-lose game situation (Christie and Geis, 1970, p. 124).

In the present study, behavior is defined in agreement with social exchange theorists Thibaut and Kelley (1967, chap. 7), Endler and Magnusson (1976), and the contingency leadership theory of Fiedler (1971). Thibaut and Kelley view behavior at any given time as depending upon:

instigations, both from within the person (e.g., need or drive states) and from outside (e.g., incentives or problem situations, tasks confronting him...etc.), and the reinforcement previously associated with the [behavioral] set. The stability of a [particular behavior] set depends on the temporal persistence of the stimuli that serve to instigate it. (p. 11)

In other words, a high Mach behaving in a manipulative manner in a laboratory win/lose game setting does so only when manipulation is the name of the game; it is the only means of power over the opponent. His/her objective in the game is to get the opponent to behave in a manner favorable to his/her winning (Christie and Geis, 1970, p. 124).

However, in this researcher's opinion this does not necessarily mean that the high Mach is a "manipulative" person; there are circumstantially induced attitudes which in turn produce specific behaviors. For example, one may have at a particular time a hostile attitude toward a perceived aggressor and act accordingly, and yet not be a "hostile" person. The distinction is important when speaking of power and manipulation. In leadership positions, individuals are often required to behave in a way that they would not if they were not in that position. The president of a nation may legitimize "killing" in a situation of war to defend his country and oblige the citizens to serve in the armed forces. However, an individual citizen may not wage war on his neighbors for the benefit of his family in the same society.

The tactics of a leader are not subject to the same rules as those of a private individual. The context and consequences determine the "goodness" or "badness" of an act. It is the combination of the role and the incumbent personality that must be considered when addressing the issue of power and tactics (Getzels and Guba, 1954).

From the above reasoning, it would seem probable that in a low power position within the university hierarchy, a department head who was to serve as an agent of change would need persuasive power in one-to-one and/or group interactions with subordinates. The conditions conducive to successful strategies for winning by high Machs in the laboratory setting appear to duplicate themselves in the department head role position. In working with subordinates the department head must depend more on personal influence than role power to effect change in them. The manipulative skills of a high Mach department head would allow the securing of influence in the academic organization that subordinates would recognize, and for this reason faculty might attribute a high Mach department head more role and personal power than a low Mach department head in the same position.

Social Insight and Power of the Department Head

As a leader responsible for the development of subordinates, the department head must have a certain degree of insight into the needs and wishes of those subordinates. Such ability is an important tool of leadership, for the department head must be able to integrate the needs and abilities of subordinates with the overall needs and structure of the organization. To do this, the department head must correctly perceive the rewards others desire and be able to mediate those rewards in order to be successful in any power attempts. Incorrect perception or insight regarding desired rewards, or failure to mediate them successfully for the dependent member, decreases the leader's power (Bennis and Shepard, 1958). The department head, whose role power is already undermined by weaker administrative status in the organizational hierarchy, will need model interpersonal leadership skills to serve as an agent of change. This ascribed role and personal power will be increased or decreased to the degree that such influence is felt (Getzels and Guba, 1954).

Accurate perception of others' attitudes, motives, and needs, does not mean that one must necessarily "affectively" experience these attitudes, motives, needs. Guterman (1970) recalls that with regard to sympathy and empathy,

"Rosalind Dymond Cartwright, who at one time was an enthusiastic proponent of role-taking accuracy as an index of sympathy (empathy) wrote: 'People might be empathic (sympathetic) without being able to predict and might be able to predict accurately without the process being an empathic one.'" (p.45)

Social insight, then, may be defined as the ability to cognitively discern the motives for another's behavior as Gough (1968) states:

to sense what they feel and think, and to predict what might be needed to bring about certain changes in any given situation, to improve it, perhaps, or to rectify disturbing tensions or conflicts. (p.1)

Since faculty attribute the department head low role power in the organizational hierarchy, the incumbent's actual influence over faculty behavior, as an organizational agent of change, depends on native or acquired interpersonal skills. Therefore, in structural terms, power will stem from management of social relations. If this is true, the department head who understands the needs, wishes and abilities of faculty members, and mediates successfully for them, will be attributed more power than a department head who does not do this, or has low social insight.

Social insight, then, may be used as a personal medium of power. This is not to imply, however, that insightful de-

partment heads can and/or will use this ability to further personal influence over faculty members successfully, or that they will be effective agents of change. This cognitive, analytic ability does not preclude the possibility of the empathic or sympathetic disposition of a subject. If department heads are not only insightful cognitively, but also empathic or emotionally involved with subordinates, they may possibly be totally ineffective task leaders (Jacobson, 1972, p. 31). They may become so involved in the human relations aspects of a work situation that the task is ignored or forgotten. This is what happens to low Machs in the emotionally charged lab experiments, and it causes them to lose sight of the goal of the game itself and the strategies necessary to win, causing their defeat. In this study, then, social insight is viewed as a cognitive variable, separate from intuitive emotive states of sympathy or empathy.

Earlier in this chapter, high Mach subjects were described as detached, analytical, uninvolved in situations dealing with value-laden issues. Their emotional control was visibly evident in contrast to their low Mach opponents. If high Machs possess high social insight, it would seem that they would have more control than high Machs with low social insight, i.e., one might anticipate an interaction effect of these two variables on the power attributed high Mach department heads by faculty.

SUMMARY

In summary, consumer-market models of management are, in this researcher's opinion, inadequate in academe. Political power models dealing with interpersonal relations and the uses of interpersonal political power and influence appear to be more appropriate as the basis for development of academic leadership training.

Change in individual faculty members' behavior as the intended effect of the administrative "power agent" in the present study was assumed to depend on the department head's leadership mode. Having described the department head's academic leadership role as one almost totally dependent upon social interaction processes as conditions of power, there appeared to be certain unique characteristics required for successful innovative leadership. Given the political nature of the academic community with its properly "Italian Renaissance" organization by "intellectual" city-states, i.e., individual disciplines or departments, it appeared plausible to reexamine and evaluate by modern standards Machiavelli's political management precepts as the basis for academic change leadership and leadership training.

A second variable, social insight, was examined as another personal power means to effective department head leadership. The possibility of an interaction effect was mentioned as an exploratory area for examination. The gen-

eral thesis guiding the research hypotheses reflects this anticipated interaction.

THESIS STATEMENT

In this study it was theorized that the degree of role and personal power attributed department heads by faculty members would vary as a function of the department head's manipulative orientation (Machiavellianism) and social insight (ability to cognitively discern the nature of another's behavior).

The three major concepts to be operationally defined for research in this study were: (a) Machiavellian orientation of a department head; (b) social insight; and (c) the role and personal power attributed the department head by faculty members. The basic dyadic unit of analysis used in this study was the individual faculty member and the respective department head.

Once again, the assumptions implicit in the case made for such a conceptual framework are based on the:

1. previously elaborated character of the academic organizational structure,
2. type of interpersonal relations associated with the organizational power hierarchy, and

3. the role of the department head as administrative agent of change through the use of interpersonal influence and power over the individual faculty members in the department.

PURPOSE OF THIS STUDY

Due, in part, to such factors as the ever increasing unwillingness of taxpayers to support higher education, declining birth rate, increased costs due to double digit inflation, and decreasing federal support to higher education, the number of job openings for university teaching personnel has decreased. Faculty mobility has also decreased, in sharp contrast to the marketplace of Caplow and McGee of some twenty years ago when it was a "seller's" market. Today, it is a "buyer's" market and the competition is keen and the positions are limited. This creates a potential problem of stagnation of faculty in their same positions for years and, in many cases, a subsequent lack of innovation and inspiration in teaching, research, and service. Staff development programs are intended to counteract this potential stagnation and increase the quality of faculty members' performance. Enterprising university administrators aware of such difficulties have been largely unsuccessful in their attempts at innovation and are still searching for

more effective strategies. The purpose of this study is to contribute new insight into successful administrative strategies for introducing change in individual faculty behavior in institutions of higher education.

Chapter II

RESEARCH DESIGN AND METHODOLOGY

In the previous chapter, it was suggested that one possible strategy for introducing change into a university's organizational structure is to select department heads who are highly skilled in the use of interpersonal power. The underlying assumption is that department heads high in these skills will be attributed more role and personal power by faculty members. Such attributed power, then, would allow department heads to influence faculty members, individually, toward organizationally desirable behaviors.

Due to both the faculty perceptions of a flat hierarchical power structure in higher educational institutions (Hill and French, 1967) and the unique academic personality of faculty members, it was hypothesized generally that: the degree of role and personal power attributed department heads by faculty members will vary as a function of department heads' manipulative orientation (Machiavellianism) and social insight (ability to cognitively discern the nature of another's behavior). Following the next section on definition of terms, this general hypothesis is subdivided into three empirical statements with their accompanying rationales.

DEFINITION OF TERMS

In this section, the specific meanings of the terms in the three major empirical statements are defined as they are used in this study. They are:

Department Head

This is the person listed as department head in the selected institution's 1979-80 catalog and checked against a current listing in the university's administrative offices. Only those department heads with one year in office as of September 1, 1978 were contacted for participation. Of 44 eligible candidates, 37 participated in this study.

Faculty Members

These are the individuals under the supervision of the above mentioned department heads. All candidates were chosen from the 1979-80 institutional catalog and verified by a current listing in the department. A sample of 276 faculty members was used in this study.

Attributed Power

In this study, power was defined in accord with the definition given by Hill and French (1967) whereby:

The power of an individual in a social situation consists of the sanctions others in the situation perceive that he has available to employ in ways that affect them. (p. 552)

Department heads have some sanctions by virtue of their role position in the organization, but they may also acquire additional powers due to their own personality and/or abilities in carrying out their roles. For example, they may establish very positive and strong relationships with their dean and other upper level administrators and gain control of some sanctions which do not properly belong to the role of department head. But they may also lose power by neglecting the interpersonal means of control within their own department thus losing control of some of the sanctions associated with the position (Hill and French, 1967, p. 554).

Based on these assumptions of possible sources of power for department heads, attributed power was measured by the 31 items of the "Available Power Instrument" (API) of the 1967 Hill and French study (p. 553). The 31 API items were rearranged so that its two content dimensions were clearly separated and these were presented to the subjects as two distinct sections. This distinction was not made in the original "Available Power Instrument." Section One of the new version contained the 22 role associated power items and Section Two contained the nine personal leadership items. The revised instrument was called the "Job Item Inventory" (JII). (See Appendix A.) For each item, faculty rated their department head's degree of power on a scale measuring zero

to four. Mean response scores of individual faculty members were used as the operational measurements on the seven attributed power subscales (APS) derived by factor analysis (with varimax rotation) of the JII. The seven subscales were named as follows:

1 Personal Leadership

Goal Determination: Setting goals for the department.

Influence: Power to establish contacts with higher administration.

Interdepartmental Relations: Ability to sustain liaisons with other departments.

Information: Knowledge of what is going on around the college.

Inspiration: Ability to exert professional leadership and stimulation.

Community: Ability to maintain good contacts with community; publicity.

Counseling: Ability to counsel staff about teaching and/or research.

2 Teaching and Curriculum Logistics

Scheduling: Determining times and days of class meetings.

Course Assignments: Controlling courses (field level, number of preparations) instructors are assigned.

Curriculum: Influencing curriculum development.

Assigning Additional Teaching: Controlling assignment of summer teaching opportunities.

Teaching Loads: Deciding class contact hours of professors.

Clerical Work: Securing clerical assistance for faculty.

3 Career Status

Promotion: Influencing promotion decisions for department members.

Tenure: Influencing tenure decisions for department members.

4 Control of Extracurricular Resources

Funds for Research: Acquiring funds for faculty research.

Speaking and Consulting: Making unpaid "community service" assignments to faculty members.

Academic Contacts: Ability to assist faculty members in developing professional acquaintanceships.

Consulting: Ability to secure paid consulting jobs for members of the department.

Colloquia: Ability to develop stimulating academic environment through seminars bringing distinguished visiting lecturers to campus, etc.

5 Research Resources

Student Assistants: Controlling amount of student help supplied to professors.

Facilities: Securing equipment and supplies.

Research: Securing research time and facilities for faculty.

Travel Funds: Acquiring funds for travel to professional meetings.

Research Assistance: Getting re-
search assistants, supplies, etc.

6 Extra Compensation

Paid Extra Teaching: Controlling
extension teaching appointments.

Paid Extra Work: Effecting the ac-
quisition of paid short courses,
etc.

7 Committee-Shared Concerns

Committees: Forming committees and
making committee assignments.

Salary Increase: Controlling step
and/or merit raises.

Recruitment: Recruiting qualified
faculty.

Sabbaticals: Awarding of sabbati-
cals leaves.

Machiavellianism

Machiavellianism was defined as the total score for each of 36 department heads on the Total Mach V test and two of its three subscales, Tactics and Views. The third subscale, Morality, was not included as it is least representative of the conceptual content of Machiavelli's politi-

cal works. (See Chapter 1, pp. 17-18.) In the Mach V scale the three subscales of the instrument are as follows: (items are numbered as in the original test) nine items relating to Tactics:

3. A. Never tell anyone the real reason you did something unless it is useful to do so.
[M]²
- B. The well-being of the individual is the goal that should be worked for before anything else.
- C. Since most people don't know what they want, it is only reasonable for ambitious people to talk them into doing things.
4. A. People are getting so lazy and self-indulgent that it is bad for our country.
- B. The best way to handle people is to tell them what they want to hear. [M]
- C. It would be a good thing if people were kinder to others less fortunate than themselves

² M indicates an original Machiavellian statement.

7. A. A good teacher is one who points out unanswered questions rather than gives explicit answers.
- B. When you ask someone to do something, it is best to give the real reason which might carry more weight. [M-]³
- C. A person's job is the best single guide as to the sort of person he is.
8. A. The construction of such monumental works as the Egyptian pyramids was worth the enslavement of the workers who built them.
- B. Once a way of handling problems has been worked out it is best to stick to it.
- C. One should take action only when sure it is morally right. [M-]
9. A. The world would be a much better place to live in if people would let the future take care of itself and concern themselves only with enjoying the present.
- B. It is wise to flatter important people. [M]

³ M- indicates a reversal of an original Machiavellian statement.

- C. Once a decision has been made, it is best to keep changing it as new circumstances arise
12. A. A person shouldn't be punished for breaking a law that he thinks is unreasonable.
- B. Too many criminals are not punished for their crimes.
- C. There is no excuse for lying to someone else. [M-]
16. A. It is best to give others the impression that you can change your mind easily.
- B. It is a good working policy to keep on good terms with everyone.
- C. Honesty is the best policy in all cases. [M-]
17. A. It is possible to be good in all respects. [M-]
- B. To help oneself is good; to help others even better.
- C. War and threats of war are unchangeable facts of human life.

20. A. People who talk about abstract problems usually don't know what they are talking about.
- B. Anyone who completely trusts anyone else is asking for trouble. [M-]
- C. It is essential for the functioning of a democracy that everyone vote.

Nine items relating to Views of life:

1. A. It takes more imagination to be a successful criminal than a successful business man.
- B. The phrase, "the road to hell is paved with good intentions" contains a lot of truth.
- C. Most men forget more easily the death of their father than the loss of their property. [M]
5. A. Most people are basically good and kind. [M-]
- B. The best criterion for a wife or husband is compatibility--other characteristics are nice but not essential.
- C. Only after a man has gotten what he wants from life should he concern himself with the injustices in the world.

6. A. Most people who get ahead in the world lead clean, moral lives. [M-]
- B. Any man worth his salt shouldn't be blamed for putting his career above his family.
- C. People would be better off if they were concerned less with how to do things and more with what to do.
10. A. It is good policy to act as if you are doing the things you do because you have no other choice.
- B. The biggest difference between most criminals and other people is that criminals are stupid enough to get caught. [M]
- C. Even the most hardened and vicious criminal has a spark of decency somewhere within him.
13. A. Generally speaking, men won't work hard unless they are forced to do so. [M]
- B. Every person is entitled to a second chance, even after he commits a serious mistake.

- C. People who can't make up their minds are not worth bothering about.
14. A. A man's first responsibility is to his wife, not his mother.
- B. Most men are brave. [M-]
- C. It's best to pick friends that are intellectually stimulating rather than ones it is comfortable to be around.
15. A. There are very few people in the world worth concerning oneself about.
- B. It is hard to get ahead without cutting corners here and there. [M]
- C. A capable person motivated for his own gain is more useful to society than a well-meaning but ineffective one.
18. A. Barnum was probably right when he said that there's at least one sucker born every minute. [M]
- B. Life is pretty dull unless one deliberately stirs up some excitement.
- C. Most people would be better off if they controlled their emotions.

19. A. Sensitivity to the feelings of others is worth more than poise in social situations.
- B. The ideal society is one where everybody knows his place and accepts it.
- C. It is safest to assume that all people have a vicious streak and it will come out when they are given a chance. [M]

Two items relating to Morality:

2. A. Men are more concerned with the car they drive than with the clothes their wives wear.
- B. It is very important that imagination and creativity in children be cultivated.
- C. People suffering from incurable diseases should have the choice of being put painlessly to death. [M-]
11. A. All in all, it is better to be humble and honest than to be important and dishonest. [M-]
- B. A man who is able and willing to work hard has a good chance of succeeding in whatever he wants to do.
- C. If a thing does not help us in our daily lives, it isn't very important.

Social Insight

This was defined as the total score for each of the 37 department heads on the 25 items of the Chapin Social Insight Test (CSI: Chapin, 1967).

Scoring was done according to the instructions in the manual for administration of this test. (See scoring section of this chapter.)

HYPOTHESES

The following section includes the rationale for, and the statement of, the hypotheses and empirical proposition of primary interest in the present study.

Machiavellianism and Attributed Power: Rationale for Hypothesis

The department head is viewed in this study as the in-house agent of change for administrative purposes of faculty renewal and/or staff development. However, the university's organizational hierarchy is perceived by faculty as relatively flat, with faculty as a collegiate body having equal to or more power than the department head (Hill and French, 1967). In view of this situation, the department head as an agent of change must depend on personal behavioral powers to manipulate, induce, or persuade faculty members to accede to leadership demands for innovation. Faculty acceptance of

the department head's leadership will increase the amount of power attributed the role of department head. Conversely, faculty rejection of the department head's leadership will decrease the amount of power attributed the role. In either case, however, the key to role power is the personal or manipulative power of the department head.

Such "manipulative" or persuasive powers are often described in a pejorative manner as "Machiavellian." The implication is that the manipulative or persuasive power agent is acting through evil or immoral motives. The goodness or badness of an act of power, or its "morality," is, nevertheless, largely a function of its social and temporal context (Hampshire, 1979). The "why" of an act of power is subject to such contexts and is the concern of the moral philosopher. Machiavelli, however, was a political "strategist." He concerned himself with the amoral "hows" of an act of power. In THE PRINCE, he analyzes the behavioral strategies used successfully to acquire, maintain, and increase political leadership power. A person in a power context similar to that of Machiavelli's prince, (in this case, the department head in the university's political power structure of "kingdoms" or departments) would be advised to use these strategies when and where manipulative tactics are the necessary means to power for effecting change in subordinates' behavior.

Based on the above rationale, if university department heads adopt a Machiavellian approach to people and the management of power and use Machiavellian behavioral strategies, then faculty should perceive them as powerful. In effect, they should be attributed more power than department heads who do not adopt such views or use such strategies. This notion may be examined within the following empirical hypotheses:

Hypothesis 1:

The greater the department needs^o Machiavellianism, the greater the role and personal power attributed them by their faculty.

To this end, department head scores on the:

Total Mach V

Mach Views

Mach Tactics

scales should be positively related to scores of attributed power by faculty on the Attributed Power Subscales:

- 1 Personal Leadership
- 2 Teaching and Curriculum Logistics
- 3 Career Status
- 4 Control of Extracurricular Resources
- 5 Research Resources
- 6 Extra Compensation

7 Committee-Shared Concerns.

Social Insight and Attributed Power: Rationale for Hypothesis

It has been previously stated that university department heads are perceived by faculty as having low role authority. Yet, they are responsible for the development of their subordinates and must be able to integrate the needs and abilities of those subordinates into the overall structure of the organization. In other words, a high degree of personal power will be needed to counteract the low power attributed the role.

Rosen, Levinger and Lippert (1961) showed that high power is associated with helpfulness, fairness, sociability, expertness and physical strength. Adults as well as children are influenced by those displaying behavior that gratifies social and emotional needs (Jacobson, 1972, p. 131). Social insight as defined in this study is the ability to cognitively discern the motives for another's behavior, "...to sense what they feel and think and predict what they may say and do" (Gough, 1968, p.1).

Understanding what others want, need and will do in a specific situation implies, also, an advantage in choosing appropriate strategies for purposes of interpersonal control, i.e., persons with high social insight may gain power

over others in interpersonal exchange by understanding and satisfying others' social and/or emotional needs (Thibaut and Kelley, 1967, chap. 7). This does not mean that they will choose to do so, but that they would be more successful should they so decide, than a person with low social insight.

Based upon the above rationale, department heads who are high on social insight have the information necessary to use all aspects of their positions (rewards and sanctions) to influence the direction (e.g. performance) of their subordinates, thus affecting the latter's perceptions of their department head's power. Therefore, department heads high on social insight, by anticipating and gratifying the needs and wants of subordinates, will be attributed greater power than department heads with low social insight. Stated empirically:

Hypothesis 2:

The greater the department heads' social insight, the greater the role and personal power attributed them by their faculty.

To this end, department head scores on the

CSI

should be positively related to scores of attributed power by faculty on the seven Attributed Power Subscales:

- 1 Personal Leadership
- 2 Teaching and Curriculum Logistics
- 3 Career Status
- 4 Control of Extracurricular Resources
- 5 Research Resources
- 6 Extra Compensation
- 7 Committee-Shared Concerns.

**Machiavellianism, Social Insight and Attributed Power:
Rationale for Empirical Proposition**

A third and final concern of the researcher was to investigate the possibility that the two department head variables (Machiavellianism and social insight) have an interactive effect on the measures of attributed power. As indicated in the literature, high and low Machs differ in behavioral situations of interpersonal bargaining (Christie and Geis, 1970, p. 90), and high and low social insight scorers also differ in leadership behavior (Gough, 1968, p. 9).

Therefore, it appeared tenable that combinations of these two might interact to cause differences in department head role behavior, leading to differences in role and personal power attributed them by faculty. However, as not all

role powers of the department head deal with faculty interpersonal bargaining situations, emphasis in this study was given primarily to those power scales which deal with subordinate interaction aspects of power.

Empirical Proposition:

The addition to a multiple regression equation of the term for the interaction of the specific Machiavellian variable with the social insight variable may increase the prediction of each of the APS measures.

Stated operationally, the R-Square of the multiplicative or interaction term (Machiavellianism x social insight) for department heads' scores on the:

Total Mach V x CSI

Mach Tactics x CSI

Mach Views x CSI

correlated with attributed power by faculty on the Attributed Power subscales:

- 1 Personal Leadership
- 2 Teaching and Curriculum Logistics
- 3 Career Status
- 4 Control of Extracurricular Resources
- 5 Research Resources
- 6 Extra Compensation
- 7 Committee-Shared Concerns

may differ significantly from the R-Square of the department heads' scores on the:

Total Mach V

Mach Views

Mach Tactics

CSI

correlated with the attributed power scores by faculty on the Attributed Power subscales:

- 1 Personal Leadership
- 2 Teaching and Curriculum Logistics
- 3 Career Status
- 4 Control of Extracurricular Resources
- 5 Research Resources
- 6 Extra Compensation
- 7 Committee-Shared Concerns.

POPULATION AND SAMPLE

On-campus faculty and department heads from a large land grant university in the southeastern United States participated in the study. Permission to conduct the study was obtained from chief administrative officers, and participation was strictly voluntary on the part of all subjects. Thirty-seven department heads and 276 faculty members across seven colleges collaborated in the study. As there were 44

eligible department heads, the 37 represented 84% of the total number available. Those 37 departments encompassed 71% of the total available faculty (928/1295). Because of the voluntary nature of the study and the essential collaboration of individual department heads as the initial step in the sampling procedure, random sampling was used only in the faculty sample. This sample constituted 38% of the available population (353/929). The 276 faculty respondents represented a total usable return of 78% (276/353).

The particular institution was selected as the site of research for the following reasons: it was large enough to assure adequate sampling numbers for testing (53 departments, 1500 faculty); it had seven colleges that were under the direction of one set of administrative norms (organizationally); it was a comprehensive university and the nearest institution of its size available to the researcher. Further, by concentrating on one institution, the administrative and organizational structure was the same for all participants. Variations in perceived power of department heads by faculty could be better attributed to the incumbent's personal behavior in the role rather than to different institutions' administrative philosophies.

CRITERIA AND METHOD OF SELECTION OF DEPARTMENT HEADS

As previously mentioned, participation in this study on the part of both department heads and faculty was voluntary and all data were kept strictly confidential. After permission to conduct the study was granted by the administration, eligible chairpersons were contacted by phone and/or in person to enlist collaboration. Only those department heads with at least one year in office were invited to participate in the study. Based on the time-in-office criterion, there were 44 eligible department heads. Initially, the 44 consented by phone or personal interview to participate. On receiving the instruments by mail, however, seven declined, stating reservations about the content of the instruments, particularly the Mach V, called in this study "The Interaction Attitude Inventory." Thirty-six department heads responded, filling out both instruments with no omissions. However, one department head returned both forms having completed only the CSI test. He explained that it was impossible for him to complete the Mach V and, consequently, he was returning it with only two of the 20 items marked. This instrument was not used in the data analyses. Because of these missing data, the complete data base was established on 36 departments for both Mach V and CSI analyses, and on 37 for the CSI alone.

PROFILE OF PARTICIPATING DEPARTMENT HEADS

While there were 37 respondents, not all demographic data were complete; therefore, the "N's" vary from 32 - 37. For 35 department heads, the following profile emerged: mean age, 47; mean years of teaching experience in higher education, 18; mean years of administrative experience in higher education, seven. All 37 respondents were tenured, but data for the number of years with tenure at the institution and the number of years in current department at the institution were complete for only 32 and 36 subjects respectively. The mean for both of these items was five years.

CRITERIA AND METHOD OF SELECTION OF FACULTY MEMBERS

The researcher used the findings of the Hill and French study (1967) to establish criteria for the sampling procedure of faculty members. It was observed in the above cited study that there was an inverse relationship of rank to power attributed department heads. Therefore, the perceptions of the particular sample might be distorted if a disproportionate number of any one rank were sampled in a department. As the present study included 37 departments within the same institution, a sample was drawn by a random stratified quota procedure as follows: a percentage for the number of

any one rank of instructors in the department was calculated from the listing in the 1979-80 university catalog and then used as the percentage of each rank to be drawn for the sample. If the rank represented 20% of the total department population, 20% of the instructors in that rank were randomly drawn (Table 1). This was not possible however, in departments where in some ranks there was only one person. In such instances that person was automatically selected. All faculty names were copied from the 1979-80 university catalog using random selection within each rank where possible. The names were then verified with the departments' current listings to assure accuracy.

TABLE 1

Example of Sampling Method for Departmental Faculty Members

Department A Population			Department A Sample	
Rank	Number in Department	Percentage of Total Department	Number by Percentage of Rank in Department	Percentage of Total Sample
Professor	13	$13/47 = .28$	$.28(13) = 4$	$4/15 = .27$
Associate	10	$10/47 = .21$	$.21(10) = 2$	$2/15 = .13$
Assistant	19	$19/47 = .40$	$.40(19) = 8$	$8/15 = .53$
Instructor	5	$5/47 = .11$	$.11(5) = 1$	$1/15 = .07$
Total	N = 47	$47/47 = 100\%$	$100\% = 15$	$15/15 = 100\%$

PROFILE OF PARTICIPATING FACULTY MEMBERS

While there were 276 subjects in the sample, 274 reported rank and were distributed as follows: Professors, 75; Associates, 80; Assistants, 99; Instructors, 20. For 276 subjects the mean age was 42 years; and the mean years of teaching in higher education was 11. There were 247 males and 29 female respondents. Mean administrative experience for all respondents was eight months, and mean number of years with tenure at the institution was nine years.

INSTRUMENTATION

Three instruments were used to operationalize the major variables under investigation in this study. The Mach V of Richard Christie (Christie and Geis, 1970) was used for the variable Machiavellianism; the Chapin Social Insight Test (Chapin, 1967) was used for the variable Social Insight; the "Available Power Instrument" of Hill and French (1967) was used for the variable Attributed Power by faculty to department heads. The following demographic data were requested of all participants in the study: academic rank; age; years teaching in higher education; if tenured--date of tenure appointment; date of appointment in present department; and length of administrative experience in higher education if any.

Development of Machiavellian Scale

The idea for the Mach V scale was developed by Dr. Richard Christie in the 1960's when he found, in a study of political leadership, that authoritarian personalities were ineffective when dealing with the real world of politics (Christie and Geis, 1970, p. 2). Intrigued by the consistency of such findings, Christie decided to explore the tactics of manipulation as successful leadership principles. A total of 71 items were pooled from Machiavelli's works as measures of the main elements contained therein. In Machiavelli's writings (THE PRINCE and THE DISCOURSES), three substantive areas can be identified. These are (a) the nature of interpersonal tactics, (b) views of human nature, (c) abstract or generalized morality (Christie and Geis, 1970, p. 10). In the original pool the content distribution was of 32 items related to area (a), 28 items related to area (b), and 11 items to area (c).

An item analysis revealed that about 60 of the items correlated at the .05 level of significance with the total "Mach" score (the items about human nature being most highly related, the ones about morality least highly related.) The ten highest related items of those worded in agreement with Machiavelli were selected for the final scale along with the ten highest related items worded in disagreement with Machiavelli. This 20-item Likert format was called Mach IV.

The first nine samples tested on the Mach IV were drawn from 1196 undergraduate students of behavioral sciences in five American universities (Christie and Geis, 1970, p. 33). The mean split-half reliability coefficient for the pooled samples was $+0.79$, and the mean item-whole correlation of the 20 items was $+0.38$. Broken down by content area, the mean item-whole correlation for the nine items classified under Tactics was $+0.41$; for the nine on Views of Human Nature, $+0.35$. The mean part-whole correlation of those items worded in agreement with Machiavelli was $+0.38$; that of the reversals, $+0.37$ (those statements worded in disagreement with Machiavelli and which the respondents chose as least like themselves). There are only two items related to the third area, Morality, and no data are given for them by Christie and Geis. This scale was not used in the present study.

Christie and Geis (1970, p. 18) write that when Edwards (1957) was demonstrating the effects of social desirability upon responses to personality and attitude inventories, the Mach IV was given to samples of two classes of medical school students along with Edwards' scale of Social Desirability. The correlations between the Edwards' Social Desirability Scale and the Mach IV were $+0.35$ and $+0.45$ for the two classes. In an attempt to bypass the effects of the desirability influence, a forced-choice version, Mach V, was

devised. Twenty sets of three items were presented with the instructions to choose the one in each set most like the respondent and the one least like him, thus leaving the third item unmarked. One of the three items was keyed for the particular scale of interest (Tactics, Views, Morality). It was then matched in rated social desirability with another item unrelated to the scale of interest. The third item was a buffer, high in social desirability if the keyed and matched items were low, and low if the keyed and matched items were high in social desirability. This rather sophisticated strategy precluded the average respondent's determining the socially "correct" answer.

Mach V Scoring

The scoring system on the Mach V scale has a theoretically neutral point of 100. Summing over the 20 items gives a range of 20 to 140; a constant of 20 is added, however, (to match the Mach IV scoring) so that the scale has a minimum score of 40 and a maximum of 160. A score of 160 on Mach V means that every item keyed for Mach is most or least like the subject and the item matched for social desirability is at the extreme opposite. Under this system, "pro" Mach items are scored as follows: the highest score (7) goes to the choice of the Mach item as most like one and the matched item (social desirability measure) least like one;

the next highest score (5) goes to the choice of the Mach item as most like one and omitting the matched item; the same score is given for omitting the "pro" Mach item but choosing the matched item as least like one; the next score (3) is given for a choice of the Mach item as omitted and the matched item as most like one, or for the Mach item as least like one and the matched item omitted; the lowest score (1) is given for the choice of the Mach item as least like and the matched item as most like one. "When the Mach item is worded in the anti direction the scoring is reversed...." (Christie and Geis, 1970, p.30.) For the subscales Tactics and Views (nine items each) the theoretical range is a minimum of 9 (1 point each for the lowest score) to 63 (7 points each for the highest score). Adding the constant of 20 to these as is done with all Mach V scores, the theoretical range becomes 29 - 83.

Validity

Since the development of this scale there has been a great deal of interest in trying to determine the likelihood that individuals with a given Mach orientation will, in fact, operate as predicted in various interpersonal settings. According to Geis (Christie and Geis, 1970), Machiavellianism is an interpersonal orientation towards mani-

pulation of others which should relate to success in manipulating others. The relationship can be broken down into three components: "a belief that people are in fact manipulatable; willingness to attempt manipulation; and ability or skill in manipulative techniques" (p. 112)

The simplest interpretation of a Mach score is, according to Geis (Christie and Geis, 1970), that

it represents the degree to which a respondent believes that people in general are manipulatable, that interpersonal manipulation is possible. This is a face valid interpretation. (p.107)

The second component, or willingness to manipulate others as a characteristic of high Mach scorers, was tested by Geis, Christie, and Nelson in the "Machiavel" study (Christie and Geis, 1970, Chapter V). In laboratory experimental research Christie showed that high Machs were willing to manipulate a supposed peer. Due to the situational controls in the experiment (there were no tangible rewards to be gained), willingness to manipulate could not be attributed to differential success or reward. Therefore, high Mach scores can be inferred to reflect this volitional component.

The third and final component, the actual behavioral skill of successful interpersonal manipulation by high Mach scorers, was tested by Geis (Christie and Geis, 1970) in her study, "The Con Game." The major hypothesis was that

if Mach scores do predict success in interpersonal manipulation, then, in a conflict of interest bar-

gaining situation in which interpersonal manipulation can influence the distribution of rewards, high Machs should obtain more of the rewards. (p. 127)

The hypothesis was supported and it was found that the more ambiguous the bargaining situation became, the more successful the high Machs were. On the sample of 66 male students in introductory psychology and sociology courses, a correlation of $+0.71$ was found between Mach scores and success in interpersonal bargaining in the above cited laboratory game situation. This gives evidence that a "measurable personality variable can influence the outcome of group interaction in a relevant situation" (Christie and Geis, 1970, p. 129). "Specifically, the more Machiavellian group members in this study succeeded in getting more of the rewards" (1970, p. 129). Similarly, high Machs have been shown to be winners in situations where subjects need to improvise both with regard to the timing and content of their responses (Christie, Gergen, and Marlowe, 1970; Exline, Thibaut, Hickey, and Gumpert, 1970; and Droxy and Gloskinos, 1980).

In the present study, the Mach V scale was used to measure the implied behavioral orientation of university department heads based on the research findings cited previously. A conceptual parallel was drawn in this study between the parameters for success by high Machs in laboratory settings and the conditions of successful leadership for department heads as agents of change. These are as follows:

Parameter for Success
in the Laboratory
for High Machs

1. Face-to-face interaction
2. Irrelevant affect
(In affective situations, when dealing with value-laden and/or emotive situations high Machs remain ego detached.)
3. Ambiguity of situational power structure and opportunity for individual behavior to affect distribution of rewards.

Parameter for Success
in the University
for Department Heads

1. Department heads deal with individual faculty members in face-to-face interaction situations.
2. Department heads deal with value-laden and/or emotive situations when urging behavioral change in individual faculty members.
3. While there are certain role powers granted by the organizational hierarchy, they are moderated (increased or decreased in amount and/or number) in the perceptions of faculty by virtue of the incumbent's behavior.

Reliability of Mach V

According to Christie (Christie and Geis, 1970), "in most samples [in experimental situations] the predictive reliability of Mach V hovers in the .60's" (p.27). However, internal consistency measures are not as high. Christie explains the low internal consistency as the result of choosing between alternative strategies: "One was to focus upon purifying them [the items] to maximize internal consistency. The other was to determine whether or not the scale ...would be adequate for research" (p. 27). He decided to forget about the psychometric perfection and see if the scale had any relevance to subjects' behavior.

The same low internal consistency for the Mach V was found for the present study sample of 36 university department heads. The average item-whole correlation of the Total Mach V is only +.37, while that of the subscale Tactics is a part-whole correlation of +.39. The Views of Life scale, however, has a part-whole negative correlation of -.41.

In the present study, the argument has been made by this author, earlier, that the Views of Life scale is not a truly congruent or representative measure of the views of life for private individuals. Machiavelli addressed the Prince as a head of state who, as such, must use power strategies based on assumptions of human behavior from a public point of view, as a representative leader, and not a

private individual.

The maintenance of a state's power implies that it is subject to threat by others, and as a protector of a nation, the head of state must make realistic judgments about other world leaders to successfully foresee and evade actions intended to diminish or wrest away the power of his nation.

The Views of Life Scale deals with this kind of power where leadership is concerned for the good of the whole v. the good of the individual-- where to save a nation, some may have to be sacrificed. Many of Machiavelli's views of life in THE PRINCE and THE DISCOURSES are, for this reason, endorsable only under the banner of such group leadership. On the other hand, the tactics of interpersonal power strategies remain the same no matter what the underlying views of life. When it comes to power over individual others, power tactics are the same for all. In the sample used in this study there was no correlation at all between Tactics and Views ($r = -.01$). Following Christie's argument, the internal consistency of the scales, as such, then, is not of great concern in this study, as the assumptions of Mach V's correlation with behavior, as seen in the experimental literature (Christie and Geis, 1970), are the main issue as set forth in the theoretical framework of Chapter 1.

Development of Chapin Social Insight Test

The Social Insight Test was originated by F. Stuart Chapin in 1942 (in Gough, 1968, p.1) to assess the perceptiveness and accuracy with which an individual can appraise others and forecast what they might say and do. This test does not intend to measure empathy, sympathy, emotional responsiveness, tolerance, or other connotations of the phrase "social insight." This definition stresses the diagnostic capacity of the individual and not his own tendencies to behave in a more or less adaptive way.

The test consists of 25 short descriptive paragraphs involving problems of interpersonal relations or personality dynamics. The respondent must choose from among four multiple choice statements the one which offers the wisest course of action or insightful commentary. Originally, Chapin assembled 45 such items and then chose the 25 which best differentiated between high and low scorers. The five items with strongest differentiations were assigned weights of +3 for the correct response; the six items ranking next in differentiating power were given weights of +2; and the 14 remaining items were given weights of +1. For the 25 items weighted in this way, the total score could range from 0 to 41.

Validity of the CSI

Validation evidence is available for the CSI in its present 25 item format through a number of different criteria (Gough, 1968, p.8). One of these was based on the correlation of CSI scores with behavioral ratings assigned 100 commissioned military officers by psychologists who had studied the men intensively in a five day program. The subjects were observed in many contexts doing many different jobs, were interviewed, and were given many tests including the CSI. The psychologists who contributed the ratings did so on the basis of interviews and personal observations. They saw no test scores including the CSI so that their observations are independent of the test and serve as criteria. Characteristics found to correlate with the CSI were: ability to communicate ($r = +.31$); ability to evaluate ideas ($r = +.29$); good judgment ($r = +.27$); leadership ($r = +.26$). "These coefficients are not large, but they do show a moderate clustering of qualities suggestive of interpersonal sensitivity" (Gough, 1968, pp. 5 and 6).

With regard to social insight and leadership, one of the highest median correlations on a sample of 86 military subjects was with the "How Supervise Test" (File and Remmers, 1948), with an $r = +.40$. This test includes, in addition to leadership content, content related to social insight, similar to that of the CSI, which may explain the

higher correlation. These leadership and social insight characteristics are of the type that would characterize successful management of interpersonal relations in a power position similar to that of the department head.

Other characteristics associated with the CSI were found in a sample of 66 undergraduate students who were interviewed and observed in various contexts by a panel of three psychologists. After the sessions the three psychologists completed a 50-item Q sort of descriptive items for each of the 66 subjects. Three independent lists were then combined to provide a modal description of each subject.

Next, the interview and behavioral observation scores of the 66 students were correlated with each of the 50 items in the Q sort providing data relevant to the question, How might individuals who score higher or lower on the CSI be described? The 50 correlations ranged from $+.43$ to $-.45$, with a positive correlation meaning that the item statement was assigned more often to those scoring high on the CSI; a negative correlation meant that the statement was used to describe more frequently those with lower scores.

The two descriptions having the highest positive correlations with the CSI were: "Is an effective leader; able to elicit the response and cooperation of others" and "Is a good listener, draws other people out; has a knack for getting others to 'be themselves'" (Gough, 1968, p.9). Another

highly correlated item was "quick to respond to the nuances of others' behavior" (p. 9).

Taking into consideration the items with the largest negative correlations, a description can be formed of the subject scoring low on the CSI. The three items with the largest negative correlations were: "Deliberate and methodical in behavior; inflexible and stubborn in attitude;" and "Dull, lacking in ability and understanding" (Gough, 1968, p.9).

The instrument seems to discriminate successfully between those subjects who are able to analyze others' behaviors and then act in accord with that information to enlist others' cooperation and lead them in an intended direction. It is this type of insight that would allow a department head to influence others, and by doing so acquire power in the eyes of faculty members. This would be an appropriate leader behavior mode for an intended agent of change so that one would expect a high CSI score to relate positively to the faculty attributed power measures used in the present study.

Reliability of the CSI

Item-total score correlations have been computed for samples of 494 males and 215 females, with median coefficients of +.30 for men and +.28 for women (Gough, 1968, p.

10) .

In the present study on a sample of 37 department heads, item - total score correlations on the 25 item test gave a median coefficient of +.39.

Scoring of CSI

The scoring of the CSI is, as previously mentioned, based on a weighted scale of +1 to +3 for items with the least to the most discriminating power (Gough, 1968, p. 5). Items 13, 18, 23, 24, 25 are assigned +3; Items 7, 9, 11, 17, 20, and 21 are assigned +2; and the remaining 14 items are assigned +1 (Gough, 1968, p. 5). The test is separate from the answer sheet, and as there is no mechanized scoring device, it must be scored manually.

Development of the Job Item Instrument

A study by Hill and French (1967) of the perceptions of department head power by professors examined one dimension of college administration-- administrative power and how it relates to the performance and satisfaction of the faculty. One concern was the development of an instrument for measuring the power of department heads as perceived by professors, along with other instruments for measuring satisfaction and productivity. To assure adequate testing of their hypotheses, they required data from a large number of pro-

fessors from a variety of disciplines to make any bias introduced by association with particular disciplines negligible, and from a large number of departments to test, adequately, the premise that power varies among department heads. The researchers decided to use mailed questionnaires for data collection and obtained a sample of 375 professors from five state colleges in two western states.

The questionnaire developed included 74 items organized into six sections. One section was concerned with the respondent's perceptions of the power of the department head; the others were concerned with the respondent's satisfaction, the professional output, the estimate of the productivity of the department in comparison to other departments, the relative influence of various groups in the college and general information about the respondent.

For purposes of their study, it was necessary to devise a method for measuring the power of department heads. Both the authority associated with the role of the department head and the personality influence of the incumbent were of interest. The definition of power used to develop the operational measures was "The power of an individual in a social situation consists of the sanctions others in the situation perceive that he has available to employ in ways that will affect them" (Hill and French, 1967, p. 552).

This definition appeared comprehensive enough to in-

clude both authority and influence, and also permitted the measurement of power in terms of perceptions of sanctions. Sanctions are the power instruments, the resources, the means of control, the inducements that a person may have available to influence the behavior of others. It was assumed that department heads have some sanctions due to their position in the organization, and that they are able to acquire others because of their personalities and behavioral approaches in carrying out their roles.

In the development of the instrument, a list was made of sanctions that department heads might have available to influence the professors in their departments. Thirty-one items were finally included in the instrument after a series of interviews with state college professors in which they were asked to name the sanctions they thought their department heads had available. A five-point modified Likert-type scale with categories varying from "To little or no degree" to "To a very great degree" was then constructed. An index of the power of the department head attributed to him by each professor could then be computed by using the method of summed ratings. Scale categories were numbered from zero to four, and the sum of scores of each respondent to the 31 items represented the department head's power in the eyes of the professor.

This same instrument was used in the present study,

modified for purposes of the specific research problem in the following way. The nine interpersonal power items, which were indiscriminately listed with the other 22 department head role power items in the Available Power Instrument were separated to form two distinctly identifiable subscales with separate instructions for each. As the hypotheses in the current study propose that variations in power attributed department heads by faculty may relate to the former's social insight and manipulative strategies (Machiavellianism), it seemed prudent to clearly separate the items on the role and personal power dimensions for faculty consideration (Appendix A). This revised form of the Available Power Instrument was called the Job Item Instrument (JII) for purposes of this study.

The first 22 items of the JII relate to the "givens" or role powers assumed to be available to all department heads in the same institution, with variations depending on their personal role interpretations. Obviously, variations could occur as individuals did or did not exercise these powers, or varied in performance of them. If performance did vary, the observed differences would be attributable not to organizational position, but personal variables.

The second dimension clearly distinguished the aspect of personal leadership as opposed to formal role requirements, for the nine items listed constituted ancillary areas

of influence available to department heads partially due to their organizational position, but chiefly due to their own initiative and interpersonal skills.

Demographic data requested on the last page of the JII were: years in current department, total years of teaching experience in higher education, current academic rank, tenure status, age, and administrative experience in higher education (Appendix A).

Scoring

For analyses of the faculty data related to the hypotheses of the study a principal components analysis with varimax rotation was performed on the JII, and seven factors were derived called the Attributed Power Subscales (APS). Raw score means of the items in the seven subscales for each faculty member were used as measures of the perceived power of department heads. The scores were based on a scale range of zero to four.

Principal Components Analysis of JII

For more meaningful use of the JII data, a principal components analysis with a varimax rotation of the JII was done and seven major factors, called the Attributed Power Subscales (APS), were obtained. Correlations were based on individual faculty members' raw mean scores, and the crite-

tion for retention of a factor was an eigenvalue of greater than one. The seven subscales accounted for 68.9 percent of the total variance of the JII. The item content for each subscale was chosen by selecting those items loading the highest on a particular factor after a varimax rotation (Appendix B).

The range of items per subscale was from two items (APS 3: Faculty Career Status and APS 6: Extra Compensation) to seven items (APS 1: Personal Leadership). The APS titles and their respective items have been given in the Definition of Terms section earlier in this chapter.

Reliability of the Seven Attributed Power Scales

The internal consistency of the seven APS for this sample of 276 university professors was tested using split-forms reliability coefficients (Table 2). The instrument appeared adequate in view of the size of the coefficients.

TABLE 2

Split Forms Reliability Coefficients for the Seven
Attributed Power Scales of the JII

Factor Title	Number of Items	Split Forms Coefficient
1. Personal Leadership	7	.7374
2. Teaching & Curriculum Logistics	6	.6871
3. Faculty Career Status	2	.9088
4. Control of Extra Curricular Resources	5	.7320
5. Research Resources	5	.6696
6. Extra Compensation	2	.5722
7. Committee Shared Concerns	4	.3962
TOTAL	31	

DATA GATHERING PROCEDURES

The faculty instrument (JII) was sent by mail to all faculty selected by the sampling procedure described earlier. Enclosed with the forms was a pre-stamped envelope addressed to the researcher. All JII forms were mailed to faculty at their homes for confidentiality while department head forms were sent to their offices and returned via the campus mail. Within one month there were 211 faculty returns (60%: 211/353) and 37 department head returns (84%: 37/44). A follow-up form was sent out to the remaining faculty, and the remaining department heads were contacted by phone. Of the 142 faculty forms sent the second time, sixty-five were returned completed, and 59 were returned with reasons for non-participation written on the form itself or in a separate letter. Nearly all of these subjects expressed concern for their anonymity, and others felt the nature of the instrument was inadequate as an "evaluation" of the department head. Eleven faculty forms were returned because of incorrect address, with no forwarding address available. The remaining seven were non-returns, and due to the nature of the other refusals, no further attempt was made to contact the seven. The final faculty data base was 276.

The researcher received nine anonymous phone calls at home from faculty who expressed concern for the true identity of the researcher and the purpose of the study. The nine

agreed by phone to participate after being given a more detailed explanation of the nature of the study and its strictly academic intent. The study was initiated at precisely the time when the university's higher administrative officers were evaluating department heads, who in turn were evaluating faculty for promotion and tenure. This was, in one sense, an unfortunate coincidence, but on the other hand, perhaps the circumstances generated the high faculty rate of return.

STATISTICAL PROCEDURES

Traditionally, in most leader-subordinate studies, the group mean is used as the subordinate's measure of leader behavior. The underlying assumption for the use of the group mean of the subordinates is that superior-subordinate behavior is homogeneous; i.e., the leader treats all subordinates in the same way. It is assumed that all possible random samples of individuals within groups will be the same; i.e., there will be no individual variance beyond that of measurement error. Furthermore, individual perceptual differences, are assumed to be negligible given the homogeneity of leader behavior in normal circumstances (e.g. a teacher evaluation by a single class). In these situations, a group mean is used to reflect a particular leader's behavior.

According to the above, the use of a group mean in a

leadership study is appropriate only when the leader behavior is viewed as homogeneous with regard to all subordinates (Dansereau and Dumas, 1977). When a leader is involved in face-to face interpersonal dealings with specific subordinates, variability among perceivers is an important consideration. Given the nature of human individual differences and the organizational constraints on the department head role, leader behavior would most probably vary in accord with the idiosyncracies of the particular leader-subordinate interaction dynamics. Therefore, all statistical analyses were carried out using the mean scores for each individual faculty member on the seven APS of the JII as the unit of measure of perceived leader behavior (N= 276) correlated with the respective department head scores on the Mach V and CSI.

Analytic Procedures for Hypotheses

Using the Statistical Analysis Systems (SAS) computer programming package, Pearson correlation coefficients were computed for the faculty scores of the seven attributed power subscales with the department head's scores on each of the three Mach V scales (Total Mach V, Tactics, Views of Life) for the first hypothesis, and with the department head's scores on the CSI for the second hypothesis. For the empirical statement, two types of multiple regression equations

were computed. The first equation involved the prediction of the specific APS measure from the variables of Mach V and CSI. The second equation involved an interaction variable of Mach V X CSI in addition to the individual variables of Mach V and CSI. An F test of the difference between the R-Squares of these two equations was conducted to test whether the inclusion of the multiplicative term significantly increased the prediction of the attributed power measure. To further illustrate the exact nature of the interaction, a Surface II Graphics system program (Sampson, 1978) was used to display the contour configuration of the interaction term. Surface II is primarily designed for creating subsurface structural contour maps of geological data but also features designs to allow the investigation of basic problems of spatial variability.

The system will, in general, display the graphical form of any variable characterized by values "located" in coordinates defined by two other variables. For example, the geographic coordinates of the points on the earth's surface at particular elevations constitute two variables, X and Y; and the height of the ground above sea level at each point constitutes a third variable, Z. Surface II can produce diagrams that show the continuous form of the ground in the area containing the control points. The only inherent restrictions are that the coordinate variables must be orthogonal, and the mapped variable must be single valued.*

In the case of the present study, the coordinates are Ma-

* VPI&SU Computer Center Miniguide 73, p.1.

chiavellianism and social insight of department heads (X and Y) and the attributed power scores of faculty, the elevation or height (Z).

Analytic Procedures for Demographic Data

Analyses of the demographic data were reported in the Population and Sample section of this chapter. Results and discussion of the analyses mentioned above are presented in the following chapter.

Chapter III

RESULTS

This chapter contains the results and discussion of data collected from 37 department heads and 276 faculty members of a large, land-grant university in the southeastern United States. Three major statements were examined dealing with the relationship of department heads' Machiavellianism and social insight to the role and personal power attributed them by their respective faculty members. Operational measures of the variables of interest were defined as follows: for Machiavellianism, the Total Mach V test and its subscales of Tactics and Views; for social insight, the CSI; and for the role and personal power attributed department heads by faculty, the APS--seven factor-analyzed subscales of the JII. The results are presented in the order in which the hypotheses were discussed in the hypothesis section of Chapter 2. Each proposition will be restated followed by the appropriate statistical analyses. Means and standard deviations of all variables are presented in Table 3.

TABLE 3

Means and Standard Deviations of Machiavellianism, Social Insight, and Attributed Power Scales

Variable	n ^a	Mean	Standard Deviation
Total Mach V	36	98.94	6.96
Mach Views	36	75.39	3.58
Mach Tactics	36	75.42	5.55
Social Insight	37	26.05	4.67
Attributed Power Subscales			
1. Personal Leadership	275	2.30	.93
2. Teaching and Curriculum Logistics	276	2.31	.83
3. Faculty Career Status	276	2.72	1.09
4. Control of Extracurricular Resources	276	1.28	.84
5. Research Resources	276	2.43	.87
6. Extra Compensation	276	1.56	1.17
7. Committee Shared Concerns	276	2.70	.72

a variations in n due to missing data

MACHIAVELLIANISM AND ATTRIBUTED POWER BY FACULTY TO DEPARTMENT HEADS

Hypothesis 1. The greater the department head's Machiavellianism, the greater the power attributed him/her by faculty.

To this end, the correlations between each of the three measures of Machiavellianism and the seven attributed power measures were examined using a one-tailed test for level of significance with alpha equal to .05.

Table 4 contains the correlations between the three Mach measures and the seven attributed power measures. From the table, it is clear that the Total Mach scale shows a significant positive relationship to the APS measures of: Teaching and Curriculum Logistics ($r = +.13, p < .05$); Faculty Career Status ($r = +.12, p < .05$); Research Resources ($r = +.12, p < .05$); and Committee Shared Concerns ($r = +.18, p < .05$).

Observation of Table 4 also reveals that the Mach V measure Views of Life showed a significant positive relationship to the APS measures of: Faculty Career Status ($r = +.15, p < .05$), and Committee Shared Concerns ($r = +.12, p < .05$).

It may be seen, too, that the Mach Tactics scale showed a significant positive relationship with the APS measures of: Teaching and Curriculum Logistics ($r = +.14, p < .05$),

TABLE 4

Correlation Coefficients for Attributed Power Scales and Machiavellianism and Social Insight

Variables	n ^a	Total Mach	Mach Views	Mach Tactics	Social Insight
Attributed Power Scales					
1. Personal Leadership	275	.05	.00	.04	.00
2. Teaching & Curriculum Logistics	276	.13*	.03	.14*	.14*
3. Faculty Career Status	276	.12*	.15*	.05	-.09
4. Control of Extracurricular Resources	275	-.05	-.17	.04	-.06
5. Research Resources	276	.12*	.00	.14*	.04
6. Extra Compensation	276	.00	-.12	.08	-.05
7. Committee Shared Concerns	276	.18*	.12*	.17*	.04
Mach V Scales					
Mach Views	36	.55*			
Mach Tactics	36	.80*	-.02		
Social Insight	37	-.05	.09	-.05	

a variations in n due to missing data

* $p < .05$; one tailed test

Research Resources ($r = +.14$, $p < .05$), and Committee Shared Concerns ($r = +.17$, $p < .05$).

SOCIAL INSIGHT AND ATTRIBUTED POWER BY FACULTY TO DEPARTMENT HEADS

Hypothesis 2. The greater the department head's social insight, the greater the power attributed him/her by faculty.

To test this hypothesis, the CSI scores were correlated with the seven APS using a one tailed test for level of significance with alpha equal to .05. From Table 4, it is clear that the only significant finding was a positive relationship between the CSI scale and the APS measure of Teaching and Curriculum Logistics ($r = +.14$, $p < .05$).

MACHIAVELLIANISM, SOCIAL INSIGHT, AND ATTRIBUTED POWER BY FACULTY TO DEPARTMENT HEADS

Empirical Proposition. The addition to a multiple regression equation of the term for the interaction of the specific Machiavellian variable with the social insight variable may increase the prediction of each of the APS measures.

Total Mach X CSI

Table 5 contains the summary of F values for R-Square increases for the APS measures resulting from the inclusion of the interaction term Machiavellianism and social insight in the regression equation. Examination of the table reveals that the addition of the Total Mach X CSI interaction term contributed significantly to the increase in prediction of the scores on the APS measures of Personal Leadership, ($F = 7.885, p < .05$), Control of Extracurricular Resources ($F = 8.404, p < .05$), and Committee Shared Concerns ($F = 5.119, p < .05$).

The nature of the significant interaction term for the Personal Leadership measure is shown in the contour surface plot of Figure 1. It reveals that at high levels of Total Mach, faculty perceived the department heads who had high social insight scores to have greater personal leadership power than the department heads who had low social insight scores. At low levels of Total Mach, however, faculty perceived the department heads who had low social insight scores to have greater personal leadership power than the department heads who had high social insight scores. The APS measures of Control of Extracurricular Resources, and Committee Shared Concerns showed this same relationship (Figures 2 and 3).

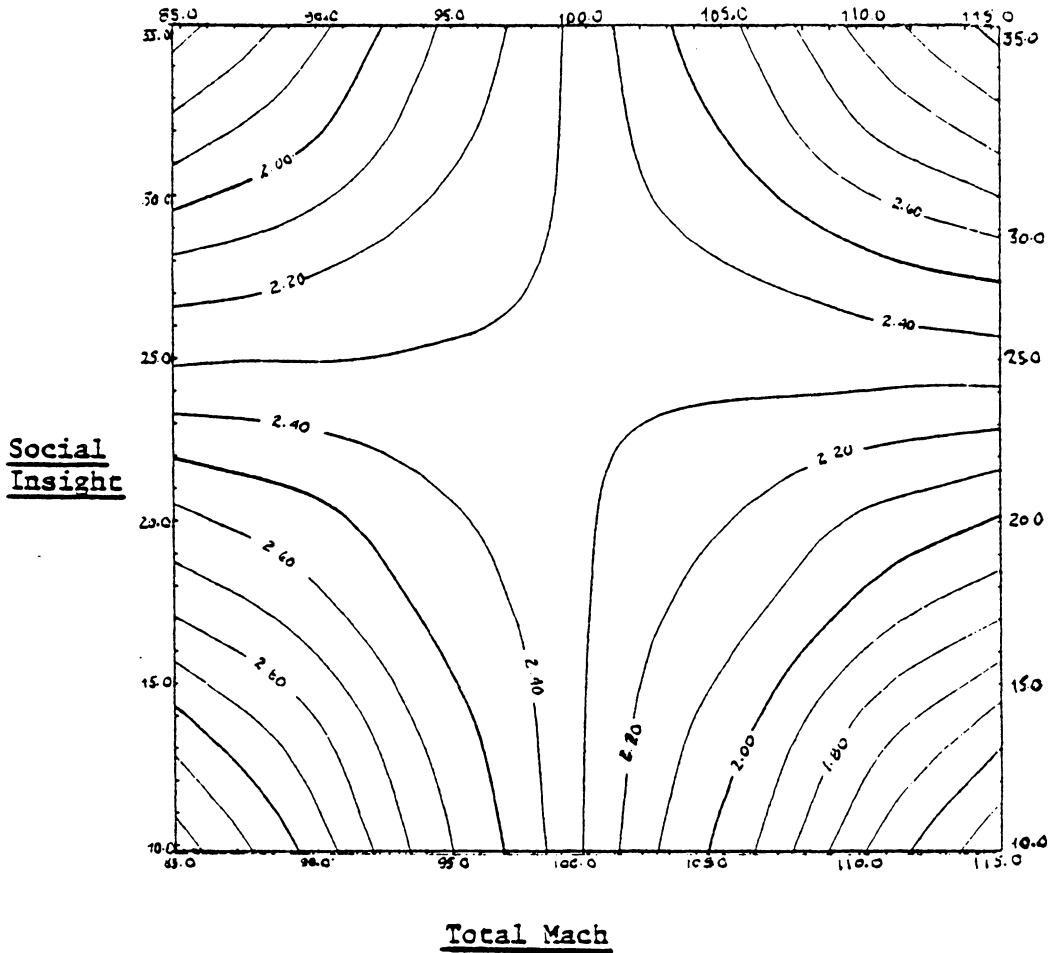
TABLE 5

R-Square Increases and F Values for APS Using the Mach and
CSI Interaction Term in the Regression Function

Faculty APS	<u>Total Mach X CSI</u>		<u>Mach Views X CSI</u>		<u>Mach Tactics X CSI</u>	
	<u>F Ratio</u>	<u>R² Increase</u>	<u>F Ratio</u>	<u>R² Increase</u>	<u>F Ratio</u>	<u>R² Increase</u>
1. Personal Leadership	7.885*	.0285	3.118	.0115	5.395*	.0197
2. Teaching and Curriculum Logistics	3.504	.0123	8.801*	.0309	.000	.0000
3. Faculty Career Status	.109	.0004	6.369*	.0226	.702	.0026
4. Control of Extracurricu- lar Resources	8.404*	.0302	7.562*	.0226	3.599	.0132
5. Research Resources	.000	.0000	.756	.0028	.027	.0001
6. Extra Compensation	.375	.0014	.000	.0000	1.002	.0037
7. Committee Shared Con- cerns	5.119*	.0181	2.381	.0087	5.068*	.0180

a df (1, 268)

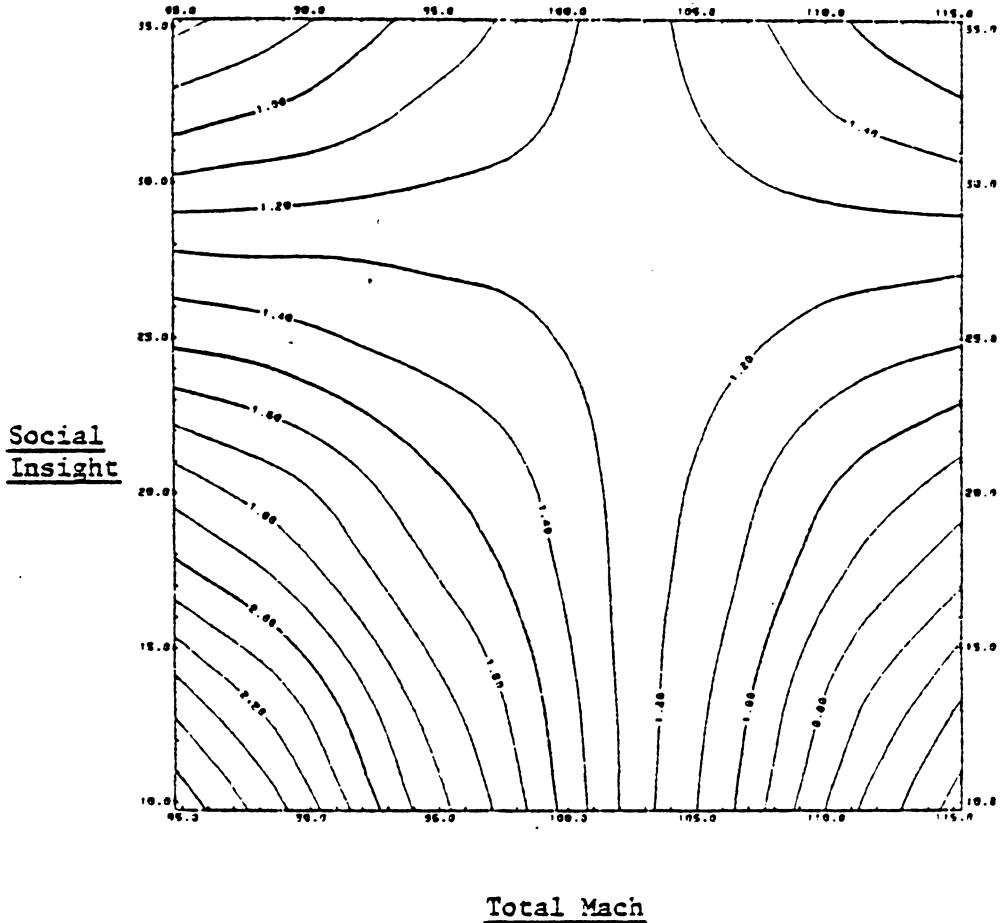
* p .05, one tailed test



$$\hat{Y} = 13.353564 + (\text{Mach}) -0.110930 + (\text{CSI}) -0.447992 + (\text{Mach} \& \text{CSI}) 0.00450409$$

$$\hat{Y} = 1.505985 + (\text{Mach}) 0.008490826 + (\text{CSI}) 0.002741978$$

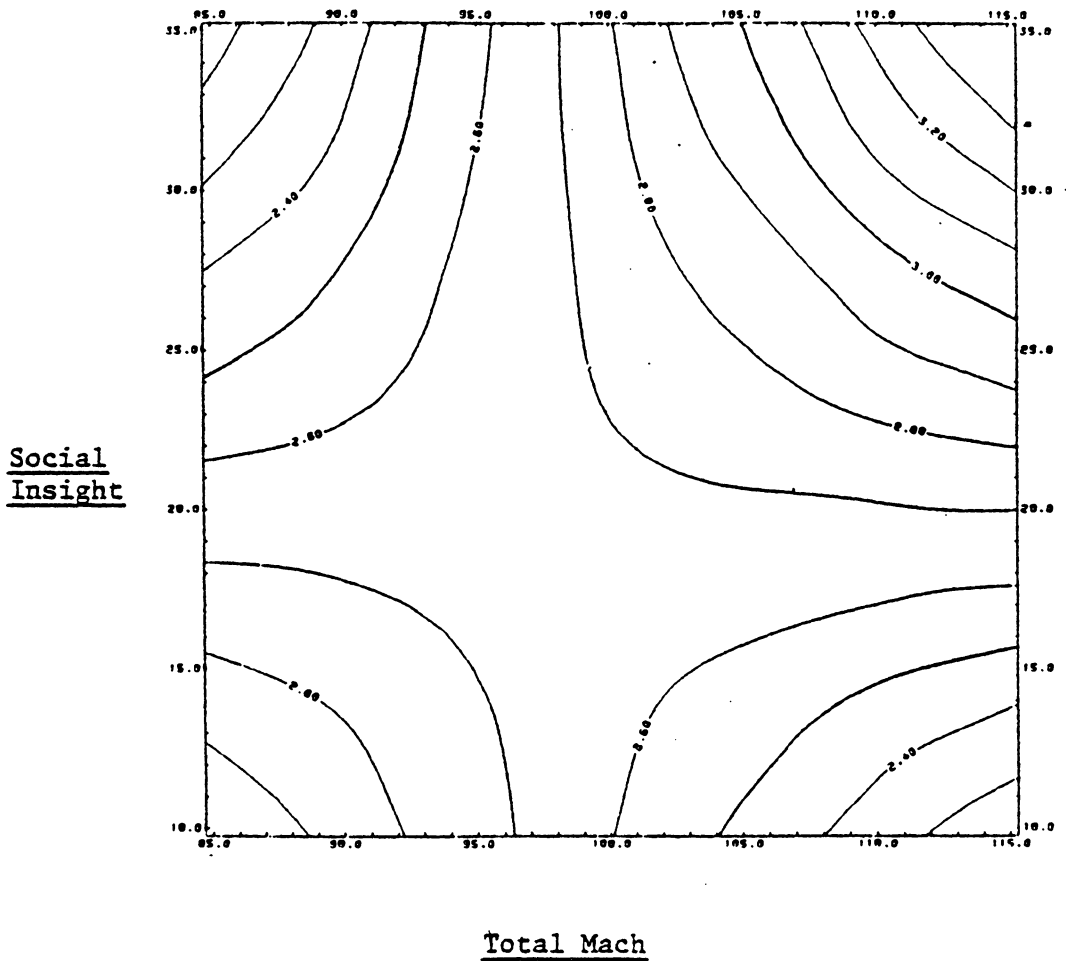
Figure 1: Contour Surface Plot of Regression of Total Mach and Social Insight for APS 1, Personal Leadership



$$\hat{Y} = 13.264461 + (\text{Mach}) -0.116874 + (\text{CSI}) -0.426844 + (\text{Mach} \times \text{CSI}) 0.00415161$$

$$\hat{Y} = 2.332242 + (\text{Mach}) -0.00768381 + (\text{CSI}) -0.010933$$

Figure 2: Contour Surface Plot of Regression of Total Mach and Social Insight for APS 4, Control of Extracurricular Resources



$$\hat{Y} = 7.370333 + (\text{Mach}) -0.052417 - (\text{CSI}) -0.259873 + (\text{Mach} \times \text{CSI}) 0.002773585$$

$$\hat{Z} = 0.574656 + (\text{Mach}) 0.019491 - (\text{CSI}) 0.007685023$$

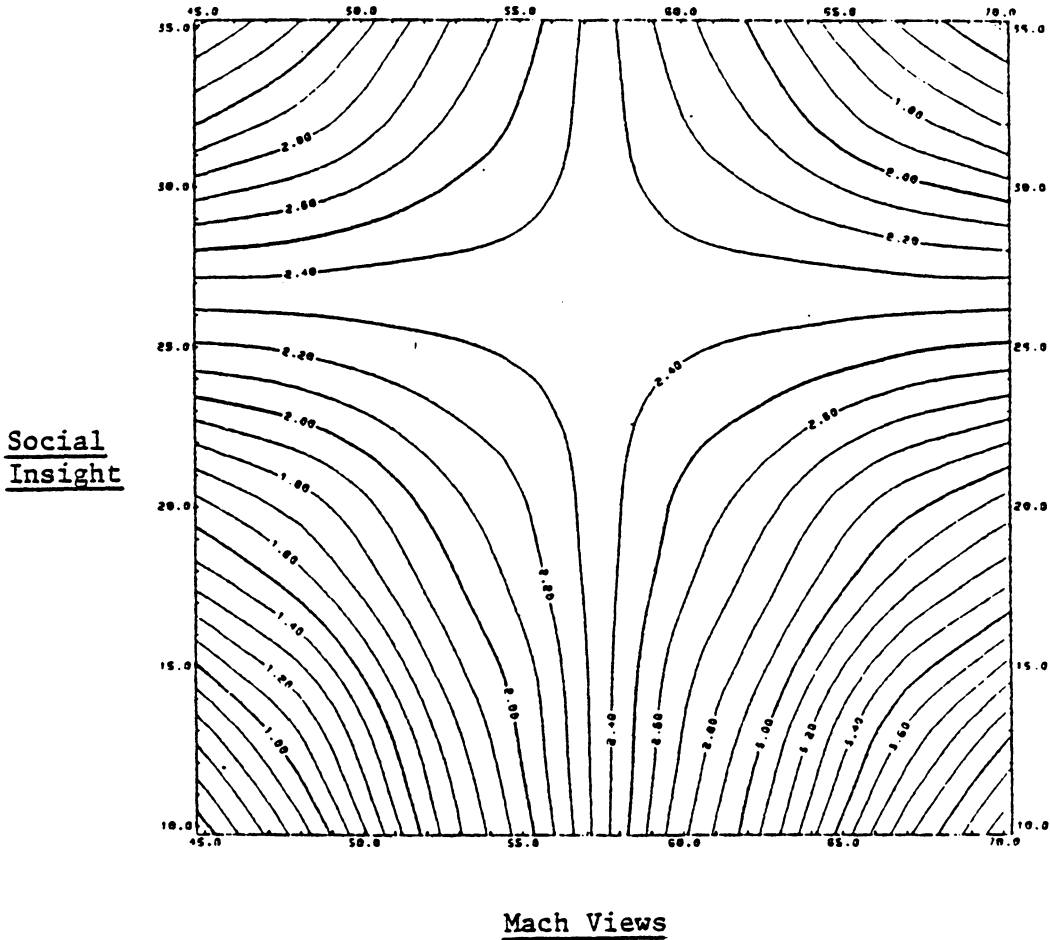
Figure 3: Contour Surface Plot of Regression of Total Mach and Social Insight for APS 7, Committee Shared Concerns

Mach Views X CSI

The addition of the Mach Views X CSI interaction term contributed significantly to the prediction of the scores on the APS measures of Teaching and Curriculum Logistics ($F = 8.801, p < .05$), Faculty Career Status ($F = 6.369, p < .05$), and Control of Extracurricular Resources ($F = 7.562, p < .05$).

The nature of the interaction for the APS measures of Teaching and Curriculum Logistics is shown in Figure 4. At high levels of Mach Views, faculty perceived department heads who had low social insight scores to have greater teaching and curriculum logistics power than the department heads who had high scores. At low levels of Mach Views, the faculty perceived the department heads who had high social insight as having more power than the department heads who had low social insight scores.

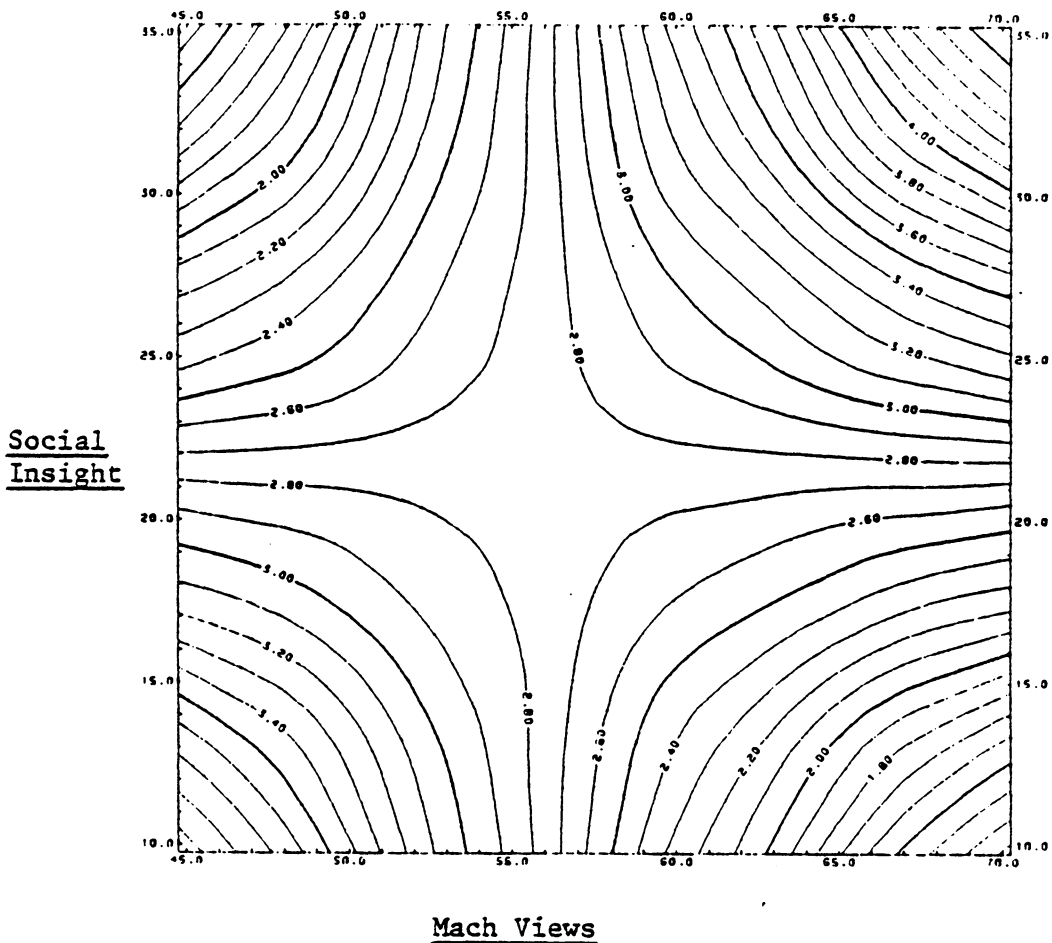
Figures 5 and 6 show the nature of the Mach Views X CSI interaction for the APS measures of Faculty Career Status and Control of Extracurricular Resources. Both of these interactions revealed that at high levels of Mach Views, faculty perceived the department heads who had high social insight scores to have greater power than the department heads who had low social insight scores. Conversely, at low levels of Mach Views, faculty perceived the department heads who had low social insight scores as having greater power



$$\hat{Y} = 14.616878 + (\text{Mach Views}) - 0.255668 + (\text{CSI}) - 0.456264 + (\text{Mach Views} \times \text{CSI}) 0.005290203$$

$$\hat{Y} = 1.136265 + (\text{Mach Views}) 0.045871 + (\text{CSI}) 0.033196$$

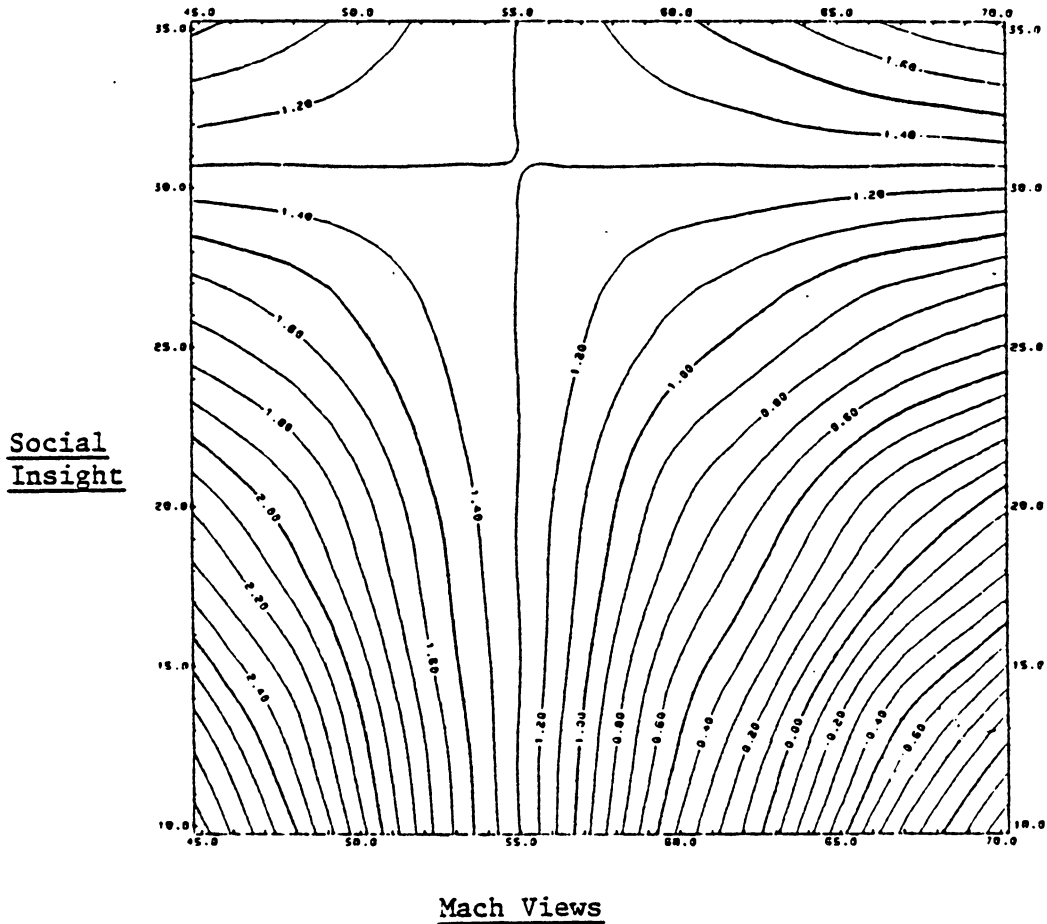
Figure 4: Contour Surface Plot of Regression of Mach Views and Social Insight for APS 2, Teaching and Curriculum Logistics



$$\hat{Y} = -12.084380 + (\text{Mach Views}) 0.231494 + (\text{CSI}) 0.342281 + (\text{Mach Views} \times \text{CSI}) 0.009926932$$

$$\hat{Y} = 0.707639 + (\text{Mach Views}) 0.043871 + (\text{CSI}) -0.019162$$

Figure 5: Contour Surface Plot of Regression of Mach Views and Social Insight for APS 3, Faculty Career Status



$$\hat{Y} = 15.3923412 + (\text{Mach Views}) -0.255648 + (\text{CSI}) -0.434264 + (\text{Mach Views} \& \text{CSI}) 0.008290203$$

$$\hat{Z} = 3.673791 + (\text{Mach Views}) -0.039613 + (\text{CSI}) -0.00750711$$

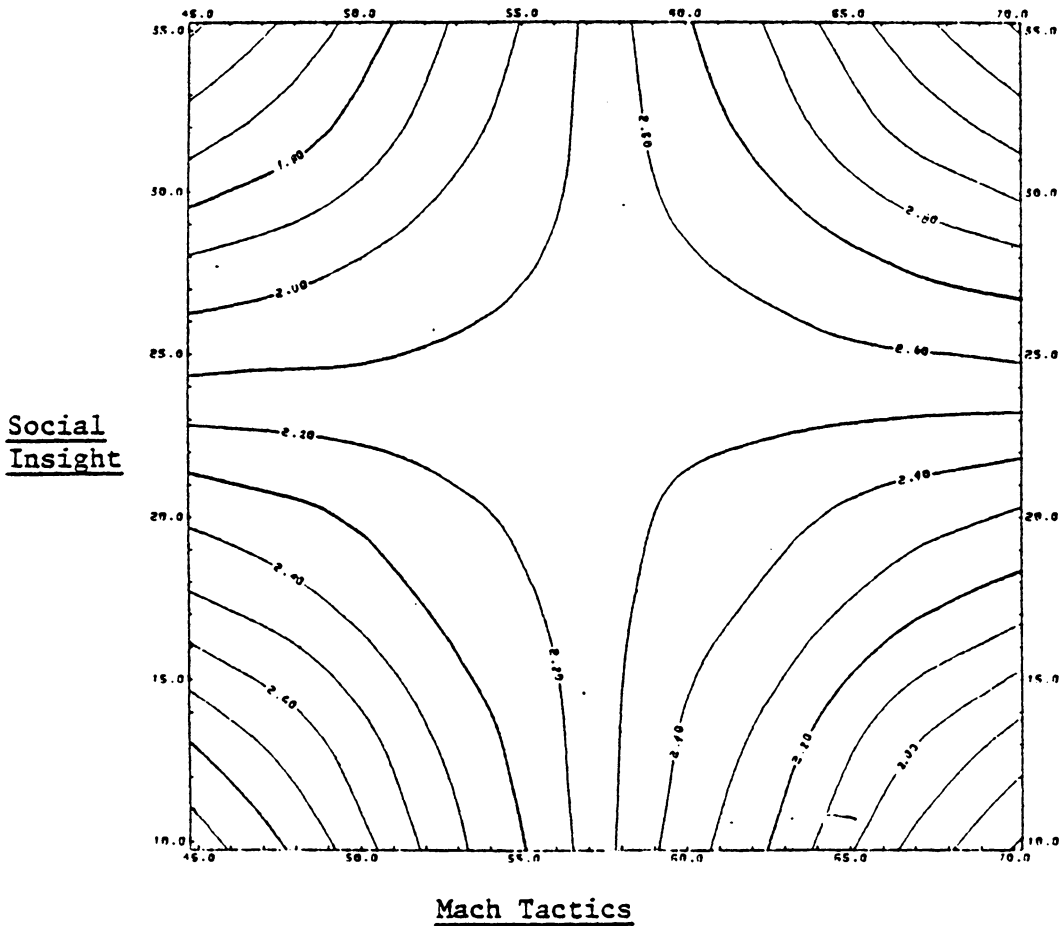
Figure 6: Contour Surface Plot of Regression of Mach Views and Social Insight for APS 4, Control of Extracurricular Resources

than the department heads who had high social insight scores.

Mach Tactics X CSI

Table 5 reveals that the Mach Tactics X CSI interaction term contributed significantly to the increase in prediction for the APS measures of Personal Leadership ($F = 5.395, p < .05$), and Committee shared Concerns ($F = 5.068, p < .05$).

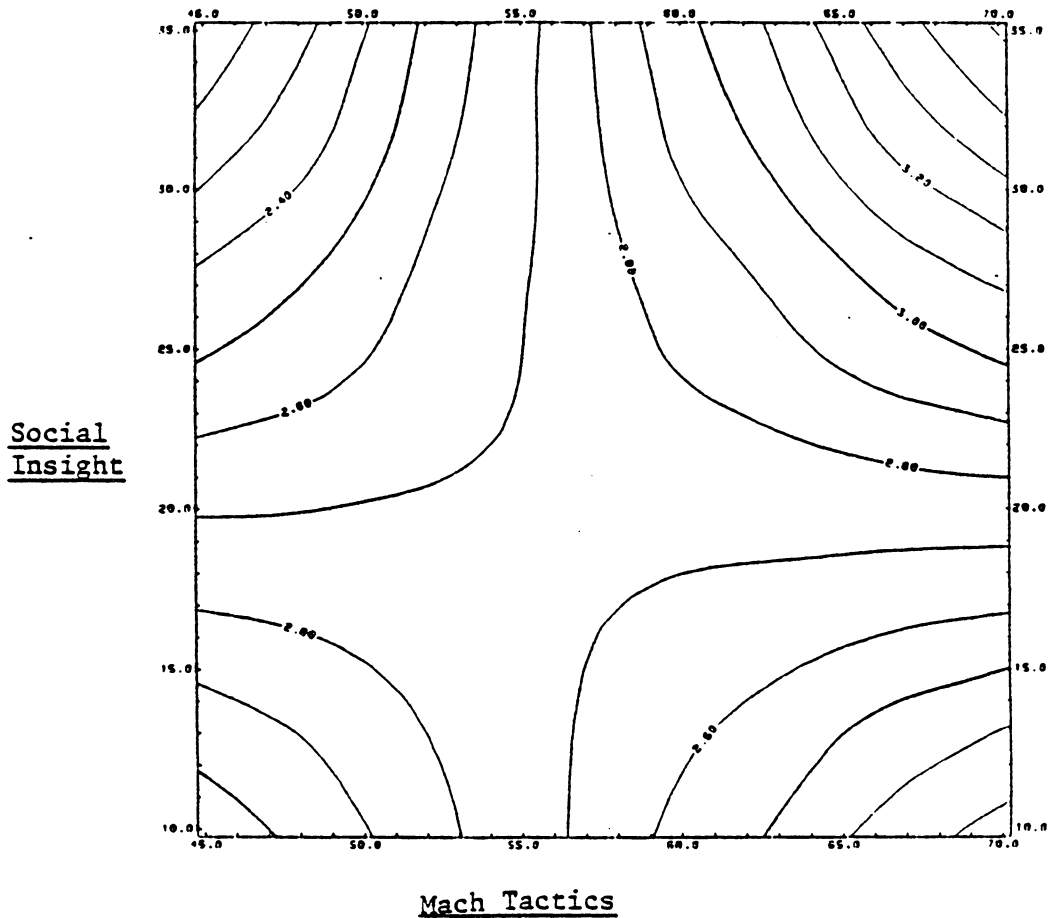
The nature of the interaction for both APS scores is shown in Figures 7 and 8. For both of these measures, it was found that at high levels of Mach Tactics, faculty perceived the department heads who had high social insight scores as having greater power than the department heads who had low social insight scores. At low levels of Mach Tactics, however, faculty perceived the department heads who had low social insight scores as having more power than the department heads who had high social insight scores.



$$\hat{Y} = 9.062143 + (\text{Mach Tactics}) -0.117353 + (\text{CSI}) -0.291023 + (\text{Mach Tactics} \times \text{CSI}) 0.004903716$$

$$\hat{Y} = 1.868078 + (\text{Mach Tactics}) 3.006785557 + (\text{CSI}) 0.002620815$$

Figure 7: Contour Surface Plot of Regression of Mach Tactics and Social Insight for A9S 1, Personal Leadership



$$\hat{Y} = 6.583739 + (\text{Mach Tactics}) - 0.0694461 + (\text{CST}) - 0.201785 + (\text{Mach Tactics} \times \text{CST}) 0.003621214$$

$$\hat{Y} = 1.274187 + (\text{Mach Tactics}) 0.022232 + (\text{CST}) 0.00767306$$

Figure 8: Contour Surface Plot of Regression of Mach Tactics and Social Insight for APS 7, Committee Shared Concerns

Chapter IV

SPECULATIVE EXPLANATIONS FOR FINDINGS

This chapter includes a discussion of the findings presented in the previous chapter. Each hypothesis or proposition is restated and examined in view of the findings in the order presented in Table 6.

MACHIAVELLIANISM AND THE APS

Hypothesis 1. The greater a department head's Machiavellianism, the greater the power attributed him/her by his faculty.

This hypothesis was supported in part by (a) the significant relationships between Total Mach and the APS measures of Teaching and Curriculum Logistics, Faculty Career Status, Research Resources, and Committee Shared Concerns, (b) the significant relationships between Mach Views and the APS measures of Faculty Career Status and Committee Shared Concerns, and (c) the significant relationships between Mach Tactics and the APS measures of Teaching & Curriculum Logistics, Research Resources, and Committee Shared Concerns (Table 6).

The APS measures of Teaching and Curriculum Logistics, Research Resources and Committee Shared Concerns reflect the types of control that a Machiavellian leader could use to

TABLE 6

Summary of Findings for Hypotheses and Empirical Proposition

		Faculty Attributed Power Scales						
Statement	Department Head Variables	1. Personal Leadership	2. Teaching & Curriculum Logistics	3. Faculty Career Status	4. Control of Extra-Curricular Resources	5. Research Resources	6. Extra Compensation	7. Committee Shared Concerns
Hypothesis 1								
The greater the department heads' Machiavellianism, the greater the power attributed them by faculty.	Total Mach	n.s.	*	*	n.s.	*	n.s.	*
	Mach Views	n.s.	n.s.	*	n.s.	n.s.	n.s.	*
	Mach Tactics	n.s.	*	n.s.	n.s.	*	n.s.	*
Hypothesis 2								
The greater the department heads' social insight, the greater the power attributed them by faculty.	CSI	n.s.	*	n.s.	n.s.	n.s.	n.s.	n.s.
Empirical Proposition								
The addition to a multiple regression equation of the interaction of the specific Machiavellian variable with the social insight variable may increase the prediction of each of the APS measures.	Total Mach	*	n.s.	n.s.	*	n.s.	*	*
	X CSI							
	Mach Views	n.s.	*	*	*	n.s.	n.s.	*
	X CSI							
	Mach Tactics	*	n.s.	n.s.	n.s.	n.s.	*	*
	X CSI							

p < .05, one tailed test

affect the career obligations and opportunities of faculty members.⁵ The work areas involved in these APS measures lend themselves to leader subordinate situations of face-to-face interaction where the use of persuasive or manipulative power maneuvers may be particularly effective.

The APS Teaching and Curriculum Logistics items, for example, permit the department head control of vital aspects of faculty growth and development by management of such activities as determining time and days of class meetings; controlling courses (field level, number of preparations) instructors are assigned; influencing curriculum development; controlling assignment of summer teaching opportunities; deciding class contact hours for professors; and securing clerical assistance for faculty.

Another area, vital to career growth is that of research. In times of "publish or perish--research or resign" in academe, the APS Research Resources content is paramount to individual faculty members. It includes controlling amount of student help supplied to professors, securing equipment and supplies, securing research time and facili-

⁵ As the findings for the Total Mach with the APS measures Teaching & Curriculum Logistics, Research Resources and Committee Shared Concerns are the same as for those of Mach Tactics, the discussion for these measures is applied without exception to both Machiavellian variables. Comment on lack of significant findings for the APS measure Faculty Career Status with Mach Tactics will be presented later in the chapter.

ties for faculty, acquiring funds for travel to professional meetings, and getting research assistants and supplies.

The third and final area concerned with power over individual faculty is the subscale Committee Shared Concerns which contains areas related to forming committees and making committee assignments, controlling step and/or merit raises, recruiting qualified faculty, and awarding of sabbatical leaves. In universities, where "committees" flourish, it is of great importance for an agent of change to have access to committees as power tools.

The APS measures for which no significant results were found for the Total Mach and Mach Tactics variables are areas in which the leader behavior for characteristics of Machiavellianism may be irrelevant. The Personal Leadership measure reflects perceived behaviors that are not used in the interpersonal bargaining tactics that a department head has for dealing with change in individual faculty members. For instance, setting the goals of the department and having the power to establish contact with higher administration, knowledge of what is going on around the college, ability to sustain liasons with other departments, ability to maintain good contacts with community, and publicity, are mainly concerned with events that are external to the faculty. These are measures of the incumbent's ability to project him or herself as a force at levels other than the day-to-day

interaction with faculty.

The same kind of reasoning may be applied to the APS measures of Control of Extracurricular Resources, and Extra Compensation. Such activities as acquiring funds for faculty research, making unpaid "community service" assignments to faculty members, assisting faculty members in developing professional acquaintanceships, counseling staff about teaching and/or research, developing a stimulating academic environment through seminars and bringing distinguished visiting lecturers to campus are examples of behaviors that may require department head interaction with faculty but whose link to the department head reward structure is much less vital and evident than, for example, that of the APS scales Teaching and Curriculum Logistics and Committee Shared-Concerns. The second measure, Extra Compensation, consists of similar elements: controlling extension teaching appointments and effecting the acquisition of paid short courses. These items, also, are less relevant to the reward system for most faculty as they constitute special or limited situations, and, consequently, are also less relevant to the use of Machiavellian skills or tactics for the change agent role as defined in this study.

A possible explanation for the differences in significant findings for the APS Faculty Career Status for Total Mach and Mach Tactics is the following. A significant posi-

tive relationship of this APS and the Total Mach may be due to agreement with the Mach Views items which reflect a high distrust in people component. (See the Mach Views discussion, pp.69-70.) This distrust in people may move department heads high on this dimension to involve themselves personally in promotion and tenure matters, due to a lack of trust or belief in the faculty's ability to do the job. Direct action by the department heads in such matters would be readily observed by faculty who would then attribute them more influence on this dimension. On the other hand, high scorers on the Mach Tactics component of the Total Mach would no doubt prefer the more subtle Machiavellian tactic of delegating such personnel decisions to committees. While they could influence such decisions by controlling the committee, their actions would be less easily observed by faculty, hence they would be attributed less influence on this particular dimension. Regarding department heads as agents of change, then, the Faculty Career Status subscale as a power tool does not seem of great importance as the literature shows that in higher educational institutes, most decisions affecting promotion and tenure are delegated to committees, at least in an advisory capacity, and while a department head may make a separate decision, these factors are not controlled exclusively by department heads.

The significant relationships between Mach Views and

Faculty career Status and Committee Shared Concerns also gave some support to the hypothesis. A tenable explanation for these findings might be that department heads who share a Machiavellian view of life are, in fact, distrustful and cynical of existing societal (and university) procedures. While such individuals are forced by organizational policy to relegate such faculty-related decisions as promotion and tenure to committees, they many times are responsible for the major composition of the committees and implementing those decisions once they are made. In many colleges within the university, the department head also has the authority to disagree with a committee and forward a personal recommendation with that of the committee on these matters. Observing this type of behavior, faculty would attribute the high Mach Views department head more power on these dimensions.

The lack of significant relationships between Mach Views and the other five APS measures warrants mentioning. Because the author was using a one-directional test, the negative relationships of Mach Views with Control of Extracurricular Resources and Extra Compensation had to be considered as nonsignificant findings. On a post hoc basis, however, these findings support the supposition that department heads who are high on Mach Views are cynical and distrustful of societal institutions and their members and are,

consequently, disinterested in activities that are necessary to foster the well-being of others in the institution.

SOCIAL INSIGHT AND APS

Hypothesis 2. The greater the department head's social insight the greater the power attributed him/her by faculty.

The only significant relationship that supported this hypothesis was between CSI and the APS measure of Teaching and Curriculum Logistics. Unlike the Mach V which deals specifically with tactics for acquiring and maintaining political power, the social insight scale reflects the ability to intellectually discern underlying causes of behavior. It does not purport to measure the ability to control the behavior of others. With regard to the particular subscale Teaching and Curriculum Logistics, it would seem logical that a department head who was sensitive to others' behavior and interested in their motivation, would also seek effective means of facilitating the needed job conditions for subordinate satisfaction and productivity. This insight might make itself more manifest in exactly the elements of which the Teaching and Curriculum Logistics measure is composed. The securing of adequate clerical help might greatly aid those faculty members interested in publishing and developing new curricula. The arranging of lighter teaching loads to allow

for research and service would also be an important power tool for influencing faculty behavior. While these activities constitute relatively routine chores in many departments, department heads who have greater insight into faculty's needs and motives may be perceived as having a greater influence in these activities.

The nonsignificant findings for the CSI measure and the other APS measures (Table 6) may be interpreted within the above framework. These APS dimensions reflect activities that do not offer the opportunity for direct observation by the faculty of behavioral manifestations of social insight as defined in this study. In the majority of departments, the communication of these activities is at the discretion of the department head, and if the socially insightful department head is willing to cede this power to faculty, then the department head would be perceived, in fact, as less powerful than faculty themselves.

MACHIAVELLIANISM, SOCIAL INSIGHT, AND APS

Empirical Proposition. The addition to a multiple regression equation of the interaction of the specific Mach variable (Total Mach, Mach Views, Mach Tactics) with the social insight variable (CSI) may significantly increase the

prediction of the scores of each of the
APS measures.

Total Mach X CSI

This proposition was supported, in part, by the finding of significant positive relationships of the interactive term Total Mach X CSI and the APS measures of Personal Leadership, Control of Extracurricular Resources, and Committee Shared Concerns.⁶ For the APS Personal Leadership scale, it was found that at high levels of Total Mach department heads who were high on CSI were perceived as more powerful by faculty than department heads low on CSI. At low levels of Total Mach, department heads low on CSI were also perceived as more powerful than department heads high on CSI. A possible explanation for these findings may be found in examination of the nature of the APS measures and the characteristics of Mach and social insight defined in the literature. Both the APS measures Personal Leadership and Control of Extracurricular Resources relate to department head activities exter-

⁶ As the findings for the interactive term Mach Tactics X CSI with the APS measures Personal Leadership and Committee Shared Concerns were the same as for those of the interactive term Total Mach X CSI, the discussion for these measures is applied without exception to both interactive variables. Comment on the lack of significant findings for the APS measure Control of Extracurricular Resources with Mach Tactics X CSI will be presented later in the chapter.

nal to the face-to-face situations of control of growth and development of individual faculty members. They reflect an ability to influence administrative activities and events in the academic community by behavioral strategies facilitating: the establishment of contacts with higher administrators, the sustaining of liaisons with other departments, the ability to exert professional leadership and stimulation, the ability to maintain good contacts with the community, and the ability to secure publicity for the institution. At high levels of Mach, these behavioral skills would be a part of a department head's potential behavioral repertoire. The motivation to do these things, however, is not guaranteed by possession of the skills. This is where high levels of CSI combined with such Mach behavioral skills would work favorably. The awareness of people's needs, sensitivities, and interests characteristic of high levels of CSI associated with supervisory and leadership skills (Gough, 1968, pp. 6 and 9), coupled with the high Mach tactical skills, offers a possible explanation for such results. This social insight scale does not, however, as mentioned earlier (p. 111), appear of major use as a power tool to department heads in the change agent role.

On the other hand, at low levels of Mach, subjects in leadership positions are observed as more empathic, person-oriented, involved with others, and much affected by contex-

tual cues (Durkin, 1970). It is possible that the personal leadership aspects of the department head role appeal to the low Mach leader. Also, while a high level of CSI denotes a rationally insightful individual, the low levels of CSI do not necessarily mean lack of insight of an empathic or sympathetic orientation. The highly intellectualized ability reflected in the CSI may reflect, in part, academic training in the behavioral sciences where such terms as transference, regression, sublimation, and rationalization, (concepts underlying the situations in the Chapin test) are taught as tools of analysis of human behavior. Those unfamiliar with the theories may have lower scores on the CSI due to a knowledge gap, rather than an actual lack of sensitivity, or due to using their kind of insight to "feel" their way through relationships rather than analyzing them as psychologists and sociologists are trained to do.

Finding that educational level and type of training correlate highly with CSI scores seems to confirm this line of thought (Horner, Reid and Okanes, 1978; Gough, 1967, p. 7). In fact, in the Horner et al. study it was found, for example, that sociology students, scored much higher than business students. In the research on CSI, at low levels, leaders are observed to be concerned with detail, less imaginative, and more rigid in their approaches to leadership. Coupling these characteristics with the low Mach character-

istics of people concern, one may infer that a combination of these characteristics in department heads might lead them to actively pursue the areas covered in this APS measure, since these areas are a matter of individual enterprise, and thus be perceived as more influential in extradepartmental areas by faculty. This type of "power," however, is again not so pertinent to the change agent role.

The APS measure Control of Extracurricular Resources has characteristics similar to the Personal Leadership measure, and, again, the same interaction effects are found. The items contained in this subscale also reflect the inclinations of the incumbent, rather than absolute requirements of the department head role. This subscale includes such things as acquiring funds for faculty research, making unpaid "community service" assignments to faculty members, ability to assist faculty members in developing professional acquaintanceships, ability to develop stimulating academic environment through seminars, bringing distinguished visiting lecturers to campus. The same rationale applies to the interaction effects for this subscale as for Personal Leadership.

The university has been described as a political leadership power arena. There are several types of leadership models to describe leadership styles. Some of these are authoritarian, laissez faire, democratic, and Machiavellian.

The success of these leadership styles depends on their contribution to the accomplishment of the organization's goals. Different leadership styles may be needed to accomplish different goals. The types of leadership styles examined in this study include low and high Mach, low and high social insight, and combinations of these. A low Mach style may be roughly compared to the authoritarian style of leadership, and a high Mach style may be considered a manipulative or political leadership mode. While the combination of low Mach, low social insight makes favorable gains in attributed power by faculty, an authoritarian style of leadership, while a legitimate power mode, is not suited to the more politically oriented change agent role (see p. 59). The Mach variable, however, at high levels by itself or in combination with high levels of social insight appears to be a more appropriate leadership style for the role of change agent.

The next significant finding is for the effect of the interaction of Total Mach X CSI on the APS measure Committee Shared Concerns. Once again, at high levels of Total Mach the department head who is high on CSI is perceived as more powerful than the department head who is low on CSI. At low levels of Total Mach the department head who is low on CSI is perceived as more powerful than the department head who is high on CSI.

It is important in this study that the power dimension of Committee Shared Concerns receive special emphasis as a key power tool for innovation by the department head in the academic organization. Baldrige (1971) has discussed the political nature of decision making in colleges and universities in Power and Conflict in the University and in his book with Tierney (Baldrige and Tierney, 1979) about the impact of Exxon's Resource Allocation Management Program (RAMP) on 49 institutions of higher education receiving grants. In the latter, he noted that in academic organizations almost all decisions are made by committees (p. 173). "Therefore, organizational politics often centers around committee politics. Having influence on a committee is frequently equal to having influence over the decision" (p.176). According to Roach (1976), many department problems deferred to committee decisions are important personnel decisions and include matters of recruitment "...academic responsibilities, promotion, tenure and salary" (p.20). The subscale for the sample in this study of 276 faculty members includes "committees" as a separate item in addition to the items salary increase, recruitment, and sabbaticals. As a power dimension, the subscale contents in this study coincide with the vital power areas stressed by Roach (1976) and by Baldrige and Tierney (1979) for a combination of areas of great influence in department decision making.

Specifically, Roach (1976) states that a department head may encounter many situations which engender conflict and confrontation. He will be called upon "to reduce emotional tension and thus enhance solutions and feelings of personal worth...to seek more imaginative solutions in which ...two sides might achieve goals or compromise" (p.21). This ability is similar to the one explored in the CSI which Chapin (1942) describes as the ability

to recognize in principle in a given situation...the need of some specific stimulus to adjust group conflicts or tensions...suggest compromise, preserve status,...discover the missing part required to complete a pattern of thought.
(p. 214)

Another characteristic of a successful department head Roach mentions is that of a rational approach to problem solving...with a clear demonstration of "an attitude of objectivity, an openness to any and all considerations, and a strong preference for hard empirical data" (p.21). This rational dimension coincides with findings about high Machs in Epstein's (1969) study, in which she concluded high Machs are more pragmatic, information-oriented, and rational in emotionally charged attitudinal situations than their low Mach counterparts. Consequently, it appears reasonable that at high levels of Total Mach department heads high on CSI would command more influence than department heads low on CSI, and hence be attributed more role and personal power by faculty. This was found to be empirically true in this

study.

While the author, up to this point, has emphasized the importance of the APS measure Committee Shared Concerns and talked of "successful" department heads and "successful" management of the content areas contained in this ASP measure, success must be defined in a specific context. A department head who is perceived as powerful on this Committee Shared Concerns measure, may be so, in fact, to the detriment of his faculty and his institution. The power addressed in this study is of the type to be used to effect change in faculty behavior towards organizationally desirable goals, and the department head high on Mach who is also high on CSI would appear fitted to that particular type of power role. However, at low levels of Mach, the department head who is low on CSI is also perceived as more influential than a department head with high CSI.

The best explanation here might be that where Mach is low and CSI is low, attribution of higher power is probably best attributed to the contingent administrative circumstances, where nothing but routine matters are occurring and status quo and smooth operational flow are the main concern. In this context, perhaps at low levels of Mach (where leaders are more people oriented and less inclined to manipulative strategies), the low CSI, which is characterized by a certain rigidity, conforming to the rules, and concern for

detail (Gough 1968, p. 9), may be the perfect combination for a department head to be perceived as more influential in substantive administrative details and supported by faculty who would feel content with the less enterprising but efficient leadership role. On the other hand, a poorer behavioral tactical skill (low Total Mach) coupled with the ability to understand the motives for others' behavior (high CSI) might lead to a department head's administrative burn-out through frustration of knowing what should be done for people but unable to do it. Observation by faculty of department head behaviors caused by such frustration may explain the lack of significant findings in this direction.

Mach Views X CSI

The next Mach and CSI interaction term to be examined is Mach Views X CSI. Supporting the empirical proposition, there are significant positive relationships between Mach views X CSI and the APS measures Teaching and Curriculum Logistics, Faculty Career Status, and Control of Extracurricular Resources (Table 6).

In the first interaction effect (Mach Views X CSI and Teaching and Curriculum Logistics), at high levels of Mach Views, a department head with low CSI is perceived as more powerful than a department head with high CSI. At low levels of Mach Views a department head with high levels of CSI

is perceived as more powerful than a department head with low CSI. In the case of the low Mach Views-- high CSI, the leader would be highly insightful with analytical social insight ability, with a people oriented, kind and tolerant view of men and life. A department head of this type would probably consider the impact of the items of the APS Teaching and Curriculum Logistics on faculty and be sensitive to their needs, becoming more involved with them on an individual basis. They would, in turn, become more conscious of this control in these areas and thus, attribute him/her greater power. As mentioned earlier, other vital career areas such as those of the APS Promotion and Tenure are seldom one-man decision variables in the institutional setting.

At high levels of Mach Views, i.e. where a department head distrusts others and views life cynically, the low CSI dimension may indicate a certain tolerance for routine and objectivity as he/she handles, in a routine way the teaching and curriculum logistics. Since a distrust of people is reflected in the high Mach Views and a low CSI is indicative of rigidity and unimaginativeness, power may stem from a more authoritative (expert or referent power) and somewhat inflexible rule. While not the type of power sought for administrative purposes in this study, it would still be recognized as control without regard for its advisability.

For the APS measure Faculty Career Status, at high lev-

els of Mach Views the department head with high CSI is perceived as more powerful than the department head with low CSI. At low levels of Mach Views, however, the department head with low CSI is perceived as more powerful than the department head with high CSI.

The two items in this scale are promotion and tenure, and decisions related to these areas are, of course, vital to the academic life system. These decisions involve great tension and anxiety and may invoke bitter reactions. Granting promotions and tenure is no problem, but denying them may be. This is, however, a one-shot type of power device as it is a yes/no decision for tenure, and only a three time possible power in an academic career life, a process which few single department heads will control for many numbers of their individual faculty members. To make power decisions of this type, comfortably, one can imagine that a certain detached attitude and distrust of one's fellowman (high Mach Views, if taken from the private individual point of view) might facilitate the process and would require a more direct exercising of that control. A detached attitude towards others certainly does not preclude a sensitivity to motives for their behavior (high CSI) and it may, in fact, sharpen such insight as a means of control over others whom one does not regard too highly. This type of department head would probably prefer the personal decision power in these matters

rather than delegating it to a committee. The preferred power mode would be observably personal and absolute and faculty would be aware of this and reflect it in their perceptions of the department head's power.

On the other hand, a department head low on Mach Views and low on CSI would no doubt, due to a rather benign view of men (low Mach Views) and concern for the people-related tasks and routine administrative affairs (low CSI) of tenure and promotion, be interested, personally, in their execution and make faculty aware of the administrative intervention. Thus, they would perceive this type of department head as more influential than the one at low levels of Mach Views with high CSI who might think such matters too weighty and delicate to handle without a committee.

The next significant finding supporting the empirical proposition is between the Mach Views X CSI interaction variable and the APS measure Extracurricular Resources. At high levels of Mach Views, a department head with high CSI is viewed as more powerful than a department head with low CSI. At low levels of Mach Views, a department head low on CSI is viewed as more powerful than a department head with high CSI.

The nature of the items in this subscale refer to securing research funds for faculty, making unpaid "community service" assignments, assisting faculty members in develop-

ing professional contacts, getting them paid consulting jobs, and bringing distinguished lecturers to campus, all of which are usually undertaken by individual faculty members themselves. The basic belief in people component of a low Mach View score and the lower CSI score with its more empathic type of insight might easily explain the attributed power score here. A truly altruistic, people-oriented, empathic versus rational department head would, no doubt, go out of the way to help faculty in these areas, but, as such, would probably do so less to control them for organizational goals than for a personal need to be appreciated and liked. Again, these are areas governed by individual enterprise and not of as much career importance to all faculty members as are some of the other power dimensions.

The other finding, however, that a department head high on Mach Views and high on CSI is viewed as more powerful than a department head low on Mach Views and low on CSI presents puzzling aspects. A high disbelief in the goodness of others, an acute understanding of people's motives for behavior, and the ability to control others' behaviors would typify this type of department head. The perplexing aspect of this finding is that the types of activities involved in this APS measure (Extracurricular Resources) would appear to require a caring for people that is atypical of the cynical distrustful view of people and life found in the Mach Views

scale. A possible explanation may be that this concern for, or sensitivity to, others tempered by the "distrust" in people component becomes a form of social sensitivity for preservation of self. Doing things for others may be used as a subtle but powerful form of control. Control over others is important if one believes that they cannot be trusted and might prompt such administrative behavior. One may control others by securing their professional debt--securing research funds outside the institution above and beyond the job, for example. While not a contradiction of the empirical findings, this is, however, surmise.

The nonsignificant findings for the other APS measures are not so surprising when recalling earlier discussion about the basic effects on behavior of Views in combination with Social Insight as not leading to more altruistic actions or loyalties, particularly towards something as abstract as the "the institution" from which no immediate benefits can be derived.

Mach Tactics X CSI

The empirical proposition was further supported by the significant positive relationships of the interactive variable Mach Tactics X CSI with the APS measures of Personal Leadership and Committee Shared Concerns. As the findings for these two scales parallel those of the Total Mach X CSI

interaction results there will be no further discussion. A brief comment is offered on the nonsignificant relationship of Mach Tactics X CSI to the APS measure Control of Extracurricular Resources, the single exception to parallel results for all Total Mach, CSI, and Mach Tactics terms.

The Mach Tactics X CSI interaction variable reflects the tactical component of the Mach Tactics scale, and relates to department head behavioral attitudes (which condition behaviors) in interpersonal bargaining (win/lose) situations taking into consideration the department head differences on social insight. The APS measure Control of Extracurricular Resources contains, as cited earlier, areas related to getting funds for research for faculty, assigning outside speaking and consulting, and bringing distinguished scholars to campus. It is a dimension of power that is irrelevant to the context of this interaction term (Mach Tactics X CSI), which relates to the specific factors of control of a reward structure by behavioral ploys, and face-to-face interaction in win/lose situations. In fact, in the case of most nonsignificant results relating to the relationship of the APS measures to the terms involving Machiavellianism, this same explanation applies.

LIMITATION OF THIS STUDY

So convenient a thing it is to be a reasonable creature, since it enables one to find or make a reason for everythig one has a mind to do.

Benjamin Franklin

Autobiography

Keeping in mind the convenience of being a reasonable creature alluded to by Franklin, the author enjoins the reader to awareness of the following limitation. While discussion has included generalizations about the nature of academe and the professoriate in this particular sample, no attempt to extrapolate beyond the parameters of the present institutional setting is intended without confirmation through further research. Also although some support was gained for the hypotheses, no fast and firm claims can be made for what is largely theoretical surmise by the author in pursuit of an explanation of the empirical findings. (Note the small amount of variance accounted for in the dependent variables by the independent variables, singly and in combination.) However, whether the magnitude of the statistical findings be convincing or not, the theoretical explanation for the trends observed remain the same.

Having ended the discussion of the findings of the study, some conclusions and recommendations for further re-

search are presented in the following and final chapter.

Chapter V

CONCLUSIONS AND RECOMMENDATIONS FOR FUTURE RESEARCH

CONCLUSIONS

In summary, there are several observations to be made about results of this study. Among them is the nature of department head power and the effect of the incumbent personality on the perception of that power by faculty. The factor analysis of the JII for this sample revealed certain power areas that appear to be close to the immediate career concerns of individual faculty members. These were Teaching and Curriculum Logistics, Committee Shared Concerns, Research Resources and Faculty Career Status. Other areas of power such as Personal Leadership, Control of Extracurricular Activities and Extra Compensation are areas in which power may be acquired by the incumbents to enhance their total power image in faculty's eyes, but they appear to have less impact on the direct control of faculty rewards and sanctions, conceived in this study as the most appropriate power tool for the administrative agent of change for faculty development.

The most important area of department head power for the change agent role is probably that of Committee Shared Concerns, as in universities most relevant career decision

making is being done increasingly by committees. Those who control committees control and shape institutional outcomes via control of behavior of institutional members. In the APS power dimensions most directly related to individual faculty career concerns, i.e., Teaching and Curriculum Logistics, Faculty Career Status, Research Resources, and Committee Shared Concerns, the department head who is high on the Total Mach dimension and high on the social insight dimension is viewed as powerful by faculty. Because this is so, it would appear that a Machiavellian orientation of leadership style as defined in this study (use of interpersonal bargaining tactics) when combined with CSI, might be an effective power mode in academe for instigating behavioral change. Also, while social insight of the analytical type defined in this study may be useful in certain situations of faculty department head interaction, its potential for recognition of power by faculty, over rewards and sanctions concerning them, is evident only on one APS measure, (Teaching and Curriculum Logistics), while that of Machiavellian orientation by itself is evident on four APS measures (Teaching and Curriculum Logistics, Faculty Career Status, Research Resources, and Committee Shared Concerns). A combination of both variables, however, (Total Mach and CSI) might provide more effective role and personal power for use by the department head as an agent of change in environ-

ments where committees predominate administratively. The single best indicator of the type of power sought for a change agent, however, is the Total Mach itself.

RECOMMENDATIONS FOR FURTHER RESEARCH

Information from the findings of this study and others appears to lend some credibility to consideration by top administrators of the need and importance of training and/or selecting people for department head positions who will have the necessary skills in interpersonal power tactics to facilitate innovative processes in faculty development. Keeping in mind the relationships observed in this study, some questions for future research which may encourage decisions in this direction include the following:

1. How do department head Machiavellianism (Total Mach V, Mach Tactics) and Social Insight (CSI) relate to faculty job satisfaction, productivity, and turnover?
2. Do top administrators attribute better management practices to department heads high on Machiavellianism and social insight?
3. Do high Machiavellian, high social insight Deans choose high Machiavellian, high social insight department heads?
4. Are Machiavellianism and social insight related to longevity in administrative office in higher educa-

tion?

5. Does power attributed department heads by faculty vary as a function of training the former in interpersonal power tactics?
6. Do faculty in departments with high Mach department heads participate more frequently in staff development activities than faculty in departments with low Mach department heads?
7. Do faculty in departments with high Mach department heads score higher on measures of productivity than faculty in departments with low Mach department heads?

The university faculty members themselves constitute another source of analysis of the power dynamics within the departments.

1. Are the faculty members more Machiavellian as they ascend in the academic system?
2. Do high Mach department heads perceive themselves as faculty see them with regard to their role and personal powers?

With regard to the internal consistency of the Mach V scale, some researchers may wish to work on restructuring the instrument, working on the rewording of the Views scale items and perhaps eliminating the items on morality, in view of the low internal reliability coefficients found in this

and other studies.

With more research and the many studies now available for perusal related to the uses of Machiavellian power, and the somewhat less in number but equally interesting studies of social insight, perhaps some conclusions may be definitively drawn in the future to aid university administrators in the delicate and necessary chore of adapting and continuing one of Western Civilization's most enduring and necessary institutions, the public university.

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Appendix A
JOB ITEM INSTRUMENT

JOB ITEM INSTRUMENTInformation and Instructions

The JOB ITEM INSTRUMENT is designed to gauge the amount of influence attributed department heads by their faculty with regard to thirty-one job-related areas.

SECTION ONE

In this Section, please circle the number that you believe corresponds to the amount of influence your department head has with respect to each item. The scale is as follows:

- | | |
|---|--------------------------------|
| 0 | little or no influence |
| 1 | some influence |
| 2 | quite some influence |
| 3 | a great deal of influence |
| 4 | a very great deal of influence |

While you may be more knowledgeable about certain areas than others, please answer every item even if your answer reflects only a perception with little or no first hand knowledge.

SCHEDULING:	determining times and days of class meetings.	GOAL DETERMINATION:	setting goals of the department.
	0 1 2 3 4		0 1 2 3 4
COMMITTEES:	forming committees and making committee assignments.	PROMOTION:	influencing promotion decisions for department members.
	0 1 2 3 4		0 1 2 3 4
COURSE ASSIGNMENTS:	controlling courses (field level, number of preparations) instructors are assigned.	TENURE:	influencing tenure decisions for department members.
	0 1 2 3 4		0 1 2 3 4
STUDENT ASSISTANTS:	controlling amount of student help supplied to professors.	CLERICAL WORK:	securing clerical assistance for faculty.
	0 1 2 3 4		0 1 2 3 4
FACILITIES:	securing equipment and supplies.	CURRICULUM:	influencing curriculum development.
	0 1 2 3 4		0 1 2 3 4

-2-

ASSIGNING ADDITIONAL TEACHING:	controlling assignments of summer teaching opportuni- ties.	0	1	2	3	4	TRAVEL FUNDS:	acquiring funds for travel to professional meetings.	0	1	2	3	4
TEACHING LOADS:	deciding class contact hours of professors.	0	1	2	3	4	RECRUITMENT:	recruiting qualified faculty.	0	1	2	3	4
PAID EXTRA TEACHING:	controlling EXTENSION teaching appointments.	0	1	2	3	4	RESEARCH ASSISTANCE:	getting research assistants, supplies, etc.	0	1	2	3	4
PAID EXTRA WORK:	effecting the acquisition of paid short courses etc.	0	1	2	3	4	FUNDS FOR RESEARCH:	acquiring funds for faculty research.	0	1	2	3	4
RESEARCH:	securing search time and facilities for faculty.						SABBATICALS:	awarding of sabbatical leaves.					
SALARY INCREASE:	controlling step and/or merit raises.	0	1	2	3	4	SPEAKING AND CONSULTING:	making unpaid "community service" assignments to faculty members.	0	1	2	3	4

SECTION TWO

In this Section, please rate your department head on the following items associated with his/her leadership role. Circle the number of your choice. The scale is as follows:

- 0 little or none
- 1 some
- 2 quite some
- 3 a great deal
- 4 a very great deal

INFLUENCE:	power to establish contacts with higher administrators.	0	1	2	3	4	INFORMATION:	knowledge of what is going on around the college.	0	1	2	3	4
INTER- DEPARTMENTAL RELATIONS:	ability to sustain liaisons with other departments.	0	1	2	3	4	INSPIRATION:	ability to exert professional leadership and stimulation.	0	1	2	3	4

-3-

COMMUNITY: ability to maintain good contacts with community; publicity.

0 1 2 3 4

CONSULTING: ability to secure paid consulting jobs for members of the department.

0 1 2 3 4

ACADEMIC CONTACTS: ability to assist faculty members in developing professional acquaintanceships.

0 1 2 3 4

COUNSELING: ability to counsel staff about teaching and/or research.

0 1 2 3 4

COLLOQUIA: ability to develop stimulating academic environment through seminars, bringing distinguished visiting lecturers to campus etc.

RESPONDENT DATA FORM

In addition to the preceding, please provide the following biographical information.

Date of appointment in current department: _____
(month) (year)

Total years of teaching experience in higher education: _____

Current academic rank: _____

Tenured: Yes ___ No ___ If yes, date of tenure appointment at TTT: _____
(month) (year)

Age: ___ Sex: ___

Administrative experience in higher education: Yes ___ No ___

If yes, in what capacity?

<u>Title of position</u>	<u>Number of years</u>
_____	_____
_____	_____
_____	_____

These data will be treated confidentially and the identification numbers below will be used only to identify faculty with department needs and to follow up on non-responses. These numbers will be deleted prior to analysis after all data are collected.

Appendix B

VARIMAX ROTATED FACTOR PATTERN FOR JII

JII
ROTATED FACTOR PATTERN
VARIMAX METHOD

ITEM # of JII	FACTOR 1	FACTOR 2	FACTOR 3	FACTOR 4	FACTOR 5	FACTOR 6	FACTOR 7	ITEM NAME
I 1	0.3990	<u>0.74803</u>	0.03748	0.10299	-0.11123	0.14282	-0.01441	SCHEDULING
I 2	0.11571	0.27149	0.08366	0.00992	0.02789	-0.08621	<u>0.56530</u>	COMMITTEES
I 3	0.07635	<u>0.79520</u>	-0.07803	0.11958	0.16063	0.00358	<u>-0.00277</u>	COURSE ASSIGNMENTS
I 4	-0.05321	0.41436	0.02727	0.01098	<u>0.49166</u>	0.30641	0.01010	STUDENT ASSISTANTS
I 5	0.26736	0.35221	0.17304	-0.10329	<u>0.55984</u>	-0.02655	-0.16611	FACILITIES
I 6	<u>0.52823</u>	0.27476	0.28485	0.23220	<u>0.16755</u>	0.04082	0.08291	GOAL DETERMINATION
I 7	<u>0.08439</u>	0.06350	<u>0.93435</u>	0.12302	0.11223	0.08265	0.08211	PROMOTION
I 8	0.07327	0.05529	<u>0.93683</u>	0.05755	0.05488	0.04945	0.16099	TENURE
I 9	0.24401	<u>0.35646</u>	0.24774	-0.04903	0.30516	0.04022	0.12579	CLERICAL WORK
I 10	0.37655	<u>0.52265</u>	0.18920	0.26477	0.17881	-0.03121	0.27416	CURRICULUM
I 11	0.09318	<u>0.70382</u>	0.01673	-0.06034	0.12224	0.27780	0.11982	ASSIGNING ADDITIONAL TEACHING
I 12	0.06858	0.74948	0.08579	0.00116	0.17547	0.01676	0.18127	TEACHING LOADS
I 13	0.15497	0.27505	0.06918	0.14035	0.22325	<u>0.69257</u>	-0.04523	PAID EXTRA TEACHING
I 14	0.16013	0.12917	0.07364	0.22703	0.12664	<u>0.78354</u>	0.00491	PAID EXTRA WORK
I 15	0.31998	-0.01716	0.04270	0.19112	<u>0.64721</u>	0.16584	0.07688	RESEARCH
I 16	0.22090	-0.05793	0.35997	-0.12844	0.31316	0.01418	0.49472	SALARY INCREASE
I 17	0.22753	0.31912	0.22983	0.11685	<u>0.57795</u>	0.02978	<u>0.18261</u>	TRAVEL FUNDS
I 18	0.24183	0.05474	0.27699	0.15714	<u>0.41727</u>	-0.22244	<u>0.47386</u>	RECRUITMENT
I 19	0.12329	0.11477	-0.03783	0.20509	<u>0.73307</u>	0.20428	0.25479	RESEARCH ASSISTANCE
I 20	-0.17319	-0.03599	0.07355	<u>0.50450</u>	<u>0.49045</u>	0.15700	0.30558	FUNDS FOR RESEARCH
I 21	0.05788	0.11986	0.06363	0.38403	0.15502	0.30634	<u>0.54439</u>	SABBATICALS
I 22	0.14555	0.01138	0.04264	<u>0.75356</u>	0.00214	0.18963	0.16272	SPEAKING & CONSULTING
L 1	<u>0.74425</u>	0.10849	0.15729	0.01096	0.13675	0.12117	0.27609	INFLUENCE
L 2	<u>0.78487</u>	0.13216	0.02852	0.13505	0.07071	0.21305	0.19178	INTERDEPARTMENTAL RELATIONS
L 3	<u>0.83874</u>	0.04848	-0.01350	0.10018	0.07481	0.17120	0.11739	INFORMATION
L 4	<u>0.76275</u>	0.07004	0.01961	0.35568	0.22971	-0.03049	0.02407	INSPIRATION
L 5	<u>0.57112</u>	-0.04602	0.06414	0.49288	0.23955	0.08094	-0.09546	COMMUNITY
L 6	<u>0.55065</u>	0.10954	0.06603	<u>0.60086</u>	0.21633	-0.00356	-0.06551	ACADEMIC CONTACTS
L 7	0.26063	0.10054	0.03512	<u>0.74137</u>	0.01185	0.22720	0.02696	CONSULTING
L 8	<u>0.64124</u>	0.09727	0.05943	0.50675	0.22206	-0.10975	0.01867	COUNSELING
L 9	0.43487	0.18895	0.14371	<u>0.48640</u>	0.23636	-0.18944	-0.15124	COLLOQUIA

ORTHOGONAL TRANSFORMATION MATRIX

	1	2	3	4	5	6	7
1	0.60493	-0.35616	0.24094	-0.42089	-0.43254	0.18595	0.22438
2	0.41986	0.73921	-0.16070	0.42676	0.16948	0.14645	0.13846
3	-0.04977	0.38578	0.74594	0.25876	-0.16819	0.28977	0.35761
4	0.52401	-0.30721	-0.06564	0.36905	0.24485	-0.64254	-0.13313
5	0.04168	0.22483	-0.51494	0.33690	-0.73160	-0.13253	0.12822
6	<u>-0.41839</u>	-0.18208	-0.08102	-0.56895	-0.14551	-0.65280	0.11920
7	<u>0.06274</u>	<u>-0.00420</u>	<u>-0.31382</u>	<u>0.01908</u>	<u>0.37354</u>	<u>0.05061</u>	0.86486

PROPORTIONAL CONTRIBUTIONS FOR COMMON VARIANCES BY ROTATED FACTORS *

FACTOR 1	FACTOR 2	FACTOR 3	FACTOR 4	FACTOR 5	FACTOR 6	FACTOR 7	TOTAL
4.735	3.436	2.325	3.160	2.993	1.777	1.681	
15.27%	11.08%	07.50%	10.19%	09.65%	05.70%	05.42%	64.8%

* Factor Key

- | | |
|--------------------------------------|-----------------------------------------|
| 1. Personal Leadership | 4. Control of Extracurricular Resources |
| 2. Teaching and Curriculum Logistics | 5. Research Resources |
| 3. Faculty Career Status | 6. Extra Compensation |
| 7. Committee Shared Concerns | |

CURRICULUM VITAE

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MACHIAVELLIANISM, SOCIAL INSIGHT, AND POWER OF DEPARTMENT
HEADS

by

Sheila Sullivan Reyna

(ABSTRACT)

Department heads are viewed in this study as potential administrative agents of change for innovation in higher educational organizations. Due, however, to the low role power attributed them by faculty, it was hypothesized that department heads' manipulative orientation and social insight would be positively related to the role and personal power attributed them by faculty on power dimensions relevant to the change agent role. Statements to this effect were tested in a large land-grant university in the southeastern United States. Results of the study revealed that, in fact, department heads high on manipulative orientation are attributed more role and personal power on power scales relevant to the change agent role, than those low on this dimension. Results for social insight were confirmed on only one role power dimension. Interaction effects for the two variables of interest were explored and differed in results from the single variable trends. The strength of all relationships with respect to the amount of variance accounted for in the dependent variables by the independent variables, was low.