

MACHIAVELLIAN CONFORMITY IN THE
HEX SITUATION

By

FREDRIC BRUCE SHAFFER

Bachelor of Arts
Claremont Men's College
Claremont, California
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Master of Science
Oklahoma State University
Stillwater, Oklahoma
1973

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Thesis Approved:

Bobbel

Thesis Adviser

William H. Rambo

Bill Scott

Mark Muschick

Larry T. Brown

Larry M. Perkins

D. N. Denton

Dean of the Graduate College

963984

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CHAPTER I

INTRODUCTION AND REVIEW OF THE LITERATURE

Agger, Christie and Pinner (Christie, 1970a) laid the theoretical foundation for the investigation of the effective social manipulator whom they christened the "Machiavellian." Their real life models for the Machiavellian were senior social scientists at the Stanford Center for Advanced Studies in the Behavioral Sciences. These individuals appeared to exercise considerable influence over the lives of their fellow social scientists in terms of the distribution of funds and positions. The Machiavellian concept was intended to encompass individuals - within and outside the professions - who are markedly effective in the exercise of social influence in their interpersonal relationships.

The Machiavellian concept appears to possess relevance for both the personality theorist and social psychologist. The personality theorist is promised a potentially valuable classification schema for personality. While theorists have expressed interest in the attitudes and interpersonal behaviors encompassed by the Machiavellian concept for decades, their interest was on a piecemeal basis and a classification schema dealing exclusively with Machiavellian attitudes and behavior has not been previously advanced. Now that a Machiavellian classification schema has been proposed, personality theorists may submit it to empirical investigation so that its usefulness in concept-

ualizing human personality may be tested.

The Machiavellian concept also possesses considerable relevance for the social psychologist since it concerns the exercise of interpersonal influence which is a central problem for the discipline. Intriguing questions concerning the operation of social influence processes may be generated by treating the Machiavellian as both a source and target of influence attempts. Identification of the Machiavellian as an influence source raises questions concerning the conditions in which he attempts to influence others and in which his attempts are successful. Designation of the Machiavellian as a target of influence provokes questions concerning the circumstances in which the Machiavellian resists or complies with the influence attempts of others. The empirical investigation of these questions promises to extend the social psychologist's understanding of the mechanics of interpersonal influence as well as help the personality psychologist establish an empirical foundation for the Machiavellian personality

The Machiavellian of **The Prince**

The term, Machiavellian, was appropriated from the English language in which it designates individuals who adhere to the strategies of political manipulation advocated in Niccolo Machiavelli's The Prince (The Random House Dictionary of the English Language, 1966). Publication of The Prince made Machiavelli's name a synonym for opportunism and deceit because of its negative description of human nature and pragmatic discussion of the necessities of statecraft (Russell, 1945). A description of the historical context in which The Prince was written and an examination of Machiavelli's philosophy concerning the nature of man and realities of statecraft will be undertaken to provide both an historical and philosophical perspective of the Machiavellian.

The Prince must be understood within the context of the political upheavals of the Italian Renaissance. Fifteenth-century Italy witnessed a succession of illegitimate regimes which were established through political corruption. French and Spanish invaders divided the Italian state between themselves. The first French invasion in 1494 drove out the ruling Medici and established a republic. In 1498, one year prior to the second French invasion, Machiavelli was appointed Secretary to the Florentine republic. In this position, Machiavelli gained the wealth of political experience from which he would later fashion The Prince. In the service of the republic, he completed several important diplomatic missions to areas under Florentine control and foreign states. In 1512, the Medici were returned to power and the French invaders were expelled. Machiavelli, long an opponent of the Medici, lost his government post and was exiled to the countryside after a short period of imprisonment (Butterfield, 1956).

The Prince was written in 1513 during Machiavelli's exile at San Casciano near Florence (Milligan, 1953). The treatise was designed to win him recognition as a potential adviser to the Medici regime and to persuade Prince Lorenzo De Medici to unite the Italian state following Machiavelli's principles of statecraft. While there is a current dispute among historians as to whether the Prince of the Medici ever received The Prince, it is clear that neither of Machiavelli's objectives were realized (Anglo, 1969).

Machiavelli intended to prove his worth as an adviser by demonstrating how a new prince could consolidate his control over new principalities. This was the problem which immediately concerned the new Prince of the Medici. Machiavelli contended that the principles of effective state craft could be derived from a careful examination

of both ancient and contemporary regimes. Two important theses underpinned Machiavelli's historical method: imitation and historical recurrence. The thesis of imitation held that the great leaders of the past should be imitated to gain their virtues (Butterfield, 1956). In Chapter 6 of The Prince Machiavelli stated:

Let no man marvaile, if in the discourse I shall make of new Principalities, both touching a Prince, and touching a state, I shall alleage very famous examples: for seeing men almost alwayes walk in the pathes beaten by others, and proceed in their actions by imitation, and being that others wayes cannot be exactly follow'd, nor their vertues, whose patterne thou set'st before thee attain'd unto; a wise man ought alwayes to tread the footsteps of the worthiest persons, and imitate those that have been the most excellent: to the end that if his vertue arrive not thereto, at least it may yeeld some savour thereof (p. 20).

The thesis of historical recurrence held that history consists of repeating patterns. Machiavelli held that human nature, especially man's passions drive men to commit the same actions in all ages causing the repetition of patterns of events. Given that events occur in a finite number of patterns, knowledge of these patterns from the study of ancient and contemporary regimes would permit the derivation of true laws of history relevant to all ages. From such laws, timeless principles of statecraft could be developed to counsel princes (Butterfield, 1956). Machiavelli commented in book 3 of The Discourses:

Wise men say (and perhaps not unjustly) that in order to form an impression of what is yet to come, we ought to consider what is already passed; for there is nothing in this world

at present, or at any other time, but has and will have its counterpart in antiquity; which happens because these things are operated by human beings who, having the same passions in all ages, must necessarily behave uniformly in similar situations (p. 203).

The Prince represents an attempt to explicate the timeless principles of statecraft Machiavelli derived from his own examination of ancient and contemporary regimes. He exhorted the Prince of the Medici that through skillful implementation of these principles the Medici's rule over Florence could be consolidated and the entire state of Italy could be united. Despite Machiavelli's dedication of his treatise to Prince Lorenzo de Medici and attempted intercession in Machiavelli's behalf by his friends, his worth as an adviser went unrecognized along with his dream of a united Italy within his lifetime. Since Machiavelli possessed no occupational experience outside of government service, he devoted his remaining years to writing treatises concerning political philosophy (Anglo, 1969).

Machiavelli is unique among power theorists in his explicit discussion of his assumptions about human nature (Christie, 1970a). The realpolitik of The Prince is predicated on Machiavelli's belief that men are prisoners of their irrational passions and are incapable of self-government (Jones, 1969). In Chapter 17 of The Prince, Machiavelli discussed the flaws he found in men:

For touching men, wee may say this in general, they are unthankful, unconstant, dissemblers, they avoyd dangers, and are covetous of gaine; and whilst thou doest them good, they are wholly thine; their blood, their fortunes, lives and children are at thy service, as is said before, when the danger is

remote; but when it approaches, they revolt. And that Prince; who wholly relies upon their words, unfurnished of all other preparations goes to wrack: for the friendships that are gotten with rewards, and not by the magnificence and worth of the mind, are dearely bought indeed; but they will neither keep long, nor serve well in time of need: and men doe lesse regard to offend one that is supported by love, than by feare. (pp. 62-63).

Machiavelli held that chief among man's irrational passions is ambition. Subsidiary motivations include fear, envy, greed, hatred of restrictions on activities and security. Machiavelli believed that these assumptions about human nature possess universal validity since he assumed that human nature remains constant throughout history.

Machiavelli contended that man's passions must inevitably produce conflict among individuals within society. The certainty of conflict rendered self-government an impossibility. Machiavelli believed that the remedy to inevitable human conflict lay in the establishment of a strong monarchy which could constrain its subjects through the instruments of force and propaganda (Jones, 1969). In volume 1 of The Discourses, Machiavelli argued:

It is vain to look for anything good from those countries which we see nowadays so corrupt, as is the case above all others with Italy. France and Spain also have their share of corruption, and if we do not see so many disorders and troubles in those countries as is the case daily in Italy, it is not so much owing to the goodness of their people, in which they are greatly deficient, as to the fact that they have each a king who keeps them united, not only by his virtue, but also by

his virtue, but also by the institutions of those kingdoms, which are as yet preserved pure (pp. 209-211).

Machiavelli faced the problem that the monarch is also a man possessed of mankind's weaknesses. This problem was conceded. He observed that the private interests of princes often conflicted with those of his subjects and that most princes were tyrants. Tyranny in itself did not concern Machiavelli. His concern was whether the prince acquired and maintained power. The virtuous prince cultivated power, while the prince who lacked virtue eroded the power of his regime. Machiavelli's concept of virtue was quite different from traditional usage of the term. For Machiavelli, the effective use of power was a prince's chief virtue. The ideal monarch was one who successfully manipulated his subjects' passions to his own advantage.

Machiavelli cautioned that the virtuous prince cannot adhere to the traditional Christian values such as faith and honesty. In a world of ambitious men, the monarch must ruthlessly deal with his subjects to consolidate and extend his power or else become a victim himself (Jones, 1969). This advice is concisely expressed in Chapter 18 of The Prince:

A Prince, and especially a new Prince, cannot observe all those things, for which men are held good; he being often forc'd, for the maintenance of his State, to do contrary to his faith, charity, humanity, and religion: and therefore it behooves him to have a mind so disposed as to turne and take advantage of all winds and fortunes; and as formerly I said, not forsake the good, while he can; but to know how to make use of the evill upon necessity (p. 67).

The instruments of the virtuous prince are force and propaganda. Force must be exercised ruthlessly. In Chapter 5 of The Prince, Machiavelli advised:

Whoever becomes master of a City us'd to live free, and dismantells it not; let him look himselfe to bee ruin'd by it: for it alwayes in time of rebellion takes the name of liberty for refuge, and the ancient orders it had; which neither by length of time, nor any favours afforded them, are ever forgotten (p. 19).

In Chapter 8 of The Prince, Machiavelli warned:

It is to be noted, that in the laying hold of a State, the usurper thereof ought to runne over and execute all his cruelties at once, that hee bee not forced often to return to them, and that hee may be able, by not renewing of them, to give men some security, and gaine their affections by doing them some courtesies. Hee that carries it otherwise, either for fearfullnesse, or upon evill advice, is alwayes constrained to hold his sword drawne in his hand; nor ever can hee rely upon his subjects, there being no possibility for them, because of his daily and continuall injuries, to live in any safety: for his injuries should bee done altogether, that being seldomer tasted, they might lesse offend: his favours should bee bestowed by little and little, to the end they might keep their taste the better (pp. 35-36).

The recommendations made in Chapters 5 and 8 of The Prince are unmistakably ruthless. Policies such as the destruction of a free city or the perpetration of all the prince's cruelties at once are not calculated to cultivate his subjects' love. To the contrary, the

prince who follows Machiavelli's suggestions will evoke fear in his subjects. This outcome did not perplex Machiavelli. He believed that given the choice between the two outcomes of love and fear, it is better for the prince to be feared. In Chapter 17 of The Prince he concluded:

From hence arises a dispute, whether it is bettered to be belov'd or feard: I answer, a man would wish hee might bee the one and the other: but because hardly can they subsist both together, it is much safer to be feard, than be lov'd; being that one of the two must needs faile (p. 62).

The second major instrument of the virtuous prince is propaganda. While the prince cannot afford to exercise the traditional Christian virtues such as faith and honesty, he can strengthen his rule by appearing to be virtuous. Machiavelli's advice to the prince to manage the impressions of his subjects is contained in Chapter 18 of The Prince:

How commendable in a Prince it is to keepe his word, and live with integrity, not making use of cunning and subtlety, every one knows well: yet wee see by experience in these our dayes, that those Princes have effected great matters, who have made small reckoning of keeping their words, and have known by their craft to turne and wind men about, and in the end have overcome those who have grounded upon the truth (p. 65).

Therefore is there no necessity for a Prince to be endued with all these above written qualities; but it behooves well that he seeme to be so; or rather I will boldly say this, that having these qualities and alwayes regulating himselfe by them, they are hurtfull; but seeming to have them, they

are advantageous; as to seeme pitifull, faithfull, mild, religious, and of integrity (pp. 66-67).

The virtuous prince consolidates and increases his power through the ruthless application of the instruments of force and propaganda. Traditional Christian morality was eschewed as a liability to the prince. In the corrupt environment of fifteenth-century Italy, power was held to be the only good. Traditional Christian values were only relevant if the appearance of their possession could promote the prince's rule.

If power was Machiavelli's only good, what was the ultimate value of power? Machiavelli appears to have justified the acquisition of power on two related grounds. First, power enables the prince to establish order in the state. Since Machiavelli believed that mens' passions must inevitably produce conflict and the threat of anarchy, he contended that a powerful monarch was required to constrain the subjects from producing disorder. Second, power serves the private objectives of the prince. The prince requires power to pursue his personal interests whether they be the expansion of his realm (Machiavelli championed a united Italy) or the acquisition of greater wealth. In paying tribute to the private interests of monarchs, Machiavelli attempted to appear to be a faithful servant to the Prince of the Medici. This attempted impression management was consistent with the overall intent of The Prince which was to win Machiavelli a position as adviser to the Medici regime (Butterfield, 1956).

The Prince possesses important implications for both Western philosophy and the discipline of psychology. The remarkable contribution of this treatise to Western philosophy lies in its realpolitik. Breaking with a philosophical tradition which idealized human nature,

the state and the good, Machiavelli attempted to describe men, their governments and objectives as he believed they existed in fifteenth-century Italy. Machiavelli provided an unflattering commentary on man's nature. He assumed that men are stupid and dominated by irrational passions such as ambition instead of reason. Men were held to be incapable of self-government since their passions must inevitably result in conflict and anarchy. Machiavelli believed that civil order could only be achieved through the imposition of a strong monarchy.

Machiavelli's discussion of the art of statecraft was equally devoid of idealism. He contended that in a world of "mischievous men," the prince must ruthlessly manipulate his subjects' passions to achieve power. The prince's chief instruments of statecraft are force and propaganda. The Prince provides several concrete examples of how these instruments may be effectively employed. The practice of Christian virtues was alien to Machiavelli's statecraft. Morality in government was judged to be a liability to the prince who lived in a world populated by "mischievous men." Instead of practicing Christian virtues, the prince should use the tool of propaganda to make himself appear virtuous to his subjects.

Machiavelli chose power as his good instead of a traditional end such as justice. This conception of good derived from his belief that all men sought power. Within his perspective, the virtuous prince consolidates and expands his power. The acts by which this accomplished are the prince's virtues. In contrast, the prince without virtue erodes the power of his regime. The acts which undermine his power constitute his vices.

Machiavelli believed that the acquisition and exercise of power is ultimately justified by its service to the prince. Power enables

the prince to establish civil order which benefits the public welfare and the prince's security. Power also facilitates the prince's private interests whether they include the annexation of territory or the acquisition of wealth.

The main contributions of The Prince to psychology include its motivational model of man, early description of the Machiavellian personality, assumption of inevitable conflict among men and discussion of the exercise of social influence. Machiavelli was not the first philosopher to claim that men were driven by diverse motives. The motivational model of man presented in The Prince is unique by virtue of the motives it holds to be most influential in human behavior. Since he assumed that all men seek power, ambition was identified as man's chief motive. This position anticipated Adler's (1930) "will to power" which was postulated during the intermediate stage of his career. Adler, at this stage of his theorizing, held that man's aggressive drive is the most important determinant of human behavior. Behavior characterized by the "will to power" was described as self-centered to the exclusion of the interests of others. The virtuous prince and Adler's man dominated by the "will to power" appear to be remarkably similar individuals.

While ambition was identified as man's chief motive, Machiavelli postulated secondary motives of fear, envy, greed, hatred of restrictions on activities and security. Machiavelli anticipated Brehm's (1966) theory of reactance when he observed that men are often driven out of hatred against imposed restrictions on their freedom. Reactance theory predicts that when freedom of choice is threatened or lost, an individual will act to reestablish that freedom. Machiavelli also anticipated Maslow's (1955) "survival tendency" when he identified

security as a motive for human behavior. For Maslow, the "survival tendency" represents man's drive to satisfy needs which are crucial to biological and psychological survival. This seems to be equivalent to providing Machiavelli's security. Whereas Maslow held that this tendency is prepotent over all other drives, Machiavelli emphasized man's ambition.

Machiavelli's discussion of the virtuous monarch in The Prince provides an early description of the Machiavellian personality or Machiavellian. The Machiavellian who emerges from the treatise is characterized by rationality, amorality and manipulateness. He ruthlessly exploits others in the pursuit of power. He is a master in the manipulation of others' passions. Later, it will be demonstrated that the Machiavellian described in The Prince anticipated Freud's oral character (Maddi, 1972), Fromm's (1947) exploitative orientation, and Agger, Christie and Pinners' (Christie, 1970a) Machiavellian personality.

An important assumption of The Prince is that men driven by diverse passions inevitably come into conflict with each other necessitating the imposition of order by a powerful monarch. This assumption anticipates Freud's (1952) discussion of instinctual gratification and the role of the superego. Like Machiavelli, Freud believed that human instincts are inevitably antagonistic to an ordered society. Whereas Machiavelli held that a power monarch capable of mediating punishments is necessary for the imposition of order, Freud believed that the social order is achieved through the operation of the superego. Freud contended that instinctual gratification is constrained through the operation of the superego. The superego was conceptualized as a part of the ego which represents societal rules and regulations. The superego, like

Machiavelli's powerful monarch, constrains instinctual gratification through the use of punishment. Whenever instinctual gratification is contemplated which would violate the superego's internalized values, the organism experiences the uncomfortable increase of tension which Freud termed guilt. The punishing effects of guilt force the organism to seek forms of instinctual gratification which are more acceptable to society. Thus, The Prince remarkably parallels Freud's treatment of the problem of socialization.

The final contribution of The Prince to psychology lies in Machiavelli's discussion of the exercise of social influence. Machiavelli maintained that a prince possesses two main instruments of social influence: force and propaganda. He believed that force should be ruthlessly employed as it is better for a monarch to be feared than to be loved. Machiavelli's preference for the use of punishment in the control of human behavior runs counter to the findings of current operant conditioning research. Punishment alone has been found to merely suppress behavior. Techniques which use reward have been proved to be highly effective in shaping and maintaining desired behavior, while techniques which combine elements of reward and punishment have been found to be successful in extinguishing deviant behavior and simultaneously strengthening prosocial behavior (Hilgrad & Bower, 1975).

The Prince's second instrument of social influence is propaganda. Machiavelli anticipated impression management theorists when he advised the prince to use the tool of propaganda to appear conventionally virtuous. Recent impression management theorists like Helm (Note 1) seem to agree with Machiavelli that the active control of others' impressions of oneself can be a potent tool of social influence. There is dramatic evidence that American politicians have heeded Machiavelli's

advice in campaign advertisements which associate the candidates with God and Americanism.

Machiavelli's recommendation that the prince employ propaganda to appear virtuous also seems to anticipate Hollander's (1961) concept of "idiosyncrasy credit." Where Machiavelli argued that a virtuous appearance strengthens a prince's rule, Hollander proposed that a group leader's appearing to conform to group norms strengthens his status within the group and facilitates his introduction of innovations to the group. In both Machiavelli and Hollander's speculation, the appearance of adhering to relevant norms leads to the enhancement of the leader's power.

The Machiavellian of The Prince has now been examined within an historical and philosophical perspective. He is the virtuous monarch who cunningly manipulates his subjects' passions in the pursuit of power. The implications of The Prince for Western philosophy and psychology have been considered in order to assess the contribution of the Machiavellian concept to human thought. In the discussion that follows, the relevance of the Machiavellian concept for contemporary theories of personality will be examined in order to demonstrate that it is an important concept deserving empirical investigation.

The Machiavellian in Personality Theory

The Machiavellian of The Prince was characterized by rationality, amorality and manipulateness. This fifteenth-century description of the virtuous prince provided an early conceptualization of a Machiavellian personality. The Machiavellian of The Prince finds his counterpart in Freud's oral character (Maddi, 1972), Fromm's (1947) exploitative orientation and Agger, Christie and Pinners' Machiavellian personality (Christie, 1970a). These schemas for classifying personality

will be reviewed in an effort to demonstrate the pivotal role of the Machiavellian concept in modern personality theory and thus, its importance as a topic for empirical investigation.

Freud's oral character may be described in terms of its dominant conflict and central traits. The main conflict of the oral stage of development involves the oral activities of taking and receiving. The child's selfish desire to take and receive nurturance from his parents is hypothesized to inevitably clash with the parents' own requirements. If the parents provide the optimum attention to the child's instinctual oral needs, Freud believed that conflict will be minimized and the child can progress to the anal stage of development. But, should the parents afford either inadequate or excessive attention to the child's needs, the basic conflict will be intensified and the child's psychosexual growth will be arrested at the oral stage. Fixation of development at this stage results in a characteristic pattern of traits which are attitudes about the world and oneself (Maddi, 1972).

The traits attributed to the oral character are bipolar in nature. Individuals may vacillate between the extremes of each dimension. These traits reflect attitudes concerning the world as a source of nurturance and one's ability to achieve satisfaction. The central traits of the oral character include optimism-pessimism, gullibility-suspiciousness, manipulateness-passivity, admiration-envy, and cockiness-self-belittlement. Maddi (1972) described the oral character's traits in the following manner:

Optimism, pessimism and admiration are unrealistic estimates of the likelihood of being nurtured by other people. In manipulateness and passivity, we see unconstructive tendencies to wrest satisfaction from the world or lie back and wait until

it falls into one's mouth. Cockiness indicates an unrealistically affluent sense of one's own resources, whereas envy and self-belittlement indicate quite the opposite (p. 272).

There are important parallels between the Machiavellian and Freud's oral character. The Machiavellian's central conflict surrounds the acquisition of power which seems analogous to the child's pursuit of nurturance. The Machiavellian, like the oral character, may be particularly characterized by the single poles of pessimism, suspiciousness and manipulateness. The Machiavellian is pessimistic about the likelihood of acquiring power over others since power is a scarce commodity which is not easily won or held. The Machiavellian is suspicious of others since he believes that men are basically evil. Finally, he is manipulative of others because he believes that power can only be acquired through cunning. Men do not willingly grant others power over them.

Fromm's (1947) approach to the description of personality reflects Freud's influence in its assumptions that traits motivate human behavior and that an individual's orientation in life is made up of a cluster of traits. Fromm postulated that the exploitative orientation derives from the child's learning experiences as the dominant partner of a symbiotic relationship with his parents. In this relationship, neither the child nor the parents attain independence or individuality. The child learns that what is valued lies outside of himself and that these things must be seized or passively received from others. Fromm theorized that:

The exploitative orientation, like the receptive, has as its basic premise the feeling that the source of all good is outside, that whatever one wants to get must be sought there, and that one cannot produce anything oneself. The difference

between the two, however, is that the exploitative type does not expect to receive things from others as gifts, but to take them away from others by force or cunning. . . . In the realm of love and affection these people tend to grab and steal. They feel attracted only to people whom they can take away from somebody else. . . . We find the same attitude with regard to thinking and intellectual pursuits. Such people will tend not to produce ideas but to steal them. . . . They use and exploit anybody and anything from whom or from which they can squeeze something. . . . This orientation seems to be symbolized by the biting mouth which is often a prominent feature in such people (pp. 64-65).

The traits attributed to the exploitative orientation are also bipolar in nature. The poles in this typology represent positive and negative aspects of the traits. The main traits include active-exploitative, able to take initiative-aggressive, able to make claims-egocentric, proud-conceited, impulsive-rash, self-confident-arrogant and captivating-seducing (Fromm, 1947).

Useful parallels can be drawn between the Machiavellian and the individual characterized by the exploitative orientation. Central to the Machiavellian's strivings is the premise of the exploitative orientation that what is valued lies outside of oneself and that it can best be obtained through predatory behavior. The Machiavellian shares with the individual characterized by the exploitative orientation the single traits of aggressiveness, exploitativeness, egocentricity and seductiveness. The Machiavellian's search for power depends upon aggressive behavior. He believes that power can only be acquired through the active manipulation of others. The Machiavellian callously exploits

others in his pursuit of power. Their welfare is deemed unimportant beside his own self-interest. The Machiavellian is strongly egocentric. His sole concern is the advancement of his personal interests. Finally, the Machiavellian is seductive in his relationships with others. He attempts to manipulate their passions to gain control over their behavior.

Agger, Christie and Pinner (Christie, 1970b) proposed that individuals may be located on a Machiavellian dimension which represents the degree to which one agrees with Niccolo Machiavelli's views concerning human nature, abstract morality and interpersonal tactics. Six characteristics are attributed to individuals rated high on this dimension who will be called Highs:

- (1) Emotional detachment in interpersonal relationships. Highs restrict the depth of their emotional involvement with influence targets. This precludes the development of empathy with these individuals which allows Highs to treat them as objects to be manipulated. Emotional detachment is attained by approaching interpersonal situations cognitively rather than emotionally. In their rational approach to social situations, only information relevant to the successful exercise of influence is salient to Highs. The human consequences of their manipulative acts, such as the target's embarrassment, are unimportant as long as they do not affect the final outcome.

- (2) Lack of concern with conventional morality. Highs do not endorse conventional Judeo-Christian morality. Since they view man as selfish and competitive, the manipulation of others is justified as being essential to self-preservation. Highs' world-view is utilitarian rather than moral. Their concern is with what advances their manipulation of others rather than with what society sanctions.

(3) Emphasis on means rather than the ends of manipulation. Highs are more concerned about the choice of interpersonal tactics than with the outcomes of manipulation. For Highs, the reward lies in the manipulative act itself. The outcome of the manipulative act possesses secondary importance to them. In the political arena, Highs' emphasis on the means of manipulation causes them to place choice of tactics ahead of the ultimate ideological purposes for which the tactics are selected. Highs inhabit the entire ideological spectrum.

(4) Absence of gross psychopathology. Highs' effectiveness as manipulators requires that they possess an undistorted perception of their social environment and an unimpaired capacity for the planning and execution of manipulative attempts. Effective manipulation necessitates a minimal level of mental health.

(5) Effective manipulation of others. Highs attempt more manipulations and achieve more success in the manipulation of others than individuals rated low on the Machiavellian dimension (who will be called Lows) when three conditions are present. Christie (1970c) outlined these conditions:

Florence Geis and I have since analyzed some 50 laboratory studies and have found three parameters that determine whether Machiavellianism is salient. High Machs make out better when three crucial conditions are met: 1) when laboratory interaction is fact-to-face with another person; 2) when there is latitude for improvisation, i.e., the subject has a chance to respond freely and is not restricted to pushing buttons or taking tests; 3) when the situation permits the arousal of emotions, i.e., where the experiment has serious consequences. Playing for money rather than, say, points, is an example (p.85).

Highs appear to be more successful in manipulation than Lows because their emotional detachment and amorality allow them to intimidate opponents through calculated harassment.

(6) Extreme resistance to social influence. Highs' emotional detachment and suspiciousness of others renders them extremely resistant to social influence. Highs' emotional detachment means that they are indifferent to how others feel about their actions. Highs are guided instead by a rational calculation of which tactics will achieve the selected outcome. Highs' suspiciousness causes them to question others' intentions instead of attribution benevolence to them like Lows. This vigilance increases their likelihood of detecting deception. While emotional detachment and suspiciousness render Highs resistant to social pressure, their rational orientation allows them to be influenced by rational argumentation. Geis and Christie (1970) observed:

One consequence of the high Machs' lack of susceptibility to emotional involvements in general is a lack of susceptibility to sheer social pressure urging compliance, cooperation or attitude change - a characteristic which in turn accounts for their being no more likely than low Machs to be swayed by inducements to lie or cheat in most experiments. A second example of high Machs' resistance to social influence is their skepticism of experimenters' explanations and procedures, compared to lows' acceptance of the experimenter's definitions (p. 312).

The Machiavellian of The Prince is closely related to the Machiavellian personality which emerges from Agger, Christie and Pinners' speculation about Highs. These two conceptualizations of human personality share the elements of emotional detachment in interpersonal

relationships, lack of concern with conventional morality, the absence of gross psychopathology, effectiveness in the manipulation of others and strong resistance to social influence. The characteristic which seems to separate the Machiavellian of The Prince from the Machiavellian personality is the latter's emphasis on the means rather than the ends of manipulation. Whereas the Machiavellian of The Prince manipulates in the pursuit of personal power, the Machiavellian personality manipulates for the sake of the manipulative act itself. He is more concerned with the choice of tactics than the outcomes from their implementation. Nevertheless, it must be noted that the outcome of his manipulations is increased interpersonal power.

The Machiavellian of The Prince has now been examined within the context of modern personality theory. Parallels between the Machiavellian described in this treatise and the personality typologies of Freud, Fromm and Agger, Christie and Pinner suggest that these theorists were describing similar kinds of interpersonal behavior and demonstrates the central role of the Machiavellian concept in personality theory. It is striking that these social behaviors have persisted over the four centuries that separate Machiavelli from contemporary personality theorists. This observation is certainly supportive of Machiavelli's claim that human nature remains constant throughout history.

Now that the important contribution of the Machiavellian concept to personality theory has been demonstrated, the empirical foundation for this concept may be examined. In what follows, the scales designed to measure an individual's standing on the Machiavellian dimension will be considered and studies demonstrating Highs' effectiveness in manipulation and resistance to social influence will be reviewed.

The Mach IV and Mach V Scales

Niccolo Machiavelli's The Prince and Discourses provided explicit statements concerning human nature, abstract morality and interpersonal tactics from which Agger, Christie and Pinner constructed scales to measure an individual's standing on the Machiavellian dimension. Successive revision reduced an original set of 71 items to a 20 statement Mach IV scale (Mach is an abbreviation for Machiavellian) in which the items are placed in Likert format and counterbalanced for acquiescence set. Subsequently, a forced-choice version of this scale, designated Mach V, was constructed to control for social desirability. This scale also possesses 20 items. Each of its items contains three statements: a Machiavellian statement, a non-Machiavellian statement of equivalent social desirability and a non-Machiavellian statement possessing an opposite degree of social desirability from the first two statements. The subject taking the Mach V scale is instructed to designate statements most like and least like himself, leaving the remaining statement blank (Christie, 1970b).

The Mach IV and Mach V scales must be evaluated in terms of their internal consistency, item content and criterion validity. Their internal consistency is acceptable. The split-half reliabilities for the Mach IV and Mach V scales are .79 and .69, respectively. Christie (1970c) explained that the Mach V scale's lower reliability is due to the elimination of a set for social desirability. This explanation is supported by Budner's (1962) finding that the Mach IV scale is significantly related to the Edwards Scale of Social desirability, $r = -.35$, $p < .05$, while the Mach V scale does not significantly correlate with this scale.

The content of the Mach IV and Mach V scales deals with topics central to the Machiavellian concept. Two factor analytic scales revealed that the scale items fall into three content categories (Christie, 1970c):

(1) Machiavellian tactics. For example: "The best way to handle people is to tell them what they want to hear."

(2) Negative description of human nature. For example: "Most men forget more easily the death of their father than the loss of their property."

(3) Abstract morality. For example: "People suffering from incurable diseases should have the choice of being put painlessly to death."

The third test of the Machiavellianism scales is criterion validity. Agger, Christie and Pinner (Christie, 1970c) identified effective manipulation of others and extreme resistance to social influence as the Machiavellian personality's most important social behaviors. Empirical evidence which demonstrates that Highs are more effective than Lows in manipulating others and resisting social influence would support the Mach IV and Mach V scales' predictiveness of Machiavellian behavior. In what follows, studies which deal with these two problem areas will be reviewed to assess the criterion validity of the two scales and the empirical foundation of the Machiavellian personality.

Studies in Social Manipulation

The effectiveness of Highs in manipulating others has been demonstrated in studies concerned with the offensive manipulation of others (Geis, Christie & Nelson, 1970) and bargaining within a triad (Geis, 1970; Christie & Geis, 1970a). In each of these studies, the three conditions postulated to be crucial to Highs' successful manipulation of others - face-to-face interaction, latitude for improvisation and

affective arousal of influence targets - were present. Highs were found to be more effective manipulators than Lows in each situation.

The investigation of offensive manipulation by Geis et al. (1970) will be considered first. In this paradigm, subjects were instructed that they would complete a personality test and then administer (face-to-face) the same test to the next subject. Following completion of the initial test, it was disclosed that the student experimenter who had administered the test to them had perpetrated three minor deceptions. Due to this alteration in procedure, subjects were told to "use your power arbitrarily" (Geis et al., 1970, p. 82) in subsequent administrations of the test. The three conditions believed crucial to Highs' success in manipulating others were clearly present in this paradigm. The test administration permitted face-to-face interaction, the subject administering the test was given permission to improvise and the identification of the test as a personality test facilitated the arousal of emotions.

Highs performed more manipulations than Lows, overall. Highs also surpassed Lows in both variety and innovativeness of deception. Pre-determined categories of verbal and nonverbal behavior were used by observers to determine which behavior constituted a manipulation. Variety was defined by the number of categories used by the subject in administering the personality test. Innovativeness was determined by the number of manipulations falling into categories outside those used in the initial testing of the subject by the student experimenter.

Geis (1970) examined bargaining within a triad. Three subjects, one High, Mid (a subject who scored in the middle-third on the Machiavelianism scales) and Low, were observed within a bargaining-coalition game designed to elicit manipulative attempts and resistance to

manipulation. The game consisted of bargaining for shares of a total payoff of one hundred points per game. These points could be won exclusively by one player or divided in any fashion among two of the three players. A subject's total points over a series of games was used as an index of his ability to "manipulate his opponent relative to their ability to manipulate him" (Geis, 1970, p. 108). The three conditions postulated to be essential to Highs' success in manipulating others were also present in this paradigm. The bargaining was conducted in a fact-to-face manner, subjects had complete freedom in their selection of manipulative tactics and the competition inherent in the game facilitated the arousal of emotion.

Highs outbargained Lows as reflected in their greater point totals. A strong positive correlation was found between a composite of the subjects' Mach IV and Mach V scores and their total points, $r = .71$, $p < .05$.

Christie and Geis (1970a) examined bargaining within a triad for money instead of points. Three subjects, one High, Mid and Low, were again placed around a table and instructed that they would bargain among themselves for the distribution of ten \$1 bills. The game would end when any two players agreed to divide the money between themselves in any fashion to the exclusion of the third player. The dollars would then be given to the two players to take home according to their agreement. Subjects from the Geis (1970) study of six months ago were used to insure that all subjects were equally familiar with the bargaining process and appropriate manipulative tactics. The triads were composed so that the subjects were unacquainted with each other. The three conditions believed to be central to Highs successful manipulation of others were present in this paradigm, since the main difference from the

previous study by Geis (1970) was that players bargained for dollars instead of points. Bargaining involved face-to-face interaction, subjects were free to choose their manipulative tactics and competition for money facilitated emotional arousal. Christie and Geis (1970a) speculated that the introduction of monetary stakes made the situation more salient to Lows, increasing their affective arousal, which presumably interfered with their bargaining:

High Machs would be little affected by an increase in seriousness. Lows would do less well in more serious situations either because they are less willing to try to manipulate, or because their attention to ethical concerns interferes with bargaining effectiveness, or both (p. 169).

Highs were substantially more successful than Lows in this paradigm as reflected in their greater cash totals. In each triad, Highs were members of the winning coalition which divided the money. Compared with their performance in the Geis (1970) paradigm in which they bargained for points, Highs were considerably more successful in bargaining for monetary stakes. This difference in performance would be expected if the shift to dollar stakes increased Lows' affective involvement in the game impairing their effectiveness in bargaining.

The three studies (Geis, et al., 1970; Geis, 1970; Christie & Geis, 1970a) provided evidence that Highs are more effective manipulators than Lows in situations involving deception in test administration and bargaining within a triad for both points and dollars. The three conditions held to be essential to Highs' successful manipulation of others were present in each of these paradigms. Moreover, the shift from points in the Geis (1970) paradigm to cash in the Christie and Geis (1970a) paradigm appears to have increased Highs' competitive

advantage over Lows by increasing their emotional involvement in the games.

Christie (1970a) concluded that Highs' emotional detachment leads to the insensitive manipulation of their opponents which accounts for their success:

Geis and I have the impression that the High Machiavellian is an effective manipulator not because he reads the other person and takes advantage of his weakness, but because his insensitivity to the other person permits him to bully his way through in pursuit of coolly rational goals. The Low Mach's empathic ability prevents him from being detached enough to take advantage of the other. (p. 86).

The criterion validity of the Mach IV and Mach V scales has been supported with respect to manipulative behavior. Furthermore, the reviewed studies revealed firm empirical support for the conceptualization of a Machiavellian personality marked by effectiveness in the manipulation of others. The studies to be considered next deal with the problem of resistance to social influence. These studies will help determine whether the Machiavellianism scales are predictive of immunity to the influence attempts of others and whether there is adequate empirical support for the postulation of a Machiavellian personality characterized by this kind of immunity.

Studies of Resistance to Social Influence

A series of studies dealing with resistance-to-implication (Exline, Thibaut, Hickey & Gumpert, 1970; Bogart, Geis, Levy & Zimbardo, 1970), partner influence on task performance (Harris, Note 2; Durkin, 1970), attitude change (Geis, Krupat & Berger, Note 3; Epstein, 1969; Feiler,

Note 4) and the effect of negative feedback on self-description (Jones, Gergen & Davis, 1962) will be reviewed in search of evidence to support the thesis that Highs are extremely resistant to social influence.

Geis and Christie (1970) predicated this thesis on empirical findings that revealed Highs to be emotionally detached and suspicious of others. Evidence of Highs' emotional detachment was furnished by the resistance-to-implication study by Exline et al. (1970). After Highs acquiesced to a confederate's cheating on an experimental task, they were interrogated by the experimenter. Highs maintained longer eye contact with the experimenter (while lying about their innocence) than did Lows and were measured by independent observers to have appeared less anxious than Lows during both baseline and interrogation periods. The data on duration of eye contact and emotional appearance support the inference that Highs were more emotionally detached than Lows in this paradigm. Geis and Christie (1970) speculated that Highs' emotional detachment means that they will be indifferent to what others think of their actions and will instead attend to information which will help them achieve their desired outcomes.

Evidence that Highs are more suspicious of people than Lows was furnished by Christie, Gergen and Marlowe (1970). In this study, Highs and Lows participated in a two-man, nonzero sum game in which they competed against an unseen player whose choices were preprogrammed to be identical for each subject. Following the game, subjects were asked to rate their unseen opponent on a trustworthiness dimension. Highs rated this individual as being significantly less trustworthy than did Lows. This finding supports the inference that Highs were more suspicious of their partner in this paradigm than were Lows and is consistent with evidence from Harris (Note 2) that Highs have a negative view of people

in general. Geis and Christie (1970) hypothesized that Highs' suspiciousness of others leaves them more vigilant than Lows against others' attempts to influence them and thereby reduces their susceptibility to social influence.

Now that the theoretical groundwork for the thesis that Highs are extremely resistant to social influence has been examined along with supporting evidence, the studies designed to directly test this thesis can be examined. The resistance-to-implication studies by Exline et al. (1970) and Bogart et al. (1970) will be considered first. Exline et al. (1970) assigned a subject and a confederate to perform an experimental task. During the task, the experimenter left the room to take a long distance phone call and the confederate proceeded to implicate the subject in cheating by locating the answers to the experimental problems, writing them down on the scrap paper both were using and reciting these answers out loud. Following completion of the task, the experimenter interviewed both partners concerning the problem-solving methods they had employed, gradually showing increased suspicion until he accused them of cheating and attempted to extract a confession.

Highs acquiesced to the confederate's cheating to the same degree as Lows - as measured by not immediately informing the experimenter of the cheating, restraining the partner from cheating or asking to withdraw from the experiment - although independent observers concluded that Highs resisted the confederate's implication attempts more vigorously than Lows throughout the period assigned to the task. Two operational measures of resistance to social influence were duration of eye contact while lying about being innocent and confession to complicity in cheating. Highs maintained longer eye contact while maintaining their innocence than did Lows. Highs also confessed less often than Lows,

overall. Independent observers rated the subjects on an anxiety dimension during baseline and interrogation periods. Highs appeared to be considerably less anxious than Lows in both periods. Geis and Christie (1970) have interpreted the data on duration of eye contact and emotional appearance to mean that Highs are more emotionally detached than Lows.

This study provided mixed support for the prediction that Highs would resist implication more effectively than Lows. Highs and Lows acquiesced to the confederate's implication attempts to the same degree which fails to support the experimental prediction. This finding may be due to the limited options of resistance available to them. The confederate had located the answers, written them down on a scrap paper and recited them out loud. Resistance to implication under these circumstances would have required the subject to adopt extreme behaviors such as physically restraining the confederate from cheating, reporting the cheating to the experimenter or asking to withdraw from the experiment. The extremity of the alternatives may explain why only 4 of 42 subjects adopted them. Whatever the explanation for this high degree of acquiescence in cheating, the behavior of the 38 subjects who went along with the actions of the confederate would seem to support Machiavelli's contention that men are dishonest.

The paradigm also provided evidence which supports the prediction that Highs would resist implication more effectively than Lows. Independent observers found that Highs displayed greater initial resistance to the confederate's implication attempt than did Lows. Highs confessed less often than Lows and maintained longer eye contact with the experimenter while claiming to be innocent. Taken as a whole, the pattern of results from this study provides a small measure of support for

the thesis that Highs are more resistant to social influence than Lows.

Bogart et al. (1970) adapted the Exline et al. (1970) paradigm to examine the effects of Machiavellianism and dissonance variables on self-ratings of personal morality. A confederate was used to implicate the subject in cheating after the experimenter left the room to receive a long distance phone call as in the previous paradigm. In this study, implication was attempted by arranging to have the confederate find the answer sheet within the room and have him simply urge the subject to use the answers. Here, the subject had a less extreme option in resisting the implication attempt by the confederate. He could simply refuse to use the confederate's answers.

Two dissonance conditions were presented in this paradigm. In the high dissonance condition, the confederate's personality was unfavorably described by the experimenter prior to the task. The experimenters presumed that this condition would arouse a high level of dissonance in subjects who complied with the confederate's urging to cheat because they would be complying with an unliked, low-prestige partner, and would thus, have little justification for cheating. In the low dissonance condition, the confederate's personality was described prior to the task in a manner that made him appear to be liked and high in prestige. The experimenters reasoned that this condition would arouse a low level of dissonance in complying subjects as they would have considerable justification for cheating. The Mach IV scale was readministered to all subjects following completion of the task to assess changes in self-ratings on the morality dimension. The Mach IV scale was chosen to measure morality since it contains items relevant to conventional Judeo-Christian values.

The results of this investigation were also indecisive. Highs cheated no more frequently than did Lows, complying more often with the attractive partner (low-dissonance condition) than the unattractive partner (high-dissonance condition). Lows complied equally in both treatment conditions. Highs and Lows differed in the shifts observed in their Mach IV scores. Highs who complied in the high and low dissonance conditions did not significantly change their self-ratings afterwards. In sharp contrast, Lows who complied in the high-dissonance condition obtained higher Mach IV scores on the second testing, while those complying in the low-dissonance condition obtained lower Mach IV scores.

The pattern of experimental results failed to support the prediction that Highs would resist implication more effectively than Lows. Highs and Lows demonstrated equivalent rates of compliance which is consistent with the results of the prior Exline et al. (1970) investigation. It is important to note that the overall compliance rates for the two studies were strikingly different. Thirty-eight of 42 subjects in the Exline et al. (1970) paradigm complied with the confederate as opposed to 29 of 61 subjects in the Bogart et al. (1970) study. The difference in compliance rates may have been due to the different options for resistance available to the subjects. In the Exline group's situation, successful resistance to implication would have required physical restraint of the confederate, reporting the confederate's cheating to the experimenter or withdrawing from the experiment. These could have been extreme behaviors for college undergraduates. In sharp contrast, the Bogart group's situation afforded subjects the less extreme option of simply refusing to use the stolen answers.

The finding in the Bogart situation that Highs complied more often in the low-dissonance condition than in the high-dissonance condition is difficult to explain. Bogart et al. (1970) argues that Highs had more justification to comply with the confederate when he was described as being attractive and possessing high-status (low-dissonance condition), than when he was described in an unattractive fashion (high-dissonance condition). This explanation is unsatisfactory because it begs the question of why partner attractiveness would serve as a justification for Highs' compliance. The role of perceptions of partner attractiveness in justifying compliance by Highs appears to be particularly questionable in light of Highs' negative evaluation of others (Harris, Note 2) and emotional detachment in interpersonal situations (Geis & Christie, 1970; Exline et al., 1970). Lows exhibited identical compliance rates in both high and low-dissonance conditions. The authors plausibly argue that this finding reflected Lows' greater emotional involvement with their partners.

Geis and Christie (1970) interpreted the before and after measures of Highs' and Lows' Mach IV scores as providing evidence of Highs' greater resistance to social influence. Methodological problems render this conclusion questionable. The use of a before-after design to measure changes in self-ratings following compliance with a confederate makes interpretation of the data very difficult due to possible interaction between the pretest (the first administration of the Mach IV scale) and the experimental manipulation (the confederate's attempts to gain the subject's compliance). Insko (1967) cautioned:

A study is not necessarily invalid simply because it employs a before-after design. We really, however, need more information about the circumstances under which a pretest x

persuasive manipulation interaction might or might not occur. Satisfactory and thorough evaluation of attitude change research based on before-after designs cannot be achieved until such information is possessed (p. 5).

The stability of pretest-posttest measures of Highs on the Mach IV scale need not reflect resistance to social influence. The stability in Mach IV scores may be due to indifference whether their actions and beliefs appear consistent, tolerance of cognitive dissonance or concern that their self-ratings appear consistent. Thus, the data admit several alternative interpretations.

The interpretation of Lows; high Mach IV scores in the high-dissonance condition and lower Mach IV scores in the low-dissonance condition is also unclear due to the methodological problems inherent in before-after designs and the availability of alternative explanations. While Geis and Christie (1970) construed these findings to mean that Lows were more vulnerable to social influence than Highs, it seems equally plausible that the findings reflect Lows' greater concern about appearing consistent in belief and action or lower tolerance of cognitive dissonance.

The Mach IV scale seems to be an inappropriate tool for the measurement of morality. The scale contains items dealing with interpersonal tactics and description of human nature in addition to those dealing with abstract morality (Christie, 1970c). The heterogeneous item content of the scale would seem to preclude the precise measurement of morality.

The two resistance-to-implication studies provided weak support at best for the thesis that Highs resist social influence more effectively than Lows. In both studies, Highs and Lows acquiesced or complied with

the confederate's urging to cheat to an equivalent degree. The high overall rate of compliance found in both studies would seem to support Machiavelli's contention that men are dishonest. The Exline et al. (1970) paradigm provided data which supports the thesis. Highs exhibited longer eye contact while maintaining their innocence, confessed to cheating less often and appeared to be less anxious than Lows. The attitude change data from the Bogart et al. (1970) situation cannot be definitively interpreted to either support or contradict the experimental thesis due to problems of methodology, alternative explanations and the inappropriateness of using the Mach IV scale to measure morality.

Harris (Note 2) and Durkin (1970) studies the influence of partners on task performance. Harris instructed Highs and Lows to read excerpts from Beckett's Waiting for Godot and then individually rate the two main protagonists on 16 esoteric traits on a 10-point scale. After the subject rated the first protagonist alone, he was asked to rate the same character jointly with either a High or Low partner. The same procedure was followed for the rating of the second protagonist. Machiavellianism was counterbalanced so that if the partner for the rating of the first protagonist was a High, the partner for the evaluation of the second protagonist would be a Low.

Highs changed their judgments when rating the protagonists jointly with a partner to a considerably smaller degree than Lows across both High and Low partners. While this outcome appears to support the prediction that Highs would resist their partners' influence to a greater extent than Lows, the methodological difficulties inherent in a before-after design make a precise interpretation impossible. As Insko (1967) cautioned, the experimenter using a before-after design in the study of attitude change runs the risk of an interaction between the pretest

and the manipulation. An alternative explanation for the Harris data is that Highs were more concerned with appearing consistent in their ratings of the protagonists than Lows. Taken together, the methodological problems inherent in a before-after design and the availability of a plausible alternative explanation of the experimental results necessitate a cautious acceptance of the Harris findings.

If the Harris (Note 2) findings are cautiously accepted, the paradigm provides evidence of a difference between Highs and Lows in resistance to social influence. The paradigm was not designed to provide the information required to determine whether the operative influence process was conformity or compliance. The process of conformity involves the alteration of the subject's private perception of a stimulus for a prolonged period of time, while the compliance process produces a shift in only the subject's public behavior (Wrightsman, 1973). An operational distinction between these processes would involve private measurement of the subject's perceptions (ratings of the protagonists) at least several weeks after the post measure was completed. Since this procedure was not incorporated into the design of the Harris experiment, it remains unclear whether Highs were more resistant than Lows to a process of conformity or compliance.

Durkin (1970) placed males and females into 23 two-boy, two-girl tetrads. The tetrads were given a cooperative task in which they had to roll a ball up a spiral ramp. Individual skill levels were compared with joint performance.

Tetrads containing Highs performed in a manner that suggested to independent observers that each player's individual skill accounted for the tetrad's overall performance. Durkin (1970) inferred from this finding that Highs were uninfluenced by their partner. Tetrads containing

Lows seemed to perform in a manner that suggested that an interaction between the members accounted for the overall performance. Lows' performance did not seem to simply reflect a summation of skill levels. The author interpreted this finding to mean that Lows were more influenced by their partners than Highs.

The main problem in the interpretation of Durkin's (1970) findings is that the presence of interaction among the subjects does not in itself constitute satisfactory evidence of susceptibility to social influence. A second problem in interpreting the data is that merely noting that there was interaction among members of the tetrads does not reveal who influenced whom. These problems render the Durkin findings uninterpretable with respect to the support or contradiction of the experimental thesis.

The partner influence on task performance studies of Harris (Note 2) and Durkin (1970) provide evidence which is consistent with the thesis that Highs are more resistant to social influence than Lows, but which is open to alternative interpretations. While the Harris data appears to show that Highs shifted their protagonist ratings to a smaller degree than Lows when they interacted with their partners, the danger of an interaction between the pretest and the manipulation and the alternative possibility that Highs were concerned that their ratings appeared consistent rendered a precise interpretation impossible. Similarly, while the Durkin evidence that Lows interacted more vigorously with their partners than Highs is consistent with the experimental thesis, it is too ambiguous to provide direct evidence that Highs differed from Lows in their resistance to social influence.

The attitude change studies may be divided into face-to-face interaction paradigms (Geis et al., Note 3) and counter-attitudinal advocacy

paradigms (Epstein, 1969; Feiler, Note 4). The face-to-face interaction study will be examined first. Geis et al. (Note 3) arranged subjects in groups of either four or five. Each group was composed so that one High and one Low agreed with the Mach IV item, "The best way to handle people is to tell them what they want to hear." Each group also contained one High and one Low who disagreed with this item. The groups were instructed to discuss a revised version of this Mach IV item for 10 minutes. Half of the groups were to discuss the revised item, "Tell them what they want to hear, rather than telling the truth," while the remaining half were to discuss, "Tell them the truth, rather than what they want to hear." The experimenter collected each subject's opinion on the discussion topic in private before the discussions began and then asked the groups to proceed with their discussions with the objective of reaching a consensus. After the discussions were completed, each subject privately indicated his own position on the discussed item for a second time. Thus, this investigation of attitude change used a before-after design.

The crucial datum concerned shifts from the first rating of opinion taken prior to the discussion to the second which came at the end of the discussion. Consistent with the experimental thesis, only Lows exhibited a shift in their opinion on the revised item. The main problems in interpreting this finding concern the use of a before-after design, the availability of an alternative explanation and the inability of the experiment to discriminate between processes of conformity and compliance. The use of a before-after design introduced the danger that the first rating of opinion interacted in an unknown fashion with the subsequent discussion. The risk of this kind of interaction requires that the finding be accepted with caution. The

finding that only Lows exhibited an attitudinal shift appears to be open to the alternative explanation that Highs were more concerned than Lows about appearing consistent in their attitudes. Finally, since the second measure of opinion was taken only 10 minutes after the first, the data do not permit us to determine whether a conformity process or a compliance process was operating in this paradigm. These difficulties require that the Geis et al. (Note 3) data be treated cautiously.

The counter-attitudinal advocacy studies were designed by Epstein (1969) and Feiler (Note 4). Epstein selected Highs and Lows who strongly advocated flouridation of water so that there would be no difference between Highs and Lows on this issue. Subjects were told that the experimenter was devising a tape-recorded "discussion series" concerning flouridation for college radio stations. Half the subjects read a booklet with a "positive sponsor" and the remaining half read a booklet with a "negative sponsor" which contained the same arguments against flouridation. Half of the subjects were then asked to develop talks opposing flouridation for the college radio networks. Attitudes towards flouridation were subsequently measured for both subjects who had only silently read the booklet and those who developed talks supporting the counter-attitudinal position (opposition to flouridation). Again, attitude change was studied using a before-after design.

Lows shifted more toward antiflouridation attitudes following talks opposing flouridation than after the silent reading of the booklets. Highs, in contrast, exhibited stronger opposition to flouridation after reading the factual arguments contained in the booklets than after delivering talks against flouridation. The crucial finding

in this study was that only Lows shifted their attitudes concerning flouridation following public advocacy of a counter-attitudinal position (opposition to flouridation).

Geis and Christie (1970) interpreted this pattern of results to mean that Higs were more resistant to social influence than Lows. These findings were held to support the conclusion that the rational Higs could only be influenced by factual arguments, while Lows were more sensitive to what others would think of a discrepancy between public behavior and stated opinion. While the Epstein findings appear to be consistent with the experimental thesis, problems concerning the use of a before-after design, alternative explanation of these findings and the discrimination between the processes of conformity and compliance necessitate a conservative interpretation. The use of a before-after design introduced the risk that the first measurement of opinion might have interacted with the subsequent manipulations (reading booklets and delivering counter-attitudinal speeches). The unknown danger of such an interaction renders a precise interpretation of the data impossible. Geis and Christie (1970) made two large interpretive leaps in their discussion of the Epstein data. Their first leap involved concluding from the finding that only Lows shifted their attitudes following public advocacy of a counter-attitudinal position that Lows were more concerned than Higs about appearing consistent in public behavior and private opinion. The second leap involved asserting that the first conclusion was proof that Lows are more vulnerable than Higs to social influence. While the Epstein data is consistent with both conclusions, it does not directly prove them. Finally, since the second measurement of private opinion was taken within the same day as the

first measurement, it is impossible to determine whether a conformity or a compliance process was operating in this paradigm. For these reasons the Epstein date must be interpreted with caution.

The Feiler (Note 4) paradigm placed subjects in groups of four. Two subjects debated each other twice in alternate rounds and also judged the debates of the other two. In one debate, the subject defended a counter-attitudinal position, while in his second debate he defended a position which he personally endorsed. Subject opinions were measured before and after the debates.

Consistent with the prediction that Highs would be more resistant to social influence than Lows, only Lows shifted their attitudes following advocacy of a counter-attitudinal position. This shift was observed only when Lows believed that they had won the debates. Lows also endorsed their private opinion more strongly following debates in which they defended this opinion regardless of whether they believed that they had won or lost. Highs, in contrast, did not change their opinions across either condition regardless of whether they believed that they had won or lost.

Interpretation of these findings is complicated by the problems inherent in a before-after design, the possibility of an alternative interpretation and the inability to discriminate between conformity and compliance processes. The choice of a before-after design created the danger that the first measurement of the subjects' opinions might interact with the subsequent manipulation (the debates). Since the presence of such an interaction is unknown, the findings require cautious interpretation. As in the previous studies, while the data are consistent with the experimental thesis, the data do not provide direct proof of it. It is plausible to argue that the data only show that Lows are

more concerned than Highs about appearing discrepant in public behavior and private opinion. Concern about appearing inconsistent does not empirically require that Lows also be more vulnerable to social influence attempts. Lastly, the short interval between the first and second measurements of opinion made it impossible to determine whether processes involving conformity or compliance were present in the Feiler paradigm. These difficulties preclude precise interpretation of the data.

The counter-attitudinal advocacy paradigms provide data which is consistent with the experimental thesis, but which cannot constitute firm proof of the thesis due to problems concerning methodology and availability of alternative explanations. The methodological problem shared by both the Epstein (1969) and Feiler (Note 4) studies was the choice of a before-after design. This design entails the serious danger of an interaction between the first measurement of attitude and the subsequent manipulation. The risk of such an interaction renders interpretation inexact and hazardous.

Both paradigms were open to a plausible alternative explanation of their results. In both cases, it could be convincingly argued that the data only showed that Lows were more concerned than Highs about appearing consistent and that this concern could be empirically unrelated to vulnerability to the influence attempts of others.

A final criticism of both studies was that they did not permit the determination of whether conformity or compliance processes were in operation. Without this information, it is impossible to ascertain to which influence processes the results apply. This constitutes a serious problem since it is possible that a subject who resists a compliance process might be vulnerable to a conformity process. Overall, the three

attitude change studies provide only ambiguous support for the experimental thesis that Highs are more resistant to social influence than Lows.

Finally, Jones et al. (1962) investigated the effects of negative feedback on self-description. Subjects were told that they would be given two personality interviews to provide information on interviewer-interviewee impressions for a graduate personality course. Half of the subjects were asked to honestly portray themselves, while the other half was asked to con the interviewer into believing that they were nicer than they were. Following the first interview, the interviewer left to prepare an evaluation while the subject wrote her impression of the interviewer. Subjects were then given negative or positive feedback concerning their personality by the interviewer after which they were asked to complete a second rating on him. All subjects were then interviewed by a different interviewer using the same procedure as before.

The crucial datum in this experiment was the degree of change in the positiveness of self-description from the first interview to the second. Consistent with the thesis that Highs are more resistant to social influence than Lows, only Lows described themselves more positively during the second interview following negative feedback from the first interviewer. Highs, in contrast to Lows, did not alter their self-descriptions following either positive or negative feedback. Two problems render interpretation of the data very difficult. First, the paradigm involved a before-after design so that there was opportunity for the first self-description to interact with the positive or negative feedback in an undisclosed fashion. The danger of such an interaction

requires that the data be interpreted conservatively. Second, while the findings are consistent with the experimental thesis, they may also be plausibly explained as the result of Highs' greater concern to be consistent in their self-descriptions. Therefore, while the findings from this study seem to be consistent with the experimental thesis, problems due to methodology and availability of an alternative explanation render this study's implication for the experimental thesis uncertain.

While the social manipulation studies were successful in supporting the first thesis that Highs are more effective manipulators than Lows, the resistance to social influence studies have failed to provide consistent and convincing evidence of the Machiavellianism scales' criterion validity with respect to resistance of others' manipulative attempts. Neither have these studies provided strong empirical support for the conceptualization of a Machiavellian personality characterized by resistance to social influence. Problems concerning the use of a before-after design and the existence of plausible alternative explanations of the data have rendered the meaning of the empirical findings ambiguous so that the second thesis stands neither supported nor contradicted.

The current impasse in evaluating the second thesis that Highs are more resistant to social influence than Lows is unfortunate because the question of vulnerability to social influence is both a reasonable and important one. This question is reasonable because there is empirical support to demonstrate that Highs are more emotionally detached (Exline et al., 1970) and suspicious of others (Christie et al., 1970) than lows. These characteristics would seem to render Highs more resistant to social influence as Highs would be insensitive to what others felt

about their actions. Suspiciousness of others would protect Highs from the manipulative attempts of others as Highs would be vigilant against attempts to deceive them. Based on these characteristics, the prediction that Highs would be more resistant to social influence than Lows seems completely warranted.

The question of whether Highs are more resistant to social influence than Lows possesses considerable importance for both personality theory and social psychology. The Machiavellian concept has played an important role in the speculations of Freud, Adler and Fromm. The incorporation of Machiavellian attitudes and behaviors can be seen in Freud's oral personality, Adler's "will to power" and Fromm's exploitative orientation. But while these theorists incorporated aspects of a Machiavellian personality into their models of personality on a piecemeal basis, a completely Machiavellian personality typology had to await the contribution of Agger, Christie and Pinner. Their proposal of a Machiavellian personality provided personality theory with a new conceptual scheme for the description and explanation of human personality. The usefulness of this typology has already been demonstrated for the prediction of the manipulative behavior. What remains is to determine whether this typology is useful in predicting resistance to social influence as well.

The question of Highs' resistance to social influence also possesses important implications for social psychology. This question should interest social psychologists because it deals with the exercise of interpersonal influence which is a crucial problem for the discipline. Examination of the Machiavellian as a target of influence promises to extend the social psychologist's understanding of the mechanics of interpersonal influence, particularly the conditions under which individ-

uals resist or comply with the influence attempts of others. Thus, the question of Highs' vulnerability to social influence promises to be informative to both personality and social psychology.

Given that the question of whether Highs are more resistant to social influence than Lows is both reasonable and important, the next task is to decide which social influence process - compliance or conformity - should be studied. In order to make that decision, these two processes and paradigms which illustrate their operation will be examined within the context of social norm formation. When both processes and their respective paradigms have been reviewed, a rationale for selecting one of these processes in favor of the other will be presented.

Social Norm Formation

Norms formed in judgment situations are characterized by a range of estimates and a modal point located within that range. Norms constitute expectations or models of the environment formed from personal experience and social communication. These models summarize and evaluate in terms of acceptability the phenomena - persons, behavior, events and objects - which they represent. A social norm is a range of judgments and a corresponding modal point located within that range which emerge from the interaction of two or more individuals and which is shared by the members of this social unit to varying degrees. Sherif and Sherif (1969) emphasized the evaluative function of social norms by likening them to a yardstick:

A social norm is an evaluative scale (e.g., yardstick) designating an acceptable latitude and an objectionable latitude for behavior, activity, events, beliefs or any

other subject of concern to members of a social unit
(p. 141).

Social norms may be described in terms of their arbitrariness.

Pace and MacNeil (1974) explained:

The degree of arbitrariness of a given norm may be placed on a theoretical continuum from least to most arbitrary. The least arbitrary norm is called the natural norm. The natural norm is that norm (defined by range and focus) which, under the conditions, will develop in the absence of external (experimental) influence.

The more unrealistic (unnatural) the norm that develops, the more arbitrary it is (p. 576).

The formation of social norms in social judgment situations (such as the autokinetic situation) results from a convergence of the norms (judgment ranges and their modal points) possessed by the members of a social unit. This convergence depends upon the properties of the stimulus situation, the unique characteristics of the judging individuals and the emergent properties of the interaction between the individuals and the situation (Sherif & Sherif, 1969). The most important properties of the stimulus situation are the degree of stimulus structure and the experimenter's communications. Stimulus structure is defined by the number of alternative ways that the stimulus situation may be patterned. The less structure the stimulus situation contains, the more influential will be social communications which provide alternative means of patterning the situation (Pace & MacNeil, 1974).

Deutsch and Gerard (1955) termed this proved informational influence.

The experimenter's communications can influence both a subject's self-attributions and the attributions his interaction partners apply to him with the effect of facilitating or inhibiting the convergence of individual norms. Individuals who are told that their judgments are accurate tend to attribute greater expertise to themselves and show less convergence with their interaction partners' norms than those who are told that their judgments are inaccurate (Kelman, 1950; Mausner, 1954; Harvey & Rutherford, 1958; Luchins & Luchins, 1961; Stone, 1967). Moreover, the experimenter's attributions of credibility, prestige, status and task competence to a subject tend to be adopted by his interaction partners with the effect of increasing the convergence of their norms with his private norm (Mausner, 1953; Kidd & Campbell, 1955; Croner & Willis, 1961; Graham, 1962).

A crucial characteristic of the judging individual is his confidence in the accuracy of his estimates. Subjects who lack confidence tend to converge with the norms of their interaction partners (Sherif & Sherif, 1969) and task instructions which heighten his performance anxiety tend to increase the degree to which he converges with the norms of others (Walters, Marshall & Shooter, 1960). Conversely, as stated earlier, subjects who are told that their judgments are accurate tend to be confident in their judgments and are resistant to the norms of others (Kelman, 1950, Mausner, 1954; Harvey & Rutherford, 1958; Luchins & Luchins, 1961; Stone, 1967).

Two important emergent properties of the interaction between subjects and the stimulus situation are the arbitrariness of an individual norm and the demand characteristics of the experiment. The arbitrariness of a norm is defined by its discrepancy from the natural norm (the range and modal point located within that range which would

be formed in the absence of experimental manipulation). The more arbitrary an individual's norm is perceived to be by the other interaction partners, the lower their tendency to converge with it (Campbell, 1961; MacNeil, Note 7). The demand characteristics of an experiment represent a second emergent property of the interaction between subjects and the stimulus situation. Orne (1969) postulated that subjects search the experimental situation for cues regarding the nature of the experimental hypothesis so that they can perform in a confirmatory fashion. Presumably, convergence observed in judgment situations may reflect a subject's attempt to help the experimenter prove what is believed to be the experimental hypothesis. Schulman (1967) termed this process normative influence.

The Compliance Process

Compliance and conformity may be conceptualized as two separate processes capable of producing the convergence of estimates found in social judgment situations. The convergence of judgments created by the compliance process appears to be a temporary phenomenon lasting only as long as social pressure is present in the judgment situation (Pollis & Montgomery, 1966). The convergence of estimates seems to represent public behavior unrelated to private perceptions. In compliance, private perceptions appear to remain unaltered (Wrightsmann, 1973). The adoption of public behavior may serve a broad range of purposes. Compliance behavior may function to avoid real or imagined threats of reprisal (Schulman, 1967). Social exchange theory (Gouldner, 1960; Adams, 1965) suggests that a complying response may be rewarding to some individuals, while it may serve as a down payment on anticipated rewards for others (Hollander & Willis, 1967). Finally, compliance may enable a low-status individual to ingratiate himself

with the group leader (Jones, 1965) or a leader to increase his "idiosyncrasy credit" within the group (Hollander, 1958, 1964).

Paradigms most likely to produce compliance behavior are characterized by a high degree of stimulus structure (Sherif & Sherif, 1969). Two studies representative of the compliance process were by Asch (1951) and Crutchfield (1955). These studies will be described and their major findings considered. Asch arranged for six confederates to give false public judgments on 12 critical trials in the presence of a naive subject in an 18-trial line comparison task. The lengths to be compared were objectively different so that few subjects erred when making line comparisons alone (Asch, 1956). While 32 per cent of all subjects responses on the critical trials were in the direction of the majority, there was considerable variation due to individual differences (Asch, 1956, 1958). A subsequent test of the subjects' line comparisons when alone and removed from social pressure was not conducted. This procedure would have provided valuable evidence concerning whether compliance or conformity processes were operating in this paradigm.

The Asch paradigm contained a high degree of stimulus structure as the differences in length among the lines to be matched were apparent to most subjects. The duration of interaction was limited to the trials presented in a single experimental session. A situation characterized by a considerable degree of stimulus structure would be expected to produce a change in public behavior (verbal line comparisons) without an accompanying change in the subjects' private perceptions of the stimuli. This analysis was supported by the results of post-experimental questioning of subjects who had agreed with the majority on critical trials. Few of these subjects reported having perceived the majority's answers as being correct which would have been indicative of conformity.

The bulk of subjects who had publicly agreed with the majority explained that they had either agreed while privately believing that the majority was incorrect or had agreed because the majority reduced their confidence in the answer they still believed to be correct (Asch, 1951, 1956). The persistence of the convergent judgments obtained in this paradigm when the subject was removed from social pressure could not be determined as a subsequent test of line comparisons under this condition was not conducted. Therefore, valuable evidence concerning whether the convergence of judgments represented compliance or conformity was not acquired.

Two variations in the Asch paradigm were of particular interest. In the first variation, Asch reduced the discrepancy among the lengths of the lines to be compared and obtained a higher rate of agreement with the majority on critical trials (Asch, 1951). This variation served to reduce the amount of stimulus structure present in the situation and consequently the arbitrariness of the confederates' norm. The results were consistent with the proposition that reduction of stimulus structure and norm arbitrariness increases the importance of social influences which provide alternative ways to pattern the experience (Sherif & Sherif, 1969). Presumably, the increased rate of agreement on critical trials was due to a conformity process in addition to the compliance produced by the presence of a unanimous majority.

In the second variation, the number of confederates was altered (Asch, 1956; 1958; Rosenberg, 1961). These studies revealed that the highest rate of agreement was obtained using three confederates. The introduction of additional confederates did not appreciably improve the rate of agreement. Variation in the number of confederates may be conceptualized as manipulating the degree of external pressure on the

subject to publicly report line comparisons in a manner that is consistent with the judgments of the majority. This manipulation of external social pressure would seem to alter the effectiveness of the compliance process in altering public behavior (but not private perceptions).

Crutchfield (1955) placed five subjects in adjacent cubicles with instructions to answer multiple-choice questions in varying order by activating the appropriate switch on their individual panels. The questions ranged from line comparison to opinions and attitudes. Since each person's view of the other subjects was obstructed, feedback was supposedly provided about how preceding subjects answered the questions by a set of panel lights. In reality, the experimenter provided all five subjects with the same information and had them respond at the same time. The critical datum was the individual's agreement on 21 critical trials. Thirty-eight percent of all subjects responses on critical trials agreed with the fictitious majority, although in this case, too, the finding must be qualified by the wide range of individual differences in judgments. A later testing of the subjects in which they answered the multiple-choice questions alone and isolated from social pressure was not conducted. Again, no evidence is available concerning the persistence of social norms in the absence of social pressure. This denies the reader information crucial to the discrimination between compliance and conformity effects.

The judgment tasks in the Crutchfield situation contained a high degree of stimulus structure equivalent to that present in the Asch situation. There was no face-to-face interaction among the five subjects and the indirect interaction through the medium of console lights was limited to the single experimental session. These character-

istics of the Crutchfield paradigm render it likely that a compliance process was responsible for most of the agreement observed with the fictitious majority.

The process of compliance has been described as one which produces a temporary convergence of estimates persisting only as long as social pressure is present. Compliance appears to serve a wide range of purposes including avoidance of reprisals, acquisition of rewards, ingratiation with group leaders and accumulation of "idiosyncrasy credit" within groups. Paradigms which generate compliance are characterized by a considerable degree of structure within the stimulus situation. Studies by Asch (1951) and Crutchfield (1955) were reviewed and this characteristic was found to be present in each paradigm. Since subjects were not subsequently observed alone and isolated from social pressure in either situation, the persistence of social norms in the absence of social pressure could not be determined. This information would have proved useful in determining whether the convergence of judgments obtained in these two paradigms was due to compliance or conformity.

The Conformity Process

The process of conformity is distinct from that of compliance. The convergence of estimates observed in conformity appears to be a more permanent phenomenon than that found in compliance. In conformity, the convergence of judgments persists in the absence of social pressure (Pollis & Montgomery, 1966). This convergence seems to represent a shift in private perception rather than the simple adoption of public behavior (Sherif & Sherif, 1969; Wrightsman, 1973). The conformity process appears to be due to the operation of social influences in the patterning of experience when the external stimulus situation is unstructured (Sherif & Sherif, 1969). The patterning process is postulated

to involve central nervous system processes in addition to peripheral receptor mechanisms (Luchins & Luchins, 1963).

Paradigms possessing the greatest likelihood of producing conformity contain a low degree of stimulus structure (Sherif & Sherif, 1969). Conformity situations by Sherif (1935) and MacNeil (MacNeil & Gregory, 1969) will be described and their main findings reviewed. Sherif (1935) employed the autokinetic effect - the illusion that a stationary point of light in a completely darkened room possesses movement - in his important investigation of social norm formation. Sherif recorded estimates of movement from subjects making judgments alone, subjects who had previously made judgments alone but were subsequently placed together, subjects facing the autokinetic situation together for the first time and subjects making judgments alone after making judgments together. Several important findings emerged from these manipulations:

- (1) There were marked individual differences in subjects' estimates of movement.
- (2) Subjects making their judgments alone established a range and mode located within that range (an individual norm).
- (3) When subjects who had previously made their judgments alone were brought together, their individual norms tended to converge. The convergence was greater for subjects who had no previous opportunity to establish personal norms while alone.
- (4) Subjects who faced the autokinetic situation together for the first time formed a range and mode within that range (a social norm) characteristic of that social unit and fluctuation of the norm over trials was a social unit effect.

(5) Group members who faced the autokinetic situation alone after the development of a group norm adhered to that social norm in their judgments.

The autokinetic situation used by Sherif (1935) contained a low degree of stimulus structure. A situation possessing this property would be expected to produce a shift in subjects' judgments which would persist after the subject was isolated from social pressure. Several researchers in addition to Sherif have demonstrated the persistence of social norms formed within the autokinetic situation for periods of time of up to one year (Bovard, 1951; Rohrer, Barron, Hoffman & Swander, 1954; Walter, 1955; MacNeil, Note 8). The low degree of stimulus structure characteristic of the autokinetic situation and the demonstrated persistence of social norms after subjects have been isolated from social pressure make it most likely that the observed convergence of judgments constitutes conformity.

The Hex situation was developed by MacNeil (MacNeil & Gregory, 1969) to provide a social norm formation situation equivalent to the autokinetic paradigm. The Hex situation requires the subject to estimate the distance between two points of light in a completely darkened room. Although the light pairs are objectively equidistant, the axes between the lights are at different angles so that the subject perceives the pairs of light as being at varying distances apart. Pace and MacNeil (1974) observed:

The Hex utilizes, in part, the horizontal-vertical illusion to create perceptual differences in the apparent distance between the points of light (Kannapas, 1959).

The stimulus apparatus consists of 13 lights positioned on a vertical board in two overlapping hexagonal patterns

around a center light. Each randomly ordered presentation of the pairs of stimulus lights consists of two lights objectively equidistant (15 in.) from trial to trial but with the axes between the lights being at a different angle for each contingent presentation, thus increasing the differences in Ss' perception (p. 577).

Gregory (Note 5) recorded estimates of distances from subjects making judgments alone, subjects who faced the Hex situation together, subjects who made estimates alone and later together, and subjects who made estimates together and later alone. His investigation revealed that:

(1) Subjects who faced the Hex situation alone formed and retained a personal norm in later sessions in which they were also alone.

(2) Subjects who faced the Hex situation alone and then together converged toward a shared social norm.

(3) Subjects who faced the Hex situation together for the first time maintained the social norm developed in that condition when they later faced the situation alone.

The Hex situation developed by MacNeil (MacNeil & Gregory, 1969) possessed a low degree of stimulus structure which was slightly greater than that of the autokinetic situation (Pace & MacNeil, 1974). A situation characterized by this property would be expected to result in judgments which would persist in the absence of social pressure. The findings by Gregory (Note 5) demonstrated the persistence of social norms when the subjects were retested alone and removed from social pressure. Again, the low degree of stimulus structure present in the Hex situation coupled with the finding of the persistence of emergent

social norms indicate that the observed convergence of judgments represents conformity.

The process of conformity has been described as one which results in an enduring social norm which persists after social pressure is removed. Conformity has been explained as a product of central nervous system processes and peripheral receptor mechanisms which produce an enduring patterning of experience. Paradigms which generate conformity behavior are characterized by a low degree of stimulus structure. Social norm formation situations developed by Sherif (1935) and MacNeil (MacNeil & Gregory, 1969) were examined and this property was found to be present in both. The observation of subjects alone and isolated from social pressure following the development of a social norm provided data concerning the persistence of these norm. This evidence indicate that the convergence of judgments obtained in these paradigms represented conformity.

The Selection of a Social Influence Process

The processes of compliance and conformity have been examined and representative paradigms reviewed. The process of compliance was defined by an impermanence of social norms formed within a judgment situation. Social norms produced by the compliance process were found to persist only as long as social pressure was present. It was postulated that this impermanence is due to the possibility that only public behavior has been altered while private perceptions remain unaffected. In contrast, the process of conformity was characterized by a persistence of the emergent social norm in the absence of social pressure. The greater permanence of social norms produced by conformity was held to be due to the patterning of unstructured stimulus situations by central nervous system processes and peripheral receptor mechanisms.

A choice between the processes of compliance and conformity is necessary in order to frame a meaningful question concerning Highs' and Lows' resistance to social influence. To simply ask whether Highs resisted social influence more effectively than Lows leaves it uncertain which influence process the subjects are resisting. A finding about resistance to social influence based on a compliance paradigm may not be generalizable to resistance within a conformity paradigm. Therefore, the question concerning Highs' and Lows' resistance to social influence must be narrowed down to either compliance or conformity so that it will be clear to which process the experimental findings apply.

The importance of an influence process for social psychology appears to be a reasonable criterion for the selection of one process in favor of another. While compliance and conformity are both ubiquitous to social behavior, conformity alone is theorized to serve as the basis for relatively enduring social norms such as values and stereotypes which are of considerable interest to social psychology. Sherif and Sherif (1969) observed:

The psychological basis of established social norms - such as stereotypes, fashions, conventions, customs and values - is the formation of common reference points or anchorages as a product of interaction among individuals. Once such anchorages are established and internalized by the individual, they become important factors in determining or modifying his reactions to the situations that he will face later alone - social and even nonsocial, especially if the stimulus field is not well structured (p. 207).

Thus the process of conformity is selected because it alone is believed

to generate the enduring social norms which are of particular interest to the discipline of social psychology.

Framing an Experimental Hypothesis

Now that conformity has been selected as the social influence process to be investigated, a specific experimental hypothesis may be proposed. Based on empirical evidence that Highs are more emotionally detached and consequently more insensitive than Lows to others' expectations (Exline et al., 1970) and that Highs are more suspicious of others than Lows (Christie et al., 1970), it is hypothesized that Highs will conform to a lesser degree than Lows within a social judgment situation. The remainder of this chapter will be devoted to the selection of an appropriate methodology with which to test this hypothesis.

Methodological Considerations

The critical considerations in the development of a methodology with which to test the hypothesis - Highs will conform to a lesser degree than Lows within a social judgment situation - are the selection of an appropriate paradigm, experimental procedure, operational definition of the dependent variable (conformity) and subjects. In what follows, each of these considerations will be addressed separately.

Selection of a Paradigm

The paradigm chosen to test the experimental hypothesis should meet three main criteria:

- (1) The paradigm should possess the ability to produce conformity behavior.
- (2) The paradigm should allow differences in the degree to which individuals conform.
- (3) The paradigm should be robust.

The importance of these criteria and the differences among the 12 previously reviewed paradigms with respect to these considerations will be examined in the discussion that follows.

There should be empirical evidence that the selected paradigm is able to produce conformity behavior so that there may be confidence that Highs' and Lows' resistance to the process of conformity--and not compliance--will be tested. A standard for differentiating between these two social influence processes, advanced during the previous review of the resistance to social influence studies, was the persistence of the social norm in the absence of social pressure (Pollis & Montgomery, 1966; MacNeil, Note 6). In operational language, conformity is demonstrated when the social norm (range and modal point located within that range) obtained when subjects make their judgments in each other's presence is subsequently obtained when the subjects are retested alone in the same judgment situation.

A review of the 12 social influence paradigms considered earlier in the chapter reveals that conformity--persistence of a social norm in the absence of social pressure--has only been demonstrated in two situations: the autokinetic situation (Bovard, 1951; Rohrer et al., 1954; Walter, 1955; MacNeil, Note 8) and the Hex situation (Gregory, Note 5). Further, the Asch (1951) and Crutchfield (1955) paradigms are the only situations among the remaining 10 which involve the series of judgments required for the study of the formation of experimental social norms. These two situations were judged to produce compliance rather than conformity due to their high degree of stimulus structure (Asch, 1951, 1956; Crutchfield, 1955; Graham, 1962).

Individual differences with respect to the degree of obtained conformity must be allowed by the paradigm or else differentiation between Highs and Lows on the basis of this variable will not be possible. If the paradigm produced a degree of conformity so strong that nearly all subjects (regardless of their Machiavellianism scores) produced identical judgments, it would be insensitive to possible differences in judgments due to a Machiavellianism variable. Pace and MacNeil (1974) demonstrated that both the autokinetic and Hex situations allowed for individual differences in the extent of conformity. Marked individual differences were observed in the subjects' estimates in both situations when a ratio of one confederate to three naive subjects was used. The experimenter attributed expertise to the confederate to strengthen the influence of his judgments which were located within an arbitrary range of values (discrepant from what an individual would perceive when facing the situations alone).

The final criterion was that the paradigm be robust. Since the experimenter would be limited to one month's experience with the paradigm, it should be relatively insensitive to the minor changes in emphasis, inflection and intonation which could be expected when experience in administering a situation is limited. The sensitivity of a social judgment situation to these factors is believed to be a function of the degree of stimulus structure present (MacNeil, Note 6). Since Pace and MacNeil (1974) concluded that the Hex situation possesses slightly greater stimulus structure than the autokinetic paradigm, the Hex situation would appear to be the more robust situation of the two.

An alternative means of satisfying the third criterion would be to tape the rationale and instructions. This procedure would insure that

the presentation of this information would be identical for each subject. MacNeil (Note 6) argued convincingly against this approach because it would markedly reduce the amount of stimulus structure present in an already relatively unstructured situation. The postulated effect of reduced stimulus structure would be to render the subjects uncomfortable and increase the randomness of their estimates. These outcomes would seem likely to contaminate the experimental findings in the form of increased error variance and preclude a powerful test of the experimental hypothesis.

Three main criteria have been used to evaluate 12 social influence situations with respect to their appropriateness in testing the experimental hypothesis. The autokinetic and Hex situations were the only paradigms which both were able to produce conformity behavior and to allow individual differences in the degree of conformity obtained. The Hex situation was found to fulfill the final criterion of robustness more satisfactorily than the autokinetic paradigm due to its greater degree of stimulus structure. Thus, the Hex situation appears to be the most appropriate paradigm with which to test the experimental hypothesis.

Experimental Procedure

Now that the Hex situation has been chosen, it is necessary to select a specific procedure for its administration. Studies by Gregory (Note 5) and Pace and MacNeil (1974) involved two alternative procedures which may be evaluated for their appropriateness with respect to testing the experimental hypothesis. Gregory's (Note 5) procedure contained a social norm formation condition in which groups of two or three subjects made distance estimates (in the Hex situation) in each other's presence. This procedure provided quantified judgment data which permitted the

calculation of a range and modal point located within that range (a social norm) and the measurement of the degree of convergence among the subjects' judgments. While this procedure allowed the development and measurement of experimental social norms, the social situation-- as defined by the unique characteristics of each subject, the verbal interaction among the participants and the particular pattern of estimates made by the subjects--was not held constant for each subject. Since an appropriate test of the experimental hypothesis requires that the only differences among subjects be their standing on the two Machiavellianism scales, the Gregory procedure which permits major variation in the social situation each subject faces must be judged to be inappropriate.

Pace and MacNeil (1974) composed their experimental groups of one confederate and three naive subjects. The confederate was instructed to present judgments which were considerably discrepant from what a subject facing the situation alone would estimate. The range of these estimates (28 to 40 in.) was termed the arbitrary range. Although different confederates were used with each experimental group, each confederate presented an identical range of judgments. As in the Gregory (Note 5) procedure, the social situation which each subject faced was not identical. Despite the fact that the confederates' judgments were identical with respect to their range, the precise pattern of judgments differed with each confederate. Moreover, the confederates' unique personal characteristics--physical appearance and speech--were allowed to vary. Finally, the individual characteristics of the three naive subjects were inconsistent across groups. These sources of variation rendered the social situation unequivalent for each group of subjects. Thus, the procedure used by Pace and MacNeil (1974) is also inappropriate for a test of the experimental hypothesis.

The use of confederates in the Pace and MacNeil (1974) investigation provided a clue as to how a comparable social situation may be constructed for each subject. Experimental groups composed of a given number of confederates and one naive subject could be formed. The same confederates could be used in each group and these collaborators could present learned sequences of judgments located within the arbitrary range defined earlier. Further, the confederates could be instructed to dress in the same manner for each session and practice presentation of their estimates in a consistent manner. These precautions would seem to produce a nearly identical social situation for each subject.

Two procedural questions concerning the number of confederates and judgment trials remain. The number of confederates used to produce social pressure should be sufficient to draw subjects' estimates into the arbitrary range, yet not so great that there would be no individual differences in the number of judgments which fall within this range. MacNeil (Note 8) obtained a very high degree of conformity--ranging from 77 to 100 per cent-- using a ratio of four confederates to one naive subject. In this case, the confederates were not described to the subject as possessing expertise. MacNeil's finding suggests that a more moderate degree of conformity might be obtained by using a ratio of two confederates to one naive subject, again, without the attribution of expertise.

The final procedural question concerns the number of judgment trials required to demonstrate the presence or absence of conformity. MacNeil (Note 6) contended that 30 trials (six blocks of five trials each) should be sufficient to establish the presence of conformity.

Operational Definition of Conformity

The Pace and MacNeil (1974) investigation operationally defined conformity as the number of judgment medians located within the arbitrary range. This definition seems to be particularly appropriate to the procedure proposed in the last section since the naive subject, presumably, would be responding to the arbitrary judgments of the two confederates. The choice of judgment medians calculated from blocks of five trials each was suggested by MacNeil (Note 6). He argued that judgment medians provide a more representative measure of central tendency than do means. This position was supported by Hays (1963) who observed that medians are less sensitive to extreme scores than means.

The earlier discussion concerning the differentiation of compliance from conformity provided an alternative operational definition of conformity--the persistence of the range and modal point located within that range of the subject's judgments when he is moved from a togetherness situation to one in which he is retested alone. Highs and Lows could be compared with respect to the degree to which their social norms persisted in the retesting period. This definition appears to be an acceptable alternative to that which was used in the Pace and MacNeil (1974) investigation and would seem to possess the additional advantage of providing a check as to whether the convergence of judgments obtained in the paradigm represented compliance or conformity. A comparison between the two definitions appears to be in order.

The first definition (Pace & MacNeil) would appear to be more economical in terms of time invested in testing subjects. The retesting of subjects required by the second definition would double the testing time. The crucial question to be answered is whether this check on

conformity is worth the increased investment of time. It may be plausibly argued that a check on conformity is unnecessary in the Hex situation. Sherif and Sherif (1969) observed that conformity--as opposed to compliance--may be expected from paradigms which possess a low degree of stimulus structure. The production of conformity behavior appears to be an inherent property of situations distinguished by a low order of stimulus structure due to the combined operation of central nervous system processes and peripheral receptor mechanisms which function to pattern the experience (Luchins & Luchins, 1963). Both the Hex and autokinetic situations have been found to possess a low degree of stimulus structure (Sherif & Sherif, 1969; Wrightsman, 1973; Pace & MacNeil, 1974) and as predicted both situations have demonstrated a persistence of the emergent social norm when subjects were retested alone (Bovard, 1951; Rohrer et al., 1954; Walter, 1955; MacNeil, Note 8; Gregory, Note 5). Consequently, it may be concluded that the Hex situation inherently produces conformity behavior due to its low order of stimulus structure and that this renders a check on conformity unnecessary. Thus, since the second definition would be less economical while not producing a compensatory advantage over the first definition, MacNeil and Pace's (1974) operational definition is favored.

The final methodological problem concerns the selection of subjects. The main issues are the use of subjects of one or both sex and the selection of criterion scores with which to define Highs and Lows. There appears to be sex-related differences with respect to self-ratings of the Mach IV and Mach V scales and manipulative behavior. Budner (1962) found that females tended to score lower on the two

Machiavellian scales than did males. Singer (1964) discovered that females also differed from males in their choice of manipulative strategies. These findings erase the possibility that males and females might also differ in their response to the conformity process. To prevent sex-related differences from contributing to experimental error, the sex variable may be controlled by using either males or females in the experiment. Since the Budner (1962) and Singer (1964) studies do not provide sufficient evidence to support speculation as to whether males or females would provide a better test of the experimental hypothesis, selection of one sex on the basis of a coin toss would seem to be in order. The result of that procedure favored males.

The selection of criterion scores with which to define Highs and Lows presents a difficult problem since the eight resistance to social influence studies reviewed earlier in the chapter used considerably different criteria. The main objective in selecting criterion scores is to use scores which will define Highs and Lows to the exclusion of Mids as Christie and Geis (1970a) suggested that Mids might represent a third Machiavellian typology whose inclusion might confound the experimental data. Therefore, it would seem reasonable to adopt Christie and Geis' (1970a) convention of defining Highs and Lows on the basis of Mach IV and Mach V scores located in the upper third and lower third of the obtained score distribution, respectively.

The methodological issues involved in the selection of an appropriate paradigm, experimental procedure, operational definition of conformity and subjects have been considered and a methodology adopted. In the next chapter, the specific details of this methodology will be examined.

CHAPTER II

METHOD

Investigation of the hypothesis--Higs will conform to a lesser degree than Lows within a social judgment situation--required identification of Higs and Lows and their assignment to the Hex situation. This chapter reviews the subjects, materials and procedures used to test the experimental hypothesis.

Subjects

Eighteen undergraduate males (9 Higs and 9 Lows) drawn from Introductory and Social Psychology courses and obtaining Mach IV scores approximately one-third of one standard deviation (6.6) above or below the sample median (86) were assigned to the Hex situation. Higs obtained a mean of 102.4 on the Mach IV scale with a range of 42 (133-92). Lows obtained a mean of 68.3 with a range of 13 (76-64). The 18 males were selected from an initial pool of 150 male and 150 female undergraduates.

Materials

This investigation utilized a Wollensack cassette tape recorder, Mach IV scale, a debriefing questionnaire which included Byrne's (1971) Interpersonal Judgment Scale and the Mach V scale, the Hex laboratory and adjacent briefing room, the two male confederates, schedules of estimates for each confederate, and the rationale and task instructions for the Hex situation (discussed in Procedure).

The Wollensack tape recorder was used to record the experimenter's presentation of the experimental rationale during the five-minute dark adaptation period. The recordings were used to help determine whether the presentation of the rationale was equivalent for each subject. After each of the first five subjects were run, the experimenter and confederates reviewed the tapes together to determine whether the rationale had been consistently presented. There was a consensus among the experimenter and confederates that these presentations were consistent with respect to important characteristics like rate of delivery and emphasis. For the remaining 13 subjects, tapes were made to be reviewed in case either the experimenter or confederates believed that there had been a deviation in presentation. This problem never developed.

The Mach IV scale was employed to identify Highs and Lows (see Appendix A). This scale contained 20 items derived from Machiavelli's The Prince and Discourses which are placed in Likert format. Half the items are phrased so that endorsement means agreement with Machiavelli, while the remaining half are keyed to disagreement. Christie (1970c) contended that the scale reflects the degree to which one agrees with Machiavelli's views and marshalled experimental evidence that individuals rated high on this dimension are more effective in manipulating others and resisting social influence than those rated low.

Byrne's (1971) Interpersonal Judgment Scale (see Appendix B) was used to obtain the subject's ratings of the two confederates on the attractiveness and esteem dimensions. The IJS consists of eight items placed in Likert format. The order of positiveness is reversed for alternating items to counterbalance for acquiescence set (for example, the first choice for item one is "I feel that I would probably like this person very much," whereas the first choice for item two is "I

believe that this person is, to a great extent, not respected by those who know him.") Items one, three, five and seven are scored from seven to one points each, while items two, four, six and eight are scored from one to seven points each. Scores from items one and eight which deal with personal feelings about the ratee and how much the rater would like to work with the ratee in an experiment, respectively, are summed to provide an attractiveness rating which ranges from 2 to 14 points. A rating on the esteem dimension was also desired since esteem reflects expertise which is believed to be an important factor in a person's ability to influence others in this paradigm (Pace & MacNeil, 1974). Scores from items two and five which deal with respect for the ratee and an estimate of his intelligence are summed to provide an esteem rating which also ranges from 2 to 14 points (see Tedeschi, Schlenker & Bonoma, 1975). The remaining four items which concern approval, adjustment, knowledge of current events and morality are used as buffer items.

The Mach V scale (see Appendix C) is a forced-choice version of the Mach IV scale which controls for social desirability. Each of the 20 items on this scale contains three statements: a Machiavellian statement, a non-Machiavellian statement of equivalent social desirability and a non-Machiavellian statement of opposite social desirability. Subjects are instructed to indicate the statement most like them and least like them. The Mach V scale shares the Mach IV scale's interpretation and criterion validity. Since subjects were found by the experimenter to take ten more minutes on the average to complete this scale as opposed to the Mach IV scale, it was judged to be too lengthy to administer in the classroom. In order to obtain a Mach V score on subjects to provide a second measure of the subject's standing on the

Machiavellianism dimension and to control for social desirability at the same time, it was decided to administer the scale as part of the debriefing questionnaire.

The Hex laboratory consists of a light-proof and sound-deadened room containing an experimenter's control room which is screened off from the rest of the laboratory, the stimulus apparatus and the subject seating area including a table and three chairs. Room dimensions and arrangement are shown in Figure 1. The stimulus apparatus (see Figure 2) was described by Pace and MacNeil (1974):

The Hex utilizes, in part, the horizontal-vertical illusion to create perceptual differences in the apparent distance between the points of light (Kunnapas, 1959). The stimulus apparatus consists of 13 lights positioned on a vertical board in two overlapping hexagonal patterns around a center light. Each randomly ordered presentation of the pairs of stimulus lights consists of two lights objectively equidistant (15 in.) from trial to trial but with the axes between the lights being at a different angle for each contingent presentation, thus increasing the differences in Ss' perception (p. 577).

The stimulus was presented for .5 seconds. The duration between trials was 60 seconds. The subjects were positioned 16 feet from the Hex stimulus generator in a completely darkened room. Subjects were neither allowed to see the room in the light nor told of their distance from the stimulus lights.

The briefing room is adjacent to the Hex laboratory. The room is equipped with a table and four chairs to accommodate the experimenter, subject and confederates, a red light for dark adaptation and a black-

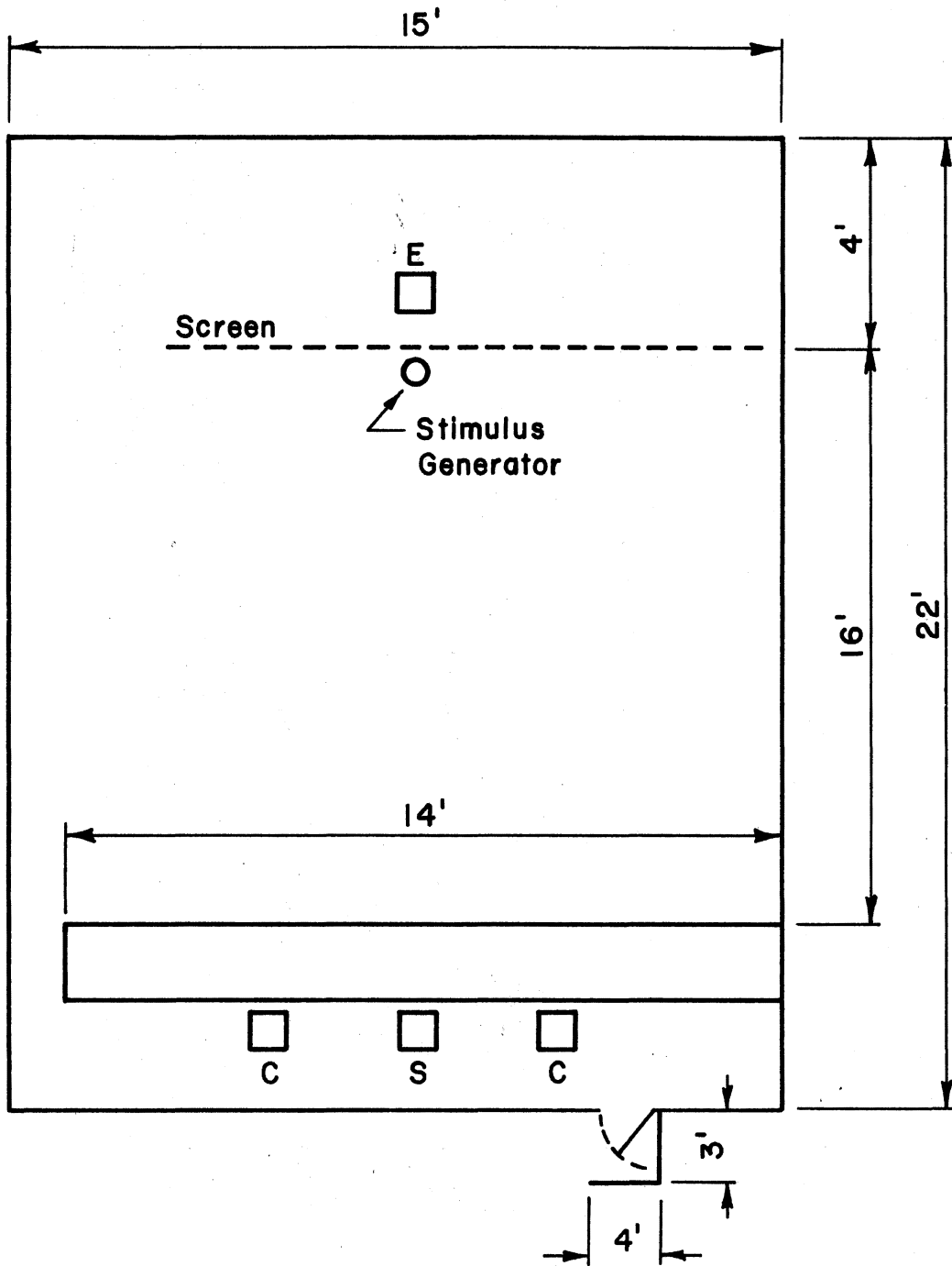


Figure 1. Dimensions of Laboratory Used for the Hexagonal Horizontal-Vertical (Hex) Judgment Situation.
 C: confederate; S: subject; E: experimenter.

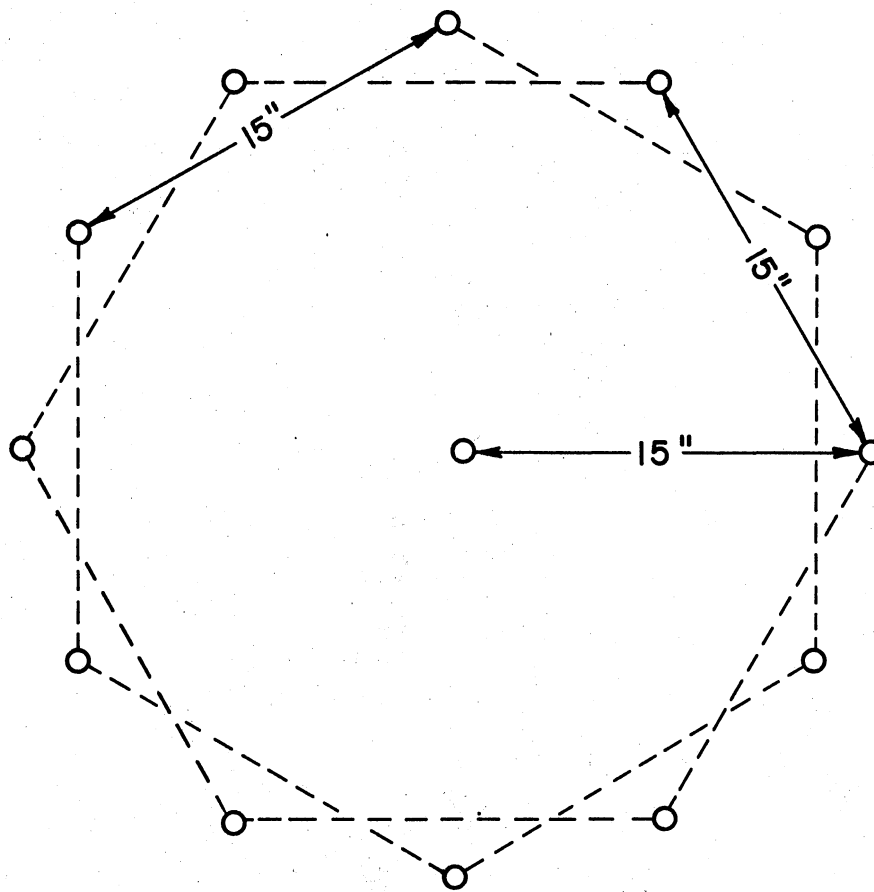


Figure 2. Position of Lights on Hexagonal Horizontal-Vertical apparatus. Twenty-Four Stimulus Light Pairs with the Lights of Each Pair 15 Inches Apart.

board used to record the subject's estimate of the average distance between the two points of light observed over 30 trials. The briefing room is also located adjacent to a classroom which is used as the confederates' waiting area.

The two confederates were both male caucasian undergraduates ages 18 and 21, respectively. Both scored above the median on the Mach IV and Mach V scales. Subjects rated the confederates equivalently with respect to judgment accuracy (Doug: 4.2; Rob: 4.1), attractiveness (Doug: 10.6; Rob 10.1) and esteem (Doug: 10.5; Rob: 10.0). To reduce the likelihood of confounding of the experimental data with experimenter expectancy effects, both confederates were ignorant of the subjects' standing on the Mach IV scale.

Each confederate memorized a separate schedule of estimates (see Table I) to be given over the 30 trials of the Hex situation. The schedules were designed to gradually draw the subject into the range of the arbitrary norm (30 to 42 inches). While the confederates' estimates agreed on the medians for each of the six sets of five trials, their estimates involved discrepancies of up to 6 inches on particular trials in order to maintain the confederates' credibility as subjects. The magnitude of discrepancy gradually decreased over the 30 trials in order to subtly increase the pressure on the subject to conform to the confederates' estimates.

Procedure

Male and female undergraduate students in Introductory and Social Psychology courses were given the Mach IV scale by their respective instructors during class. Although only males were used in the experiment, females were included in the classroom administration to prevent the development of a sex-related set. The instructors were provided

materials and the cover story that the scale was a Psychology Department student philosophy survey. The instructors collected the Mach IV scales and returned them to the experimenter in privacy. The experimenter remained anonymous throughout the procedure so that students would not associate the Mach IV scale administration with the subsequent Hex situation.

Twenty-five male subjects (11 Highs and 14 Lows) obtained Mach IV scores about one-third of one standard deviation (6.6) above or below the sample median (86). These subjects were contacted in class or by phone to secure their participation in the experiment. Subjects were told that they had been randomly selected from their class rosters to insure proper sampling. Eighteen of these subjects (9 Highs and 9 Lows) agreed to participate in the experiment in exchange for academic credit and were given their choice of testing periods.

The experimenter led the subject and confederates to the briefing room and instructed them to seat themselves at the table. Permission was asked to tape the experiment to standardize procedure. Following agreement with this request (no one refused), the tape recorder was activated and the participants were given blank cards on which they were asked to list their name and instructor. After the cards were collected, the participants were informed that the experiment would involve making judgments in total darkness and that five-minutes of dark adaptation under a red light was required. During this period, the experimenter inquired about each participant's vision and asked those wearing watches to remove them so that they would not be distracted by the luminous dials when estimating distances. A rationale was then presented verbatim to provide a plausible explanation of the experiment's purpose:

As you may recall, during the Gemini missions the on-board navigational equipment broke down several times forcing the astronauts to navigate without this equipment. These malfunctions alerted NASA to the fact that little was known about the accuracy of human judgments when limited information is available. NASA decided to learn more about the accuracy of human judgments by financing research programs across the nation like Darklab, using different age groups and both sexes. The purpose of Darklab, then, is to test how accurate your judgments can be when you are given very limited information. We don't expect anyone to be one-hundred per cent accurate in their judgments. That simply isn't possible. But, we do expect many of you to achieve a high degree of accuracy when your judgments are made carefully. Because of the importance of this problem and the considerable time and money that has been invested in this study, we're asking you to make each judgment very carefully. We're asking you to make each judgment count.

Following presentation of the rationale, the participants were asked if they understood the experiment's purpose (no one raised any questions) and then the remainder of the five minutes was spent discussing what the students planned or experienced during Spring break. The confederates and the experimenter made this part of the experiment equivalent for each subject by repeating the comments they made spontaneously in the first testing session in each of the succeeding sessions. The exact comments were reviewed by the confederates and the experimenter after the first testing session by playing back the tape

recording which had been made. At the end of the dark adaptation period, each participant was helped to his seat in the Hex laboratory. The naive subject was always placed between the two confederates who assumed the same positions each time (see Figure 1).

When all the participants were seated, the experimenter moved to a position directly in front of the naive subject. The participants were asked to state their first names in order from their left to right. After this was completed, the experimenter asked them to give their judgments in the same order throughout the experiment and to speak loudly so that their judgments could be heard over the "white noise" of the air conditioning. Then, the task instructions were given verbatim:

Your task for this situation is to give the most accurate estimate possible of the distance between two points of light which will appear in the area in front of you. These points of light will appear at various angles and distances apart, and you should give your estimate to the nearest even inch. These distances are programmed into the machine, and the machine to test your alertness occasionally may show you just one light or you may hear the warning click and not see any light. In these cases you should state aloud, "one light" or "no light." Immediately after the two lights disappear, you should give in order, from your left to right, the most accurate estimate you can of the total distance between the lights. Give your first name first and then your estimate. You will have ample time between the presentation of the pairs of lights to give your estimates. Don't hurry, but give it quickly and promptly, immediately after the lights go out in order from left to right, giving your first name

first and then your estimate. I E then moves to the front of the room toward the Hex stimulus generator, stating as he does I You will have plenty of time to give your judgment between the light presentations. We will do it a couple of times for practice before we start in. I will show you your first pair of lights in a moment.

The three participants made 30 judgments, in turn, with the subject making his judgment after the first confederate each time. The experimenter recorded the data as the judgments were given. Following the completion of 30 trials, the participants were led back into the briefing room and told that the experimenter needed to get information separately from each of them after which they would be escorted to separate rooms to complete a debriefing questionnaire. The subject was always selected as the first person to be debriefed and the confederates were seated in the adjoining classroom during his debriefing. The experimenter asked the subject to draw the average distance between the two points of light on the blank blackboard. Then, the subject was taken to a second classroom located in the same basement wing in which the questionnaire instructions were explained. The experimenter instructed the subject to leave the debriefing questionnaire in the classroom when completed and made certain that the subject had the experimenter's name and extension for later reference. The subject was promised a complete debriefing in April when the testing would be completed. A paragraph describing the experimental hypothesis, design and findings was distributed to the subjects through their classes.

The experimenter conferred with the confederates in the briefing room immediately after each subject was settled in the second classroom.

The testing session was reviewed with particular emphasis on standardization of experimenter and confederate performance. Tape recordings were played during the first five review sessions. Since there was a consensus among the experimenter and confederates that the performance of each was consistent during these testing sessions, subsequent review sessions dispensed with listening to the tape. The recordings were still made, but were not to be played back unless either the experimenter or one of the confederates detected a deviation in the presentation of the experimental rationale or conversation among the experimenter and participants during the dark adaptation period. This problem never developed.

CHAPTER III

RESULTS

All subjects completed six blocks of five trials each. Medians were computed for each block of trials as the operational definition of conformity was the number of judgment medians lying within the range of the arbitrary norm (30 to 42 inches). These data were subjected to a one-way analysis of variance and Pearson product-moment correlation analysis. The mean number of medians within the arbitrary range obtained by Highs and Lows is displayed in Figure 3 and listed in Table 1. The grand mean contributed by all subjects was 4.1 medians within the arbitrary range. In what follows, we will examine the results with respect to their implications for the experimental hypothesis.

The findings failed to support the experimental hypothesis. Highs obtained a mean of 4.0 medians within the arbitrary range compared to the Lows' mean of 4.1 medians. A one-way fixed analysis of variance disclosed no main effect attributable to the Machiavellian variable (see Table 2). Pearson product-moment correlation analysis also failed to support the hypothesis. Although lying in the predicted direction, correlations between the number of medians falling within the arbitrary range and scores on the Mach IV and Mach V scales were nonsignificant ($r(18) = -.14, p < .58$; $r(18) = -.24, p < .66$). Alternative measures of conformity including the sum of the differences between the subjects' judgment medians and the confederates' judgment medians,

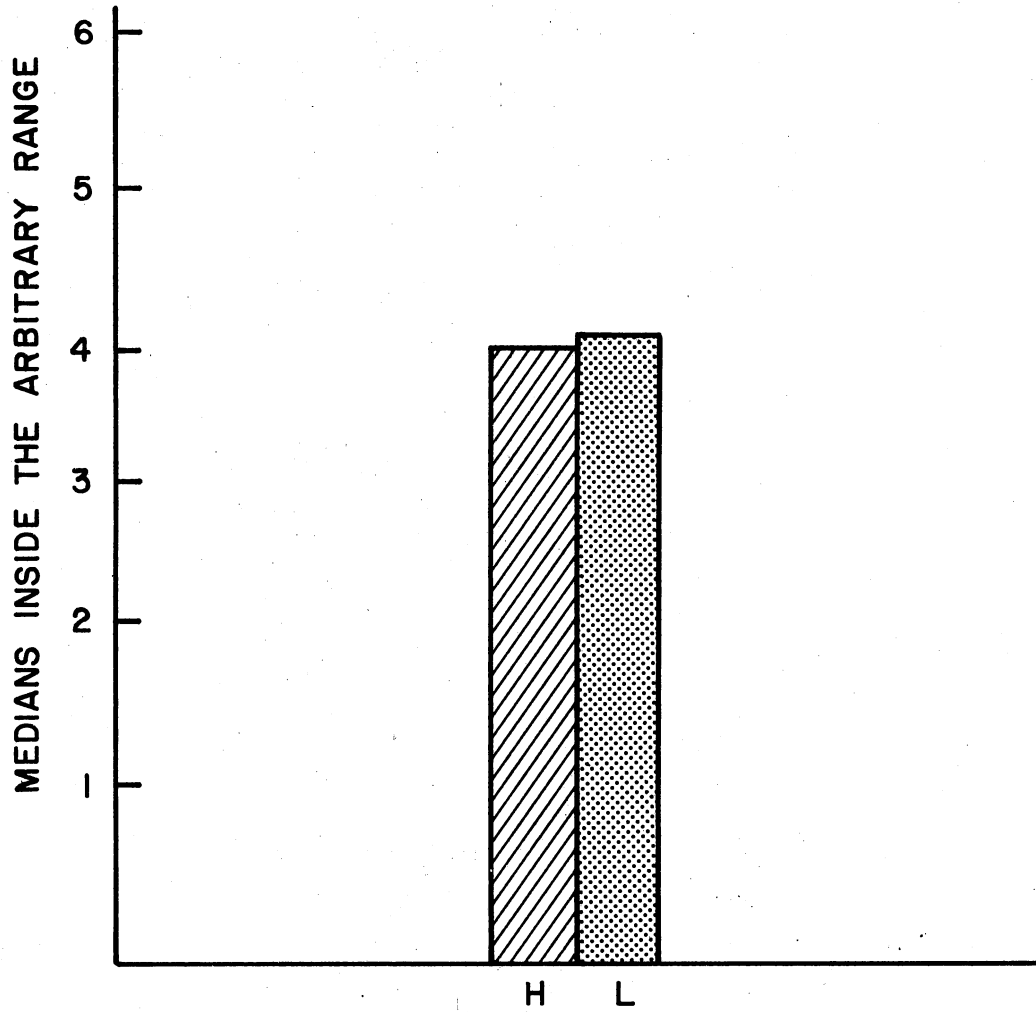


Figure 3. Conformity as a Function of Machiavellianism

Table 1
Mach IV, Mach V, Conformity and Debriefing
Questionnaire Measures

	Mean	S.D.	Range	
Mach IV	68.53	3.54	76- 64 = 13	
Mach V	93.33	5.36	100- 87 = 14	
Medians Inside	4.11	2.52	6- 0 = 7	
Self Accuracy	4.78	2.11	7- 2 = 6	
Doug Accuracy	4.56	2.45	8- 0 = 9	
Low Mach	Rob Accuracy	3.78	2.00	6- 0 = 7
	Doug Attractiveness	10.22	1.64	13- 8 = 6
	Rob Attractiveness	9.89	2.21	13- 7 = 7
	Doug Esteem	10.33	1.41	12- 7 = 6
	Rob Esteem	9.56	1.74	12- 7 = 6
	Average Distance	25.22	8.00	35- 15 = 21
	Mach IV	102.44	12.77	133- 92 = 43
	Mach V	109.78	6.04	122-102 = 21
	Medians Inside	4.00	2.45	6- 0 = 7
	Self Accuracy	4.11	1.36	6- 3 = 4
	Doug Accuracy	3.89	1.83	7- 1 = 7
High Mach	Rob Accuracy	4.56	2.07	8- 1 = 8
	Doug Attractiveness	11.00	1.94	11- 7 = 5
	Rob Attractiveness	10.33	2.35	13- 6 = 8
	Doug Esteem	10.78	1.09	12- 9 = 4
	Rob Esteem	10.44	1.24	12- 8 = 5
	Average Distance	29.67	8.86	49- 21 = 29

Table 2
Analysis of Variance Summary for Conformity

Source	Degrees of Freedom	Sum of Squares	Mean Square	F Ratio	P F
Mach IV	1	1.389	1.389	$\frac{1.389}{6.181} = .224$.646
Error	16	98.889	6.181		
Total	17	100.278	5.899		

sum of the subjects' ranges and number of subjects' judgment means located inside of the arbitrary range were also subjected to a one-way analysis of variance and Pearson product-moment correlation analysis. None of these measures supported the experimental hypothesis.

Measures taken from the Mach IV and Mach V scales, the operational definition of conformity and the debriefing questionnaire were inter-correlated using the Pearson product-moment procedure (see Table 3). Several correlations were found to be significant beyond the .05 level. Scores from the Mach IV and Mach V scales were found to be positively correlated ($r(18) = .88, p < .001$). The number of medians falling inside the arbitrary range was positively related to ratings of Doug and Rob (the two confederates) on the dimension of judgment accuracy ($r(18) = .67, p < .003$; $r(18) = .55, p < .019$). Ratings of Doug and Rob on the accuracy dimension were positively correlated ($r(18) = .47, p < .046$). Ratings of Doug on the attractiveness dimension were positively correlated with Rob's attractiveness ratings ($r(18) = .69,$

Table 3
Intercorrelation Matrix

	MACH IV	MACH V	MEDNS INSIDE	SELF ACC.	DOUG ACC.	ROB ACC.	DOUG ATTR.	ROB ATTR.	DOUG ESTEEM	ROB ESTEEM	AV. DIST.
MACH IV		.88**	-.14	-.16	-.13	.25	.28	.07	.14	.03	.34
MACH V	.88**		-.24	-.16	-.23	.30	.42	.26	.23	.33	.22
MEDNS INSIDE	-.14	-.24		.34	.67**	.55*	-.05	.24	-.21	-.02	.43
SELF ACC.	-.16	-.16	.34		.26	.36	-.24	-.06	-.39	-.20	.24
DOUG ACC.	-.13	-.23	.67**	.26		.47*	.21	.21	.13	-.31	.36
ROB ACC.	.23	.30	.56*	.36	.47*		.17	.44	-.18	.13	.25
DOUG ATTR.	.28	.42	-.05	-.24	.21	.17		.69**	.55*	.28	-.07
ROB ATTR.	.07	.26	.24	-.06	.21	.44	.69**		.21	.62*	-.14
DOUG ESTEEM	.14	.23	-.21	-.39	.13	-.18	.55*	.21		.34	.05
ROB ESTEEM	.03	.33	-.02	-.20	-.31	.13	.28	.62*	.34		-.20
AV. DIST.	.34	.22	.43	.24	.36	.25	-.07	-.14	.05	-.20	

* p .05
** p .01

$p < .002$) and Doug's ratings on the esteem dimension ($r(18) = .55$, $p < .017$). Rob's attractiveness ratings were positively correlated with his ratings on the esteem dimension ($r(18) = .62$, $p < .006$). The 30 judgment trials were intercorrelated with each other using the Pearson product-moment correlation statistic. This analysis revealed that the number of intercorrelations which were significant beyond the .05 level tended to increase with passing trials. Finally, the lines which the subjects had drawn on the blackboard during the debriefing period to represent the average distance between the two lights over the 30 trials were measured and these data were correlated (Pearson product-moment statistic) with the operational measure of conformity (the number of judgment medians lying within the arbitrary range) in order to provide a check on whether conformity had occurred within the paradigm. Perhaps due to the crudeness of this measure, a significant correlation was not obtained.

CHAPTER IV

DISCUSSION

The analysis of the data failed to support the experimental hypothesis: Highs will conform to a lesser degree than Lows within a social judgment situation. The finding of no difference between Highs and Lows with respect to conformity - as measured by the number of judgment medians falling within the range of the arbitrary norm - did not uphold the contention by Geis and Christis (1970) that Highs are more resistant to social influence than Lows. In what follows, the results of this investigation will be examined, the appropriateness of the present methodology in testing the experimental hypothesis will be considered and the broad implications of the reviewed studies and present findings for Western philosophy, psychology and political science will be appraised.

Experimental Findings

The Hex situation produced a moderate level of conformity as operationally defined by the number of judgment medians lying within the range of the arbitrary norm (30 to 42 inches). The grand mean contributed by both Highs and Lows was 4.1 medians within the arbitrary range out of a possible 6 medians. This represented a 68 per cent rate of conformity as measured by judgment medians.

There were marked individual differences in degree of conformity which were unrelated to scores obtained on the two Machiavellianism

scales. The number of judgment medians lying within the arbitrary range extended from 0 to 6: four subjects (22%) obtained no judgment medians, two subjects (11%) obtained 3 judgment medians, five subjects (28%) obtained 5 judgment medians and seven subjects (39%) obtained 6 judgment medians within the arbitrary range. The moderate level of conformity obtained within this paradigm (from 0 to 100 percent) approached the results which MacNeil (Note 8) observed when he used a ratio of four confederates to one naive subject. MacNeil's higher rate of conformity (from 77 to 100 per cent) would seem to reflect the larger number of confederates used in his investigation (four as opposed to two in the present study).

The 30 judgment trials contributed by each subject were intercorrelated using the Pearson product-moment statistic to determine whether any meaningful relationships were present in these data. An examination of the number of correlations found to be significant at the .05 level revealed a noticeable tendency towards increased intercorrelation among judgments as the trials progressed. This finding was consistent with results from the autokinetic and Hex situations which indicated that experimental norms become more stable over successive judgments (Sherif & Sherif, 1969; Pace, Note 9).

Several important findings emerged from the debriefing questionnaire. A strong positive Pearson product-moment correlation ($r(18) = .88, p < .001$) was found between the Mach IV and Mach V scales. This statistic was appreciably higher than Christie's (1970b) finding of $r(764) = .67, p$ (not provided). The difference between the two findings may be due to the substantial difference in sample size and selection of subjects from different geographic regions. Both correlat-

ions revealed a high positive relationships between the two Machiavel-
lianism scales suggesting that both scales measured the same variables.
This interpretation seems consistent with the two factor analytic stud-
ies cited earlier which disclosed that the scales involved the same
three content categories (Christie, 1970c).

The number of judgment medians located inside the arbitrary range
was found to be positively related to the ratings of the two confederates
on the dimension of judgment accuracy. Subjects who conformed in this
situation described both confederates as being more accurate in their
judgments than did subjects who failed to conform. This finding appears
to admit several interpretations. First, subjects who conformed may
have recognized that their distance estimates agreed with those of the
confederates and subsequently rated the confederates favorably on the
accuracy dimension in order to appear consistent. These subjects may
have relied upon their favorable ratings of the confederates to justify
their own conformity ("I conformed because the others' estimates seemed
to be very accurate"). This explanation seems particularly reasonable
since deference to expertise is encouraged in American culture.

Alternatively, subjects may have judged the confederates to be
more accurate than themselves and decided to agree with their judgments
in order to appear more competent in this situation. This interpretat-
ion was not supported by Pearson product-moment correlation analysis
of ratings of self and the confederates on the dimension of judgment
accuracy. Subjects' self-ratings concerned judgment accuracy were
found to be unrelated to their ratings of the confederates on this
dimension. If the interpretation were true, a negative correlation
should have been observed. In the absence of empirical support for

this interpretation, the first explanation appears to be more credible.

The two confederates' ratings on the accuracy dimension were positively correlated as were their ratings on the dimension of attractiveness. These findings suggest that the subjects perceived the confederates to be alike with respect to these dimensions. The positive correlation between the confederates' accuracy ratings would be expected due to the similarity of their estimates. It would have appeared inconsistent for the subjects to rate the confederates differently on this dimension when their judgments were always within the arbitrary range and their judgment medians were always identical.

The implications of the positive correlation between their attractiveness ratings are less obvious. It is possible that this correlation reflects the degree to which subjects perceived the confederates as conforming to their estimates. Helm (Note 1) concluded that when others are perceived as conforming to us there is a tendency to negatively evaluate them. Perhaps the confederates were perceived as having conformed to the subjects' estimates to a similar degree and were consequently given equivalent attractiveness ratings.

A second possibility is that the confederates were perceived as being alike with respect to characteristics like personality and values. Since attributions of attractiveness may be based on the degree we perceive others to be like us (Wrightsmann, 1973), the perception that the confederates possessed similar personalities and values may have similar attractiveness ratings. Unfortunately, the experimental data do not provide a basis for choosing one of these explanations in favor of the other.

Finally, the confederates' ratings on attractiveness and esteem were positively correlated. This seems to indicate that attributions of attractiveness were related to attributions of esteem. The Interpersonal Judgment Scale items which provide the basis for a rating of attractiveness deal with personal feelings about the ratee and how much the rater would like to work with him in an experiment. Those items which provide the basis for an esteem rating deal with respect for the ratee and an estimate of his intelligence. Given this item content, it seems reasonable to conclude that there was indeed a positive relationship between how much the subjects liked the confederates (attractiveness) and how much expertise they attributed to them (esteem).

A Reconsideration of Methodology

Due to the failure of the data to support the experimental hypothesis, it seems appropriate to reexamine the experimental methodology to determine whether an appropriate test of the hypothesis was provided. The three areas concerning choice of paradigm, procedure and subjects will be considered separately.

Paradigm

Was the Hex situation appropriate for the investigation of the experimental hypothesis? Three criteria were used in the selection of a paradigm: (1) The paradigm should possess the ability to produce conformity, (2) the paradigm should allow differences in the degree to which individuals conform and (3) the paradigm should be robust. In retrospect, how well did the Hex situation satisfy these criteria? In what follows, each criterion will be individually addressed.

The data demonstrated that a moderate level of conformity - as operationally defined by the number of judgment medians located within

the arbitrary range - was obtained using the Hex situation. The grand mean contributed by all subjects was 4.1 medians within the arbitrary range which represented a conformity rate of 68 per cent. At this juncture, it seems appropriate to ask whether this level of conformity was due to the successful operation of the paradigm or a strong disposition on the part of Highs and Lows to conform.

The possibility that Highs and Lows were more conforming than the undergraduates used to standardize the Hex and autokinetic situations merits serious attention. Since Highs and Lows were chosen from the upper and lower thirds of a distribution of undergraduate Machiavellianism scores, it cannot be assumed that the two populations were identical. Two lines of argument will be raised to dispute the contention that Highs and Lows were more conforming than the standardization populations.

First, if Highs and Lows were particularly disposed toward conformity in situations such as the Hex, there should have been a consistent tendency for their judgments to fall within the arbitrary range. This homogeneity of judgments would seem to be the logical consequence of assuming that Highs and Lows are strongly conforming. While a moderate rate of conformity was observed for Highs and Lows overall, there were substantial individual differences in the degree of conformity observed. Four of the subjects (22%) conformed in none of their judgment medians. Another two subjects (11%) conformed in only half of their judgment medians. This means that one-third of all Highs and Lows conformed in half of their judgment medians or less. These individual differences in degree of conformity indicate that there was marked heterogeneity in Highs' and Lows' judgments in the Hex situation.

This finding seems contradictory to the contention that Highs and Lows were more conforming than the standardization populations.

Second, the resistance to social influence literature provides no support for the position that both Highs and Lows should be more conforming than ordinary undergraduates. While several of these studies must be interpreted cautiously because of the use of a before-after design, the literature indicates that only Lows should be expected to be strongly conforming due to their hypothesized emotional involvement and trust of others (Geis & Christie, 1970). Thus, the contention that Highs and Lows were more conforming than the standardization populations seems neither to be supported by the experimental data nor the resistance to social influence studies. While the contention cannot be conclusively ruled out, both the data and cited literature render it unlikely.

Did the paradigm allow differences in the degree to which individuals conformed? This question may be answered affirmatively. In the discussion of the first criterion, it was reported that one-third of the subjects conformed in three judgment medians or less while the remaining two-thirds conformed in five judgment medians or more. This heterogeneity in distance estimates provides definite evidence that individual differences in degree of conformity were permitted in the Hex situation.

Was the paradigm robust? Robustness is believed to be an inherent property of a judgment situation which is related to the degree of stimulus structure which is present (MacNeil, Note 6). As noted in the earlier comparison of the Hex with the autokinetic situation, the Hex was judged to be a more robust paradigm due to its slightly greater

degrees of stimulus structure (Pace & MacNeil, 1974). Since the procedure by which the Hex was administered did not appear to alter the degree of structure present in this stimulus situation, there would seem to be no basis for questioning its robustness.

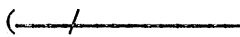
Procedure

The main procedural question concerns whether a separate retesting of each subject was needed to verify that conformity - as opposed to compliance - had been obtained in the Hex situation. While this question was addressed earlier during a discussion of procedural issues, it may be answered more completely now using data from the debriefing period.

First, it should be noted that a crude measure of the subjects' private perceptions of the average distance between the pairs of lights was obtained during the debriefing session. Subjects were asked to draw this distance on a blank blackboard. Unfortunately, this measure did not correlate with the subjects' estimates of distance during the 30 judgment trials. The failure to obtain a significant Pearson product-moment correlation between these measures appeared to be due to the imprecision involved in requiring subjects to translate their guesses about what the average distance between the pairs of light actually was into a line drawn free-hand on the blackboard.

Was the use of a more dependable verification procedure warranted? The position advanced in the earlier discussion of procedure was that retesting the subjects by themselves involved a trade-off of double testing time for the advantage of verification. It was argued that the matter rested on the necessity for verification. The experimental norm formation literature was cited to show that verification was

unnecessary. The marshalled literature supported the view that the process of conformity is inherent in situations which possess a low order of stimulus structure (Sherif & Sherif, 1969) and that the Hex situation, which possesses a low degree of stimulus structure (Pace & MacNeil, 1974), has been shown to produce the persistent social norms characteristic of conformity (Gregory, Note 5).

The data obtained during the debriefing period supports the view that conformity was the operative process in the present study. Fourteen of the subjects in the present investigation told the experimenter that they had a low degree of confidence in their judgments. A frequently encountered comment was that "If only I knew how far I was from the lights, I could have made accurate judgments." The subjects' comments about their uncertainty was consistent with their answers on the debriefing questionnaire. Subjects were asked to rate their confidence during each half (15 trials) by slashing a nine-inch line () . This procedure allowed subjects to rate their confidence from 0 to 9. The average confidence rating was 3.7 for the first half and 4.6 for the second half. This low order of confidence in the accuracy of their judgments is what would be expected where a conformity process is present. For in a conformity situation, the subjects would be quite uncertain as to how the stimulus situation should be patterned. This is in sharp contrast to the compliance process found in the Asch (1951) situation where the majority of subjects knew what the correct answer should be.

The increased self-rating on confidence in the second half would appear to reflect the stabilization of the subjects' judgments. The tendency of experimental social norms to stabilize with succeeding

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trials has been previously observed in the autokinetic situation (Sherif, 1935) and the Hex paradigm (MacNeil, Note 8).

To summarize at this point, the experimental norm formation literature and data obtained during the debriefing period support the position that conformity was the operative process in the present study. On these grounds, it would seem reasonable to conclude that the re-testing of the subjects for the purpose of verifying the presence of conformity was of doubtful necessity.

Subjects

Two questions concerning the adequacy of criterion scores and the participants' motivation will be addressed in this section. First, did the criterion scores properly define Highs and Lows. While a review of the Machiavellianism literature reveals the absence of a consensus concerning how Highs and Lows should be defined, one procedure has been employed with considerable success. In this approach, subjects are given the Mach IV and Mach V scales and the resulting score distribution is partitioned into thirds. Highs are defined by scores lying in the upper third, while Lows are defined by scores located in the lower third. This approach was used in both the Geis (1970) and Christie and Geis (1970a) studies. These studies successfully obtained differences between Highs and Lows with respect to manipulative behavior with coalition bargaining situations. Since this definitional strategy was found to be successful in these studies, there is no reason to presume that its adoption in the present study lead to misclassification of subjects.

The second question concerns whether the subjects were motivated in the Hex situation. For a proper test of the experimental hypothesis,

it was necessary that the subjects take the judgment task seriously. Both the judgment trials and the debriefing sessions provided evidence that the subjects were strongly motivated in the Hex situation. During the judgment trials both the experimenter and confederates observed that the subjects - without exception - were strongly attentive and involved in estimating the distances. In the debriefing sessions, each subject requested feedback on his performance. Ten of the subjects thanked the experimenter for the opportunity to participate in an interesting experiment. Twelve subjects inquired about how soon the experimental results would be made available to them. These data seemed to support the interpretation that subjects took the Hex situation very seriously and were strongly motivated to estimate the distances as accurately as they could.

The experimental findings have now been examined and the appropriateness of the present methodology in testing the experimental hypothesis considered. The reconsideration of the experimental methodology supported the conclusion that the hypothesis was honestly tested. In the remainder of this chapter, the broad implications of the reviewed literature and the present findings for Western philosophy, psychology and political science will be appraised.

Implications for Western Philosophy

Machiavelli made an invaluable contribution to Western philosophy when he disputed traditional idealism concerning man's nature. In place of an idealistic view of man's basic goodness, he offered his own realpolitik. In Chapter 17 of The Prince he wrote: "For touching men, wee may say this in general, they are unthankful, unconstant dissemblers, they avoyd danger, and are covetous of gaine" (p. 62).

Empirical findings have been reviewed which sustain Machiavelli's description of man's dishonesty, lack of courage, gullibility and ambition.

Studies by Exline et al. (1970) and Bogart et al. (1970) provided evidence of man's dishonesty. In the first situation, 38 out of 42 subjects acquiesced to a confederate's cheating, while in the second, 29 out of 61 subjects accepted the confederate's offer of stolen answers. In each situation, the subject's acquiescence or collaboration in cheating rendered completion of the experimental task easier.

Ironically, Lows appeared to be less honest than Highs in these situations. While Lows endorsed conventional values such as honesty, their rates of acquiescence and collaboration were identical to those of Highs who tended to reject these values. Highs seemed to be considerably more candid than Lows about their dishonesty.

The problem of man's courage was indirectly addressed by the Exline et al. (1970), Asch (1951) and Crutchfield (1955) investigations. The confederate in the Exline et al. (1970) situation searched about the room and located the answers to the experimental task. Following this, he wrote the answers down on scratch paper and recited the answers aloud. Each of the 42 subjects could have restrained the confederate by persuasion or force, informed the experimenter of the cheating or asked to withdraw from the experiment. While the subjects' acquiescence seemed to reflect self-interest, it may also have been due to fear that resistance would offend or anger the confederate who was a peer. In all, only 4 of 42 subjects resisted the confederate's implication attempts.

In the Asch (1951) and Crutchfield (1955) compliance situations, subjects were pressured to report judgments which contradicted objective visual evidence. Post-experimental questioning in the Asch (1951) situation revealed that a majority of subjects complied with the majority on critical trials while still believing that the majority answer was wrong. The frequent explanation of compliance was that the subject found it uncomfortable to oppose the majority verdict. Thirty-two per cent of all judgments on critical trials complied with the majority. This finding suggests that the subjects lacked the courage to defend the accuracy of their personal judgments. The same conclusion seems to be appropriate in the Crutchfield (1955) situation which contained an equivalent degree of stimulus structure. In the Crutchfield situation, subjects complied with a fictitious majority on 38% of the critical trials. The high degree of stimulus structure which was present in this situation rendered it likely that many subjects complied with majority answers which contradicted their personal judgments.

Human gullibility was documented in several investigations of social judgment (Asch, 1951; Crutchfield, 1955; Sherif, 1935, MacNeil, Note 8). There is evidence that a minority of subjects in both the Asch and Crutchfield situations actually perceived the false answer as being correct despite the fact that this answer contradicted objective visual data (Wrightsman, 1973). Considerably more dramatic perceptual errors were obtained in the autokinetic and Hex situations. In the autokinetic situation, subjects have been influenced to perceive movements exceeding 18 inches despite the fact that the point of light is actually stationary. Likewise, subjects facing the Hex situation perceived the light pairs as lying at varying distances apart (exceeding

42 inches in some cases), although the light pairs were always 15 inches apart.

The present study may be conceptualized as a test of Machiavelli's contention that men are gullible. All subjects reported that the light pairs were arranged at different distances apart. Overall, a 68% rate of conformity was obtained with respect to the confederates' judgments. Sixteen of the subjects provided no evidence of suspicion concerning the experiment and half of the subjects who conformed denied that their estimates had been influenced by the judgments of the confederates. These findings appear to support the view that men are gullible.

Finally, Geis et al. (1970) uncovered evidence of man's ambition. Both Highs and Lows were instructed to administer a personality test to another subject. Since a previous experimenter had perpetrated minor deceptions during a previous testing, the subjects were told that they could use their power of administration arbitrarily. While Highs surpassed Lows in sheer number, variety and innovativeness of manipulations, both Highs and Lows each performed an impressive number of manipulations. The finding of widespread offensive manipulations within this situation may be interpreted to mean that most subjects sought to exercise power over others. Again, while Lows tend to condemn manipulative behavior within this paradigm contradicted their stated beliefs. Highs, on the other hand, are very candid on the Machiavellianism scales in endorsing the manipulative behavior which they seem to enjoy.

Empirical evidence has been marshalled to support Machiavelli's uncharitable description of man. There appeared to be satisfactory evidence to demonstrate that men are dishonest, cowardly, gullible and

ambitious in social psychological situations. Highs appeared to be more candid than Lows concerning their dishonesty and ambition. Whereas Lows tended to describe themselves as being conventionally virtuous, their actions often contradicted this self-description.

Implications for Psychology

The empirical findings reviewed in chapters one and three possess important implications for both personality and social psychology. The contribution of these data to personality psychology lies in their documentation of a Machiavellian personality characterized by manipulation, selective resistance to social influence and concern regarding the appearance of consistency in attitudes and judgments.

The social manipulation literature (Geis et al., 1970; Geis, 1970; Christie & Geis, 1970a) demonstrated that Highs are quite successful in manipulating others when their interactions are face-to-face, allow for improvisation and permit affective arousal in others. In the Geis et al. (1970) situation, Highs were considerable more effective than Lows in distracting subjects to whom they were administering a personality test. Similarly, Highs proved to be extremely successful bargainers in two coalition bargaining games (Geis, 1970; Christie & Geis, 1970a) in which the outcomes were points and cash, respectively. The effectiveness of the Machiavellian in manipulating others seems to be well established.

The resistance to social influence literature may be interpreted to show that Highs selectively resist social influence when an agent of deliberate social influence attempts can be identified and the High possesses motivation to resist these attempts. In both the Exline et al. (1970) and Bogart et al. (1970) situations, Highs did not resist

implication in cheating more effectively than Lows. Their rates of acquiescence and collaboration were identical in these paradigms. These findings were not surprising since acquiescence and collaborator appearance appeared to be in both Highs' and Lows' self-interest. But in the Exline et al. (1970) situation, Highs differed from Lows in their rate of confession. It seems likely that in the interrogation phase of the paradigm where the influence agent was clearly identified and where compliance with the agent's demand for a confession contained the risk of reprisal, the preconditions for Highs' resistance to social influence were satisfied and consequently Highs confessed less often than Lows and sustained longer eye contact with their interrogator while maintaining their innocence.

The idea of preconditions to resistance to social influence would seem capable of explaining the finding in the present study of no difference between Highs and Lows in terms of resistance to conformity. It seems likely that Highs did not perceive the confederates as deliberately attempting to influence them. Eight of the nine Highs expressed no suspicion regarding either the experimenter or the confederates. Further, Highs did not appear to possess motivation to resist the conformity process. No salient outcomes could be won by disagreement with the confederates' estimates. Since neither of the two preconditions to resistance to social pressure appear to be present in the paradigm, the finding that Highs conformed as readily as Lows seems predictable. Thus, the failure of the paradigm to obtain differences between Highs and Lows with respect to conformity does not warrant the conclusion that "the wrong end of Machiavellianism was tested," rather, it demonstrates that Highs are selective as to the circumstances in

which they resist social influence.

This interpretation allows prediction of Highs' behavior in compliance paradigms as well. It seems reasonable to predict that in situations such as the Asch (1951) or Crutchfield (1955) paradigms, Highs would neither be able to identify a deliberate agent of influence or would find the outcomes of resistance to compliance pressures personally salient. Therefore, it is predicted that Highs might adopt the majority verdict as a course of least resistance. Empirical investigation of this prediction would seem to be in order. In addition to a standard administration of these situations, variations could be devised which served to manipulate the perceived deliberateness of the influence agents and the salience of the outcomes (perhaps cash rewards could be promised for accurate judgments). Such variations in the standard Asch (1951) and Crutchfield (1955) situations would seem able to provide an appropriate test of the preconditions to resistance hypothesis.

Several studies (Harris, Note 2; Geis et al., Note 3; Feiler, Note 4; Jones et al., 1962) provided evidence that the Machiavellian personality possesses a third characteristic of concern regarding the appearance of consistency in social communications. In the Harris (Note 2) situation, subjects rated protagonists alone and then jointly with a partner. Harris discovered that Highs changed their ratings considerably less than Lows following interaction with a partner. This means that Highs' communicated judgments were quite consistent. In the Geis et al. (Note 3) paradigm, attitude measures were taken and then subjects discussed a counter-attitudinal position within a group. A second attitude measurement was taken following the group discussion.

Again, Highs' communicated attitudes were very consistent while Lows exhibited an attitudinal shift. The same before-after design was used in the Feiler (Note 4) paradigm except that debates were substituted for group discussions. Feiler discovered that Highs' communicated attitudes remained consistent even after counter-attitudinal advocacy, while Lows tended to shift their attitudes. Finally, Jones et al. (1962) obtained self-descriptions from subjects and then had an interviewer furnish them with negative feedback about their personalities. Highs' self-descriptions did not change when the subjects subsequently described themselves to a second interviewer, whereas Lows tended to describe themselves more favorably.

While the use of a before-after design in these studies necessitates a cautious interpretation of their findings, there seems to be a definite pattern of results which suggests that Highs are more concerned than Lows about appearing consistent in their social communications. When Highs are conceptualized as social manipulators, their concern for the appearance of consistency becomes apparent. Consistency in social communications is believed to enhance an individual's perceived credibility and consequently increases his persuasiveness (Helm, Note 1). Since Highs are characterized as being greatly concerned about the successful exercise of interpersonal influence, the appearance of consistency in their social communications would seem to be a particularly salient issue for them.

The empirical support for the concept of a Machiavellian personality has been examined. The Machiavellian was shown to be successful in the manipulation of others when interaction was face-to-face, allowed improvisation and permitted the arousal of others' emotions. The

Machiavellian was characterized as being selective in his resistance to social influence. Resistance was predicted only when a deliberate agent of manipulation could be identified and the outcome of resistance was personally salient. Finally, the Machiavellian was described as being concerned about the appearance of consistency in his social communications. The appearance of consistency seemed important to him because it is theorized to increase an influence source's credibility and consequently his persuasiveness.

The Machiavellian literature also possesses important implications for social psychology in the areas of social manipulation and resistance to social influence. The problem of social manipulation will be considered first. The preconditions postulated for the Machiavellian's effective manipulation of others would appear to apply to social interactions in general. The successful influence source could be expected to achieve the most effectiveness when he can interact with the influence target on a face-to-face basis, improvise his communications and emotionally arouse the influence target. Face-to-face interaction would provide the influence source with valuable data about his target (including feedback on the success of his manipulative efforts), increase the emotional impact of the influence message and provide him with a captive audience for his communications. Latitude for improvisation would allow the influence source to adjust his influence messages to achieve maximum impact on the basis of feedback provided through face-to-face interaction. Finally, the arousal of the influence target's emotions (fear for example) would function to reduce the target's rational analysis of the source's influence communications consequently increasing the target's vulnerability to the source's communications.

The empirical findings of the resistance to social influence literature also seem to be applicable to the problems of conformity and compliance in social influence situations. Two preconditions were postulated for effective resistance to social influence. First, the influence target has to be identified. Second, resistance to perceived influence attempts must possess outcomes salient to the influence target. These preconditions would seem to apply to the interpersonal influence processes in general. It seems reasonable to content that in all cases of interpersonal interaction, a person must first be aware that he is the target of deliberate influence communications before he can proceed to resist. Further, in order to resist perceived influence messages the individual must possess sufficient motivation. The gains associated with resistance must greatly outweigh the costs of resistance or else the subject will have no reason to pursue this course of action. Presumably in both compliance and conformity situations, subjects submitted to social pressure because a deliberate influence agent could not be identified nor did the gains from opposing the majority appear to outweigh the perceived costs.

In summary, the discussion of the preconditions for the Machiavelian's effective manipulation of others and resistance to social influence appears to be acceptable to interpersonal influence situations in general. It is believed that effective manipulation requires the elements of face-to-face interaction, latitude for improvisation and the arousal of an opponent's emotions. Further, the necessary preconditions for resistance to the influence attempts of others appear to be the identification of a deliberate agent of attempted influence and salient outcomes to motivate resistance efforts. It was argued that

the findings observed in both compliance and conformity situations could be explained through this hypothesis. Thus, both the social manipulation and resistance to social influence literature appear to possess important implications for both personality and social psychology.

Implications for Political Science

The empirical findings of the literature dealing with Machiavellianism and the social influence processes appear to possess considerable relevance for the discipline of political science. The most significant contributions of this literature concern the management of the public's impressions concerning personalities and issues. In what follows, the danger of abuse in the management of the public's impressions will be discussed along with possible sources of correction.

Empirical evidence has been marshalled to demonstrate that when stimulus situations lack structure individuals are particularly vulnerable to social influence messages which offer a means of patterning their experience. The greater the absence of structure, the more receptive the individual is to persuasive messages. Moreover, it has been argued that individuals do not resist attempts to influence them when an agent of deliberate influence attempts cannot be identified nor when the influence target lacks motivation to engage in resisting behavior. These observations appear to be directly applicable to the problem of managing the public's impressions about personalities and issues.

Political candidates ranging from aldermen to Presidents win and maintain office through the management of the public's impressions. Public relations firms can effectively pattern the public's perceptions

about a candidate because the political arena is characterized by a low order of stimulus structure. Voters are rarely informed about the candidate's voting record, private interest commitments and sources of finance. The most salient information to the voters in patterning their impressions of candidates are the aspirants' party affiliation and media exposure. The calculated manipulation of the media to gain name-recognition and a favorable image is also made possible by the voter's failure to perceive himself as a target of influence and his lack of motivation to resist attempts to pattern his political impressions. Since the voter seldom perceives the politician's media campaign as a deliberate attempt to influence him, personally, he is not disposed toward resisting these influence messages. This appears to be especially true in the case of incumbents who skillfully use the media during noncampaign periods to shape the voters' impressions regarding their performance. Further, the voter's lack of motivation to investigate the politician's claims adds to his vulnerability to impression management through manipulation of the media. The American political process seems to be characterized by the election of a series of orchestrated images to political office which are often greatly discrepant from the men they represent.

Political issues are as unstructured a stimulus for voters as political personalities. Issues such as bussing are extremely complex for social science experts to pattern, let alone for the uninformed voter. Since the public is likely to be poorly informed about the objective facts underlying a given issue, emotional responses become an influential basis for patterning their perceptions of the issue which also serves to insulate the individuals from appeals to reason. Politicians often attempt to use emotion-charged issues in their campaigns

to gain or remain in office in order to present themselves favorably or discredit an opponent. The deliberate arousal of the voter's emotions renders him more vulnerable to social influence communications since this approach provides a simple means of patterning a complex stimulus (the issue) and simultaneously reduces the voter's reliance on reason. Again, the effectiveness of this practice is aided by the voter's lack of awareness that his impressions are being deliberately manipulated and his lack of motivation to check out the objective data underlying the issue.

The political system's defense against this pervasive practice of impression management would seem to lie in legislation which polices political finances and fairness of media advertising, and the efforts by the media and public interest groups to inform the public about candidates and issues. Legislation which compels candidates to publish their sources of income provides the public with more objective data with which to pattern their impressions about these individuals. Likewise, legislation which monitors the candidates' use of the media during campaigns promises to reduce the likelihood of media programs calculated to manipulate the public's fears or prejudices. These reforms promise to make it harder for politicians to cause the public to pattern their perceptions of personalities and issues through emotional responses.

The media and public interest groups can contribute to the welfare of the political system by informing the public about candidates and issues and providing alternative ways of patterning political experience. The more objective data the public acquires, the less ambiguous the political arena becomes and the less vulnerable the public will be to

calculated attempts to manipulate their impressions. A second contribution both the media and public interest groups can make is to provide alternative ways for the public to pattern their political experience. The availability of alternatives to an Administration position or a candidate's platform renders the public less dependent upon Washington or a given political figure in reaching their opinions. A valuable outgrowth of informing the public and providing alternative ways of patterning political experience is that the public may become sensitized to the deliberate efforts made to influence their impressions. Awareness of calculated influence attempts renders the public more resistant to them.

Does the defense of the political system ultimately rest with the media and public interest groups? No. While both the media and public interest groups serve a checks-and-balances function in the American political system, both are capable of the same abuses which have been condemned in this discussion. Such abuses can be witnessed in an anti-Nixon press or the blind advocacy of legislation by environmental groups which could be economically disastrous to the nation. The ultimate defense of the American political system appears to rest in the checks and balances produced by a diffusion of political power throughout the entire political system. This diffusion forces congressmen and journalists alike to compete for the public's attention and confidence, precluding the development of monopolies of political influence in the nation as a whole.

The implications of the Machiavellian and social influence literature for Western philosophy, psychology and political science have been considered. In the discipline of philosophy, the problem of man's

nature was addressed. The literature provided empirical support for Machiavelli's view that man is dishonest, cowardly, gullible and ambitious. The implications of the literature for personality psychology concerned support for a Machiavellian personality characterized by successful manipulation, selective resistance to social influence and the appearance of consistency, while its implications for social psychology concern the preconditions for effective social influence and resistance to interpersonal influence attempts. Finally, the literature's implications for political science were considered. The problem of the calculated management of the voting public's impressions of personalities and issues was addressed along with the political system's defenses against these abuses. The contributions of the Machiavellian and social influence literature to human thought appear to be diverse and invaluable.

REFERENCE NOTES

1. Helm, B. Interperceptions and interpersonal behaviors. Unpublished manuscript, Oklahoma State University, 1973.
2. Harris, T. M. Machiavellianism, judgment, independence and attitudes toward teammate in a cooperative judgment task. Unpublished manuscript, Columbia University, 1966.
3. Geis, F., Krupat, E., & Gerger, D. Taking over in group discussion. Unpublished manuscript, New York University, 1965.
4. Feiler, J. Machiavellianism, dissonance and attitude change. Unpublished manuscript, New York University, 1967.
5. Gregory, B. W. Judgments of distance in a quantified social norm situation. Unpublished manuscript, Oklahoma State University, 1972.
6. MacNeil, M. K. Personal communication, March, 1975.
7. MacNeil, M. K. Norm change over subject generations as a function of arbitrariness of prescribed norms. Unpublished manuscript, University of Oklahoma, 1965.
8. MacNeil, M. K. Power of status in norm formation under differing conditions of group solidarity. Unpublished manuscript, University of Oklahoma, 1967.
9. Pace, D. J. Differential effects of judgment situations on experimental groups. Unpublished manuscript, Oklahoma State University, 1972.

REFERENCES

- Adams, J. S. Inequity in social exchange. In L. Berkowitz (Ed.), Advances in experimental social psychology (Vol. 2). New York: Academic Press, 1965.
- Adler, A. Individual psychology. In C. Murchinson (Ed.), Psychologies of 1930. Worcester, Mass.: Clark University Press, 1930.
- Anglo, S. Machiavelli. London: Victor Gollancz, 1969.
- Asch, S. Effects of group pressure upon the modification and distortion of judgments. In H. Guetzkow (Ed.), Groups, leadership and men. Pittsburgh: Carnegie Press, 1951.
- Asch, S. Studies of independence and conformity: A minority of one against a unanimous majority. Psychological Monographs, 1956, 70 (9, Whole No. 416).
- Asch, S. Effects of group pressure upon modification and distortion of judgments. In E. Maccoby, T. Newcomb & E. Hartley (Eds.), Readings in social psychology. New York: Holt, 1958.
- Bogart, K., Geis, F., Levy, M., & Zimbardo, P. No dissonance for Machiavellians. In L. Festinger & S. Schachter (Eds.), Studies in Machiavellianism. New York: Academic Press, 1970.
- Bovard, E. W., Jr. Group structure and perception. Journal of Abnormal and Social Psychology, 1951, 46, 398-405.
- Brehm, J. W. A theory of psychological reactance. New York: Academic Press, 1966.

- Budner, S. Intolerance of ambiguity as a personality variable. Journal of Personality, 1962, 30, 29-50.
- Butterfield, H. The statecraft of Machiavelli. New York: MacMillan, 1956.
- Byrne, D. The attraction paradigm. New York: Academic Press, 1971.
- Christie, R. Why Machiavelli? In L. Festinger & S. Schachter (Eds.), Studies in Machiavellianism. New York: Academic Press, 1970.
- Christie, R. Scale construction. In L. Festinger & S. Schachter (Eds.), Studies in Machiavellianism. New York: Academic Press, 1970.
- Christie, R. The Machiavellis among us. Psychology Today, November, 1970, 82-86.
- Christie, R., & Geis, F. The ten dollar game. In L. Festinger & S. Schachter (Eds.), Studies in Machiavellianism. New York: Academic Press, 1970.
- Christie, R., Gergen, K., & Marlowe, D. The penny-dollar caper. In L. Festinger & S. Schachter (Eds.), Studies in Machiavellianism. New York: Academic Press, 1970.
- Croner, M. D., & Willis, R. H. Perceived differences in task competence and asymmetry of dyadic influence. Journal of Abnormal and Social Psychology, 1961, 62, 705-708.
- Deutsch, M., & Gerard, H. A study of normative and informational influence upon individual judgment. Journal of Abnormal and Social Psychology, 1955, 51, 629-636.
- Durkin, J. Encountering: What low Machs do. In L. Festinger & S. Schachter (Eds.), Studies in Machiavellianism. New York: Academic Press, 1970.

- Epstein, G. Machiavelli and the devil's advocate. Journal of Personality and Social Psychology, 1969, 11, 38-41.
- Exline, R., Thibaut, J., Hickey, C. B., & Gumpert, P. Visual interaction in relation to Machiavellianism and an unethical act. In L. Festinger & S. Schachter (Eds.), Studies in Machiavellianism. New York: Academic Press, 1970.
- Freud, S. Totem and taboo. New York: Norton, 1952.
- Fromm, E. Man for himself. New York: Holt, Rinehart & Winston, 1947.
- Geis, F. The con game. In L. Festinger & S. Schachter (Eds.), Studies in Machiavellianism. New York: Academic Press, 1970.
- Geis, F., & Christie, R. Overview of experimental research. In L. Festinger & S. Schachter (Eds.), Studies in Machiavellianism. New York: Academic Press, 1970.
- Geis, F., Christie, R., & Nelson, C. In search of the Machiavel. In L. Festinger & S. Schachter (Eds.), Studies in Machiavellianism. New York: Academic Press, 1970.
- Goldbert, S. Three situational determinants of conformity to social norms. Journal of Abnormal and Social Psychology, 1954, 49, 325-329.
- Gouldner, A. W. The norm of reciprocity: A preliminary statement. American Sociological Review, 1960, 25, 161-179.
- Graham, D. Experimental studies of social influence on simple judgment situations. Journal of Social Psychology, 1962, 56, 245-269.
- Harvey, O. J., & Rutherford, J. Gradual and absolute approaches to attitude change. Sociometry, 1958, 21, 61-68.
- Hays, W. Statistics. New York: Holt, Rinehart & Winston, 1963.

- Hilgard, E. R., & Bower, G. H. Theories of learning (4th ed.). Englewood Cliffs, New Jersey: Prentice-Hall, 1975.
- Hollander, E. P. Conformity, status and idiosyncrasy credit. Psychological Review, 1958, 65, 117-127.
- Hollander, E. P. Emergent leadership and social influence in L. Petruccio & B. M. Bass (Eds.), Leadership in interpersonal behavior. New York: Holt, Rinehart & Winston, 1961.
- Hollander, E. P. Leaders, groups and influence. New York: Oxford University Press, 1964.
- Hollander, E. P., & Willis, R. H. Some current issues in the psychology of conformity and nonconformity. Psychological Bulletin, 1967, 68, 62-75.
- Insko, C. A. Theories of attitude change. New York: Appleton-Century-Crofts, 1967.
- Jones, E. E. Conformity as a tactic of ingratiation. Science, 1965, 149, 144-150.
- Jones, E. E., Gergen, K. J., & Davis, K. E. Some determinants of reactions to being approved or disapproved as a person. Psychological Monographs, 1962, 76, (2, Whole No. 521).
- Kelman, H. Effects of success and failure on "suggestibility" in the autokinetic situation. Journal of Abnormal and Social Psychology, 1950, 45, 267-285.
- Kidd, J. S., & Campbell, D. T. Conformity to groups as a function of group success. Journal of Abnormal and Social Psychology, 1955, 51, 390-393.
- Kunnapas, T. The vertical-horizontal illusion in artificial visual fields. Journal of Psychology, 1959, 47, 41-48.

- Luchins, A. S., & Luchins, E. H. On conformity with judgments of a majority or an authority. Journal of Social Psychology, 1961, 53, 303-316.
- Luchins, A. S., & Luchins, E. H. Half views and the autokinetic effect. The Psychological Record, 1963, 13, 415-444.
- Machiavelli, N. [Discourse on the first ten books of Titus Livius] (C. Detmold, Ed. and trans.). Boston: Houghton Mifflin, 1891. (Originally published, 1519).
- Machiavelli, N. [The prince] (B. Milligan, Ed.). New York: Charles Scribner's Sons, 1953. (Originally published, 1532).
- Maddi, S. R. Personality theories: A comparative analysis (Rev. ed.). Homewood, Illinois: The Dorsey Press, 1972.
- Maslow, A. H. Deficiency motivation and growth motivation. In M. R. Jones (Ed.), Nebraska Symposium on Motivation. Lincoln: University of Nebraska Press, 1955.
- Musner, B. Studies in social interaction: III. Effect of variation in one partner's prestige on the interaction of observer pairs. Journal of Applied Psychology, 1953, 37, 391-394.
- Mausner, B. The effect of prior reinforcement on the interaction of observer pairs. Journal of Abnormal and Social Psychology, 1954, 49, 65-68.
- Orne, M. T. Demand characteristics and the concept of quasi-controls. In R. Rosenthal & R. L. Rosnow (Eds.), Artifact in behavioral research. New York: Academic Press, 1969.
- Pace, D. J., & MacNeil, M. K. Comparison of social norms across four judgment situations. Perceptual and Motor Skills, 1974, 39, 575-582.

- Pollis, N. P., & Montgomery, R. L. Conformity and resistance to compliance. Journal of Psychology, 1966, 63, 35-41.
- Random House. The Random House dictionary of the English language. New York: Author, 1966.
- Rohrer, J. H., Baron, S. H., Hoffman, E. L., & Swander, D. V. The stability of autokinetic judgments. Journal of Abnormal and Social Psychology, 1954, 49, 595-597.
- Rosenberg, L. Group size, prior experience and conformity. Journal of Abnormal and Social Psychology, 1961, 63, 436-437.
- Russell, B. A history of Western philosophy. New York: Simon & Schuster, 1945.
- Schulman, H. Asch conformity studies: Conformity to the experimenter and/or to the group. Sociometry, 1967, 30, 26-40.
- Sherif, M. A study of some social factors in perception. Archives of Psychology, 1935, 27, 187, 1-60.
- Sherif, M., & Sherif, C. Social psychology. New York: Harper & Row, 1969.
- Singer, J. E. The use of manipulative strategies: Machiavellianism and attractiveness. Sociometry, 1964, 27, 128-150.
- Stone, W. F. Autokinetic norms: An experimental analysis. Journal of Personality and Social Psychology, 1967, 5, 76-81.
- Stricker, L., Messick, S., & Jackson, D. Conformity, anticonformity and independence: Their dimensionality and generality. Journal of Personality and Social Psychology, 1970, 16, 494-507.
- Tedeschi, J., Schlenker, B., & Bonoma, T. Compliance to threats as a function of source attractiveness and esteem. Sociometry, 1975, 38, 81-98.

Walter, N. A study of effects of conflicting suggestions upon judgment of the autokinetic situation. Sociometry, 1955, 18, 138-146.

Walters, R. H., Marshall, W. E., & Shooter, J. R. Anxiety, isolation and susceptibility to social influence. Journal of Personality, 1960, 28, 518-529.

Wrightsman, L. S. Social psychology in the seventies. Monterey: Brooks-Cole, 1973.

Wrightsman, L. S., & Cook, S. Data cited by Christie, R. Relationships between Machiavellianism and measure of ability, opinion and personality. In L. Festinger & S. Schachter (Eds.), Studies in Machiavellianism. New York: Academic Press, 1970.

APPENDIX A

MACHIAVELLINA IV SCALE

 Student Name

 Sex

 Phone Number

 Instructor Name

Student Philosophy Survey

Instructions

Participation in this survey is completely optional. These items sample student philosophies about the nature of man and society. Please write your name and instructor at the top of this page. Answer all items and place your answer--which will be a number from 1 to 7--in the blank provided at the right of each question. Your responses will be help in strict confidence. Results will be made available through your instructor.

-
1. Never tell anyone the real reason you did something unless it is useful to do so.
 (7) strongly agree, (6) somewhat agree, (5) slightly agree,
 (4) no opinion, (3) slightly disagree, (2) somewhat disagree,
 (1) strongly disagree. _____

 2. The best way to handle people is to tell them what they want to hear.
 (7) strongly agree, (6) somewhat agree, (5) slightly agree,
 (4) no opinion, (3) slightly disagree, (2) somewhat disagree,
 (1) strongly disagree. _____

 3. One should take action only when sure it is morally right.
 (1) strongly agree, (2) somewhat agree, (3) slightly agree,
 (4) no opinion, (5) slightly disagree, (6) somewhat disagree,
 (7) strongly disagree. _____

 4. Most people are basically good and kind.
 (1) strongly agree, (2) somewhat agree, (3) slightly agree,
 (4) no opinion, (5) slightly disagree, (6) somewhat disagree,
 (7) strongly disagree. _____

 5. It is safest to assume that all people have a vicious streak and it will come out when they are given a chance.
 (7) strongly agree, (6) somewhat agree, (5) slightly agree,
 (4) no opinion, (3) slightly disagree, (2) somewhat disagree,
 (1) strongly disagree. _____

 6. Honesty is the best policy in all cases.
 (1) strongly agree, (2) somewhat agree, (3) slightly agree,
 (4) no opinion, (5) slightly disagree, (6) somewhat disagree,
 (7) strongly disagree _____

7. There is no excuse for lying to someone.
(1) strongly agree, (2) somewhat agree, (3) slightly agree,
(4) no opinion, (5) slightly disagree, (6) somewhat disagree,
(7) strongly disagree. _____
8. Generally speaking, men won't work unless they're forced to do so.
(7) strongly agree, (6) somewhat agree, (5) slightly agree,
(4) no opinion, (3) slightly disagree, (2) somewhat disagree,
(1) strongly disagree. _____
9. All in all, it is better to be humble and honest than important and dishonest.
(1) strongly agree, (2) somewhat agree, (3) slightly agree,
(4) no opinion, (5) slightly disagree, (6) somewhat disagree,
(7) strongly disagree. _____
10. When you ask someone to do something for you, it is best to give the real reasons for wanting it rather than giving reasons which might carry more weight.
(1) strongly agree, (2) somewhat agree, (3) slightly agree,
(4) no opinion, (5) slightly disagree, (6) somewhat disagree,
(7) strongly disagree. _____
11. Most people who get ahead in the world lead clean, moral lives.
(1) strongly agree, (2) somewhat agree, (3) slightly agree,
(4) no opinion, (5) slightly disagree, (6) somewhat disagree,
(7) strongly disagree. _____
12. Anyone who completely trusts anyone else is asking for trouble.
(7) strongly agree, (6) somewhat agree, (5) slightly agree,
(4) no opinion, (3) slightly disagree, (2) somewhat disagree,
(1) strongly disagree. _____
13. The biggest difference between most criminals and other people is that criminals are stupid enough to get caught.
(7) strongly agree, (6) somewhat agree, (5) slightly agree,
(4) no opinion, (3) slightly disagree, (2) somewhat disagree,
(1) strongly disagree. _____
14. Most men are brave.
(1) strongly agree, (2) somewhat agree, (3) slightly agree,
(4) no opinion, (5) slightly disagree, (6) somewhat disagree,
(7) strongly disagree. _____
15. It is wise to flatter important people.
(7) strongly agree, (6) somewhat agree, (5) slightly agree,
(4) no opinion, (3) slightly disagree, (2) somewhat disagree,
(1) strongly disagree. _____
16. It is possible to be good in all respects.
(1) strongly agree, (2) somewhat agree, (3) slightly agree,
(4) no opinion, (5) slightly disagree, (6) somewhat disagree,
(7) strongly disagree. _____

17. Barnum was very wrong when he said that there's a sucker born every minute.
(1) strongly agree, (2) somewhat agree, (3) slightly agree,
(4) no opinion, (5) slightly disagree, (6) somewhat disagree,
(7) strongly disagree. _____
18. It is hard to get ahead without cutting corners here and there.
(7) strongly agree, (6) somewhat agree, (5) slightly agree,
(4) no opinion, (3) slightly disagree, (2) somewhat disagree,
(1) strongly disagree. _____
19. People suffering from incurable diseases should have the choice of being put painlessly to death.
(7) strongly agree, (6) somewhat agree, (5) slightly agree,
(4) no opinion, (3) slightly disagree, (2) somewhat disagree,
(1) strongly disagree. _____
20. Men forget more easily the death of their father than the loss of their property.
(7) strongly agree, (6) somewhat agree, (5) slightly agree,
(4) no opinion, (3) slightly disagree, (2) somewhat disagree,
(1) strongly disagree. _____

APPENDIX B

DEBRIEFING QUESTIONNAIRE AND INTERPERSONAL

JUDGMENT SCALE

 (Name) (Age, Years-Months) (Date)

 (Address) (Phone Number)

1. Was it difficult to estimate the distance between the lights?
 (Check below)
- | | | |
|---------------------|-----------|----------|
| In general ? | Yes _____ | No _____ |
| In the first half? | Yes _____ | No _____ |
| In the second half? | Yes _____ | No _____ |
2. Did you use any method or device of your own to make more accurate estimates?
 Yes _____ No _____ If yes, what did you use or do?

3. How confident were you in your judgment of the distance between lights?
 (Draw a slashed line through each of the lines below indicating your degree of confidence)

In the first half: _____ / _____
 Very unsure _____ Very sure

In the second half: _____
 Very unsure _____ Very sure

4. Did the estimates given by the other person influence your judgments? (Check below)
- Yes _____ No _____ If yes, in which half the most?

(Check one) First half _____ Second half _____

5. What was the most frequent distance between the lights, and what was the average distance in each session? What was the least distance and what was the greatest distance between the lights?

First half: most frequent distance _____ inches, average distance _____ inches, least distance _____ inches, and greatest distance _____ inches.

Second half: most frequent distance _____ inches, average distance _____ inches, least distance _____ inches, and greatest distance _____ inches.

6. Did the estimations of the other person made it very easy, or very difficult for you to make your estimates accurately? Draw a slashed line through each of the lines below indicating how easy or difficult, in each session.

First half: Very easy _____ / _____ Very difficult

Second half: Very easy _____ / _____ Very difficult

7. How accurate were your own estimates? How accurate were the other person's estimates? (Draw a slash through each of the lines below indicating your degree of accuracy)

Your estimates:

Very inaccurate _____ / _____ very accurate

Very inaccurate _____ / _____ Very accurate

Other person's estimates:

Very inaccurate _____ / _____ Very accurate

8. Please rate the other person as accurately as possible on the following items:

(1) Personal Feelings (check one)

_____ I feel that I would probably like this person very much.

_____ I feel that I would probably like this person.

_____ I feel that I would probably like this person to a slight degree.

_____ I feel that I would probably neither particularly like nor particularly dislike this person.

_____ I feel that I would probably dislike this person to a slight degree.

_____ I feel that I would probably dislike this person.

_____ I feel that I would probably dislike this person very much.

(2) Respect (check one)

_____ I believe that this person is, to a great extent, not respected by those who know him.

_____ I believe that this person is not respected by those who know him.

_____ I believe that this person is, to a slight degree, not respected by those who know him.

_____ I believe that this person is neither particularly respected nor not respected by those who know him.

_____ I believe that this person is, to a slight degree, respected by those who know him.

_____ I believe that this person is, to a great extent, respected by those who know him.

(3) Approval (check one)

- I believe that this person is highly approved of by those who know him.
- I believe that this person is approved of by those who know him.
- I believe that this person is slightly approved of by those who know him.
- I believe that this person is neither particularly approved nor disapproved of by those who know him.
- I believe that this person is slightly disapproved of by those who know him.
- I believe that this person is disapproved of by those who know him.
- I believe that this person is highly disapproved of by those who know him.

(4) Adjustment (check one)

- I believe that this person is extremely maladjusted.
- I believe that this person is maladjusted.
- I believe that this person is maladjusted to a slight degree.
- I believe that this person is neither particularly maladjusted nor well adjusted.
- I believe that this person is well adjusted to a slight degree.
- I believe that this person is well adjusted.
- I believe that this person is extremely well adjusted.

(5) Intelligence (check one)

- I believe that this person is very much above average in intelligence.
- I believe that this person is above average in intelligence.
- I believe that this person is slightly above average in intelligence.
- I believe that this person is average in intelligence.
- I believe that this person is slightly below average in intelligence.
- I believe that this person is below average in intelligence.
- I believe that this person is very much below average in intelligence.

(6) Knowledge of current events (check one)

- I believe that this person is very much below average in his knowledge of current events.
- I believe that this person is below average in his knowledge of current events.
- I believe that this person is slightly below average in his knowledge of current events.
- I believe that this person is average in his knowledge of current events.
- I believe that this person is slightly above average in his knowledge of current events.
- I believe that this person is above average in his knowledge of current events.
- I believe that this person is very much above average in his knowledge of current events.

(7) Morality (check one)

- This person impresses me as being extremely moral.
- This person impresses me as being moral.
- This person impresses me as being moral to a slight degree.
- This person impresses me as being neither particularly moral nor particularly immoral.
- This person impresses me as being immoral to a slight degree.
- This person impresses me as being immoral.
- This person impresses me as being extremely immoral.

(8) Working together in an experiment (check one)

- I believe that I would very much dislike working with this person in an experiment.
- I believe that I would dislike working with this person in an experiment.
- I believe that I would dislike working with this person in an experiment to a slight degree.
- I believe that I would neither particularly dislike nor particularly like working with this person in an experiment.
- I believe that I would enjoy working with this person in an experiment to a slight degree.
- I believe that I would enjoy working with this person in an experiment.
- I believe that I would very much like working with this person in an experiment.

9. Write in a sentence or two any unusual experiment you had during the session or write any comments you would like to offer.
10. Draw the length of the average distance between the lights on the blackboard.

APPENDIX C

MACHIAVELLIAN V SCALE

6. ___ A. Most people who get ahead in the world lead clean, moral lives.
___ 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.
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 reasons for wanting it than giving reasons which might carry more weight.
___ 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.
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.
___ C. Once a decision has been made, it is best to keep changing it as new circumstances arise.
10. ___ A. It is a 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.
___ C. Even the most hardened and vicious criminal has a spark of decency somewhere within him.
11. ___ A. All in all, it is better to be humble and honest than to be important and dishonest.
___ 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.
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.
13. ___ A. Generally speaking, men won't work hard unless they are forced to do so.
___ 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.
___ 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.
___ C. A capable person motivated for his own gain is more useful to society than a well-meaning but ineffective one.
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.
17. ___ A. It is possible to be good in all respects.
___ B. To help oneself is good; to help others is better.
___ C. War and threats of war are unchangeable facts of life.
18. ___ A. Barnum was probably right when he said that there's at least one sucker born every minute.
___ B. Life is pretty dull unless one deliberately stirs up some excitement.
___ C. Most people would be better off if they control 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.
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.
___ C. It is essential for the functioning of a democracy that everyone vote.

VITA ²

Fredric Bruce Shaffer

Candidate for the Degree of

Doctor of Philosophy

Dissertation: MACHIAVELLIAN CONFORMITY IN THE HEX SITUATION

Major Field: Psychology

Biographical:

Personal Data: Born in Brooklyn, New York, May 23, 1949, the son of Irving and Bette Shaffer.

Education: Graduate from Bullard High School, Fresno, California, June, 1967; received the Bachelor of Arts degree in Psychology and Political Science from Claremont Men's College, Claremont, California in 1971; enrolled in Master's program at Oklahoma State University, 1971-1973; completed requirements for the Master of Science degree in December, 1973; enrolled in Doctoral program at Oklahoma State University, 1973-1975; completed requirements for the Doctor of Philosophy degree in December, 1975.

Professional Experience: Psychological trainee, 1971-1972, Veterans Administration Hospital, Oklahoma City, Oklahoma; research assistant, 1972-1973, Department of Psychology, Oklahoma State University, Stillwater, Oklahoma; psychiatric aide, 1973, Stillwater Municipal Hospital, Stillwater, Oklahoma; graduate teaching assistant, 1973-1975, Department of Psychology, Oklahoma State University, Stillwater, Oklahoma.