

AN EXPLORATORY ANALYSIS OF COMPLIANCE
TO AUTHORITY AND AUTHORITARIAN
TENDENCIES AMONG SELECTED
STUDENTS OF HIGHER
EDUCATION

By

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CHAPTER I

NATURE OF THE PROBLEM

Introduction

Students of human behavior generally agree that obedience is one of the more basic elements of social life. Some system of authority is necessary for the functioning and maintenance of virtually every social relationship, regardless of the level of interaction, for the needs of individual human beings call for the association of men. The necessity of mutual assistance and division of labor is not only of a biological, physical, and material nature but also increasingly concerns the intellectual, esthetic, moral and spiritual life of individuals in society. This is not to say that authority may not be misused or that man should not seek some measure of independence or freedom of thought and action. In fact, freedom is to a degree dependent upon some system of authority. The exercise of freedom is difficult in times in which the familiar order has been drastically disrupted and man is left exposed to an alien, threatening environment. Attempts to control such insecure life situations are carried out through regulation by laws and informal means of social control.

Within their social order, however, men will launch out in enterprises that threaten societal stability and even its survival. Total self interest has long been recognized as an explosive force which can prove to be very disruptive to peace and order in society. Charles

Hendel has stated that "it is characteristic of people having the intelligence and capacity to develop a civilization also to take an individual line of personal advantage within the very system which provides them with their opportunities and their enjoyments."¹ Man must often be willing to subordinate his more private, personal interests in favor of societal interests or the common good. If this common good is to be obtained through the actions of a plurality of individuals, each with his own means to such an end, authority has an indispensable role to play.

Since authority implies that an actor can carry out his will, authority involves obedience. Facts of the history of man and observation in daily life suggest that for many persons obedience may be a deeply ingrained behavior tendency. While obedience may be ennobling and educative, it may also serve to lend legitimacy to many criminal acts or acts of aggression which are destructive of society. War, for example, may entail acts of aggression which involve an authority commanding a person to harm another. Perhaps, as Stanley Milgram has suggested, "all organized hostility may be viewed as a theme and variation on the three elements of authority, executant, and victim."² The recent history of Nazi Germany serves as an excellent example of a triad of this type.

¹Charles W. Hendel, "An Exploration of the Nature of Authority," Authority, ed. Carl J. Friedrich (Cambridge: Harvard University Press, 1958), p. 8.

²Stanley Milgram, "Some Conditions of Obedience and Disobedience to Authority," Human Relations, XVIII, No. 1 (February, 1965), p. 57.

The Problem

Due to its relative importance, considerable research has been devoted to the problem of obedience. However, most of the studies, which have dealt with conformity and/or compliance, have employed experimental procedures which are rather far removed from real life situations. In effect, the act of compliance or conformity was of little import to the respondents when compared to the strong emotional problems involved in obedient acts of aggression. Accordingly, this study has attempted to implement a technique permitting an investigation of obedience, or more specifically, compliance to authority, which presents a situation of deep psychological consequence to the participants.

In addition to the aforementioned objective, this investigation has attempted to reveal something of the nature of the relationship between compliance to authority and education. From the myriad of potentially significant variables associated with compliance, the investigator has selected the formal education process. The choice was warranted, if for no other reason, because education is one of the most important elements of modern life. More specifically, this study seeks to inquire into the intrinsic relationship between values and learning.

Any investigation concerning values must initially deal with the learning experience, for values, like all elements of culture, must be learned. One particular learning experience which is highly conducive to scientific investigation is the formal education process. It offers a well-defined situation, controlled conditions, and has the advantage of easy accessibility of subjects and data.

In its most general form the problem may be defined thus: if A tells B to hurt C, will B carry out the command even when his values and training cause him to define such action as unethical or immoral?

To better understand this problem, the author has completed laboratory research involving an experimental situation in which one individual possessing a specific amount and type of college education was commanded to inflict pain on another person. By comparing college freshmen with seniors and students receiving their training in two distinct spheres of educational experience, this study concentrated on the question of obedience or compliance to authority as it related to the process of higher education. Attention was also focused on the potential relationship between the tendency to be compliant and certain personality characteristics. Specifically, the characteristics as measured by the F scale were employed to evaluate the relationship between the authoritarian personality type and compliance to authority.

CHAPTER II

REVIEW OF THE LITERATURE

As indicated earlier, there are few social relationships from which the authority element is wholly absent. It is therefore all the more remarkable that sociological approaches to the problem of authority are of relatively recent origin. Though philosophers and political theorists from the days of early Greek philosophy have been interested in the social as well as the human consequences of superordination and subordination, sociological contributions marking major departure from earlier orientations date only from around the turn of the century.

One of the earliest important works concerning authority was Simmel's¹ writing on superordination and subordination. Simmel asserts that authority necessarily involves an element of obedience and therefore also inherently involves reciprocity. In effect, obedience is not blind, it is essentially part of an interactive relationship involving not only authority but acceptance.

A more recent theorist has further reiterated this point. Blau² points out that subordinates become obligated once they have accepted

¹ Georg Simmel, The Sociology of Georg Simmel, tr. and ed. Kurt H. Wolff (Glencoe, Illinois: The Free Press, Inc., 1950), pp. 181-186.

² Peter M. Blau, Exchange and Power in Social Life (New York: John Wiley and Sons, 1964).

advice from a leader. Yet the leader or advisor then becomes obligated to supply advice and guidance. The leader, in fact, is in competition with other potential leaders for the right or duty of advising the subordinates. Blau argues that the relationship is simply one of supply and demand and that over time obligations tend to balance out, thus creating reciprocity.

There is some argument, however, that orders and advice create two essentially different situations. Homans concludes that, "in both cases, whether he gives them advice they take or orders they obey, the important point is that he controls their behavior."³ It is this authors's contention however, that there is a very important difference. As Blau asserts:

Indeed, giving advice and issuing orders have opposite consequences; advising another creates obligations, while ordering him to do something uses them up, as it were, by enabling him to discharge his obligations through his compliance.⁴

Authority may be accepted for a variety of reasons. Obedience given to a king may be vastly different than that given to a professor. Hence, differentiation must be made between the various types of voluntary obedience. In this respect the contributions of Max Weber⁵ must be considered of crucial relevance. Weber developed a classification

³George C. Homans, Social Behavior (New York: Harcourt, Brace, and World, 1961), p. 372.

⁴Peter M. Blau, Exchange and Power in Social Life (New York: John Wiley and Sons, 1964), p. 131.

⁵Max Weber, The Theory of Social and Economic Organization, tr. Alexander M. Henderson and Talcott Parsons, ed. Talcott Parsons (New York: Oxford University Press, 1947), pp. 57-77.

of types of authority based on the means of social legitimation. This threefold classification---legal authority, traditional authority, and charismatic authority---has been criticized in many respects, yet it remains as a fundamental basis for a great deal of the later theorizing in this area. Weber's insights on authority and power have been further clarified by Bierstedt⁶ who differentiates the concept of authority from other concepts, such as a leadership and influence. Bierstedt observes that authority, as distinct from other related concepts, is always attached to statuses, not to persons, and is always institutionalized. Power, on the other hand, is seen as being independent of specific roles and statuses. Anyone may have needs or goals or may have resources valued by others regardless of his roles.

Authority involves the basic element of "rightness" or legitimacy which is often employed by various writers to refer to legitimate power. In an authority relationship, not only can one individual make decisions concerning another's behavior, but both the superordinate and the subordinate perceive that the former has a legitimate right to do so and that the subordinate has an obligation to comply with these decisions. The concept of authority as used here is very nearly the same as one which French and Raven call "legitimate power."

Legitimate power of O/P (one individual over another) is defined as that power which stems from internalized values in P which dictate that O has a legitimate

⁶Robert Bierstedt, "An Analysis of Social Power," The American Sociological Review, XV, No. 6 (December, 1950), pp. 730-738.

right to influence P and the P has an obligation to accept this influence.⁷

Power is seen here as an aspect of an informal social relationship based on the ability of one person to contribute to the gratification or deprivation of another's needs. Thus in differentiating authority from legitimate power, it is important to remember that authority is an aspect of the formal structure of a group based on the role prescriptions and founded in the normative system of that group.

Authority need not and very often is not represented by any single individual, group, or ideology. Individual behavior may be affected by one's social norms and/or his various reference groups. Conformity to these group norms functions to regulate diversity within the group. Conforming behavior, due to its importance to social life, has been extensively investigated.

There are perhaps as many definitions of conformity as there are people to define it. Social science endeavors exhibit a variety of contrasting levels which have been inconsistently applied to designate similar, though not identical, types of behavior. These terms include conformity, suggestion, compliance, persuasion, acquiescence, submission, and imitation, among others.

The concept of suggestion had its beginnings in the realm of what later led to the development of clinical psychology. In the latter part of the

⁷ John R.P. French, Jr. and Bertram Raven, "The Bases of Social Power," Studies in Social Power, ed. Dorwin Cartwright (Ann Arbor, Michigan: The University of Michigan Institute for Social Research, 1959), p. 159.

eighteenth century, Mesmer's⁸ notion of "animal magnetism" led him to believe that hysteria, as well as other physical and mental diseases, could be cured. He theorized that the magnetic forces of certain individuals could be used to effect the distribution of magnetic fluid in others, thus eliminating the causes of hysteria. In practice, his theory worked. What he had actually discovered, however, was one of the later uses of hypnosis. As the phenomenon of hypnosis became more widely known, numerous theories were evolved as to its connection with hysteria. Jean Charcot, a French neurologist, conducted a series of experiments in an attempt to uncover the exact nature of the relationship. Charcot⁹ and his colleagues attempted to relate hysteria to concepts of suggestion by observing that hysterical patients tended to display heightened suggestibility. It was theorized that not only was suggestibility characterized by susceptibility to the influences of others, but was also indicative of a generally increased sensitivity to any stimulation. This view was studied by Hollingsworth¹⁰ and Titchener¹¹ by measuring the response of individuals to an assortment

⁸ James C. Coleman, Abnormal Psychology and Modern Life (Chicago: Scott, Foresman and Company, 1964), pp. 46-47.

⁹ Jean M. Charcot, Oeuvres Complètes (Paris: Bureaux du Progrès Médical, 1881).

¹⁰ Harry L. Hollingsworth, The Psychology of Functional Neuroses (New York: Appleton-Century-Crofts, 1920).

¹¹ Edward B. Titchener, A Textbook of Psychology (New York: Macmillan, 1910).

of minimal stimulation from either social or nonsocial sources. The investigation of socially influenced behavior, however, requires a somewhat more restrictive definition of social suggestibility.

Demonstrations of the effects of normative pressures upon the individual were reported early in social psychological literature. Clark,¹² for example, brought a small bottle of water into a classroom and instructed the students to indicate when they smelled the liquid. Thirty-three of the one hundred and sixty eight students, predominantly seated in one section of the classroom, indicated that they had smelled the odorless liquid. Thus, the students had responded not only to Clark's initial suggestion that an odor would be detected, but also to the normative influences of other students around them. Similarly, several early studies by Jenness¹³ and Allport¹⁴ demonstrated "bandwagon" effects in which members of groups influenced the judgments and actions of one another.

In the early 1930's, laboratory experimentation on the influence of group norms became extensive. It was in this period that Allport¹⁵ developed his well-known "J-curve" hypothesis. According to Allport variations in individual conforming behavior to institutional norms,

¹²Helen Clark, "The Crowd," Psychological Monographs, XXI, No. 4 (June, 1916), pp. 26-36.

¹³Arthur Jenness, "The Role of Discussion in Changing Opinion Regarding a Matter of Fact," Journal of Abnormal and Social Psychology, XXVII, No. 3 (October-December, 1932), pp. 279-286.

¹⁴Floyd H. Allport, Social Psychology (Boston: Houghton Mifflin, 1924).

¹⁵Floyd H. Allport, "The J-Curve Hypothesis of Conforming Behavior," Journal of Social Psychology, V, No. 2 (May, 1934), pp. 141-183.

such as customs and traditions, were distributed on a J-shaped curve rather than on the normal probability distribution that characterizes most psychological variables. In effect, the greatest frequencies stacked up at the point of maximum conformity, with decreasing frequencies associated with greater degrees of deviation. Allport's findings have been justifiably criticized. One error which produced the J-shaped distribution was failure to classify properly the varieties of deviation. He did not often differentiate between over-conformity and under-conformity or the so-called deviation. Nevertheless, Allport was among the first to investigate conformity in a laboratory setting.

Another important set of laboratory investigations of conformity to group norms was instigated by Muzafer Sherif.¹⁶ He conducted a series of experiments employing the autokinetic effect. This effect is observed when one views a very small light source in an otherwise totally dark room. The completely stationary source of light seems to move in varying fashions to most subjects. Sherif asked his subjects to estimate the distance which the light had moved. By varying the experimental situation so that subjects viewed the phenomenon either alone or in groups, he was able to establish both a group norm and a range. Subjects were then asked to view the "effect" after moving from one experimental condition to the other. Under such conditions, individual estimates were found to be profoundly influenced by the judgments of others. These findings indicate that group norms

¹⁶Muzafer Sherif, The Psychology of Social Norms (New York: Harper and Row, 1966).

are informational references used in making judgments, especially in a very ambiguous, unstructured situation such as that discussed above.

Experimentation which rather sharply contrasted to Sherif's work was carried out by Solomon Asch.¹⁷ His exploration involved a series of perceptual judgments which were very simple compared to the auto-kinetic experiments. The investigation consisted of a perceptual task in which the subject was to indicate which of three lines on a card was most similar to a "standard" line on another card. After first establishing the fact that subjects could differentiate when tested individually, Asch placed his subjects in a group situation in which all other subjects were instructed to make erroneous judgments. Under such conditions, he found that subjects could be induced to report wildly incorrect judgments. These experiments amply demonstrate the influence of group norms on individual behavior even when that individual has learned to exhibit the appropriate behavior previously.

These early explorations tended to regard socially influenced behavior as basically motivated by a single set of motivations in which conformity to norms was an end in itself. Conformity is now generally viewed as a mode or group of related modes of behavior that may occur in connection with a variety of motivational bases. The early investigations such as those cited above, were extremely important, however, in that they set the trend for later explorations.

Various distinctions have more recently been made between certain types of conformity. One such distinction was proposed by Deutsch and

¹⁷Solomon E. Asch, "Studies of Independence and Submission to Group Pressure: I.A. Minority of One Against a Unanimous Majority," Psychological Monographs, LXX, No. 9 (1956), Whole No. 416.

Gerard.¹⁸ They describe differences between "normative social influence" and "informational social influence." The former refers to agreement with other group members so as to avoid violation of their expectations. Conformity thus represents an end in itself. Informational influence, however, is described as acceptance of influence when it is expedient or useful to the conformer. It represents a means to an end.

Festinger¹⁹ has applied the terms "social reality" and "group locomotion" to concepts similar to those discussed by Deutsch and Gerard. Thibaut and Kelley²⁰ and Kelman²¹ have distinguished three forms of social influence: compliance, identification and internalization. The compliant type of influence emphasizes external conditions that induce one individual to accept the influence of another; identification is described as an influence process based on agreement or identity-seeking; and internalization is described as a process based on information seeking. Despite the fact that contemporary theorists have employed somewhat divergent terms to describe the various processes of influence acceptance, there does seem to be some general

¹⁸ Morton Deutsch and Harold B. Gerard, "A Study of Normative and Informational Social Influences Upon Individual Judgment," Journal of Abnormal and Social Psychology, LI, No. 3 (November, 1955), pp. 629-636.

¹⁹ Leon Festinger, "An Analysis of Compliant Behavior," Group Relations at the Crossroads, ed. Muzafer Sherif and Milbourne O. Wilson (New York: Harper and Brothers, 1953), pp. 232-255.

²⁰ John W. Thibaut and Harold H. Kelley, The Social Psychology of Groups (New York: Wiley and Son, 1959).

²¹ Herbert C. Kelman, "Compliance, Identification, and Internalization," Journal of Conflict Resolution, II, No. 1 (March, 1958), pp. 51-60.

consensus. The individual may accept influence either as an integral part of his own value system or may do so only overtly while in fact he may disagree personally.

Kiesler,²² in a recent study of group influence on opinion change, likewise points out three basic types of conformity. The first type refers basically to the above definition of identification while the second type conforms to the definition applied to compliance. The third type, although similar to compliance, concerns a relatively permanent opinion change resulting from continued compliance. Kiesler found that "commitment" to a group (in this case a knowledge of the permanency of the subject's problem solving group) can change the individual's opinion even in the absence of group pressure. As he emphasizes, this change of convictions is often permanent.

Continued research in the areas of compliance and conformity has made it increasingly apparent that such behavior is the product of interactions between personality and situational factors. Characteristics of the behavioral activity itself, of the person or group exerting influence, and personal characteristics of the influenced person all have an effect upon the degree to which an individual is likely to be socially influenced. In addition to findings already discussed, there have been numerous experiments in which situational factors have been varied. Frank, for example, found that: "an

²⁴ Charles A. Kiesler, "Conformity and Commitment," Trans-action, IV, No. 7 (June, 1967), pp. 32-35.

individual volunteering to take part in an experiment makes an implied contract which strongly inhibits resistance to any activity required by the experimenter."²³ This investigation differs from studies previously mentioned in that it involves pressure to comply with the wishes of the experimenter rather than with those of any specific group. The experimenter does, however, represent a certain cultural group and system of norms which are usually readily identifiable to the subjects involved.

A series of relatively recent experiments involving experimenter pressure to comply were conducted by Stanley Milgram.²⁴ These investigations were rather unique in that they involved attempts to influence the subjects to inflict pain upon another individual. Using an experimental procedure originally conceived by Buss and Brock²⁵ in a study of aggression, Milgram ordered his subjects to shock other individuals. Subjects were led to believe that they were taking part in a learning experiment and were asked to help contribute to existing knowledge concerning the effects of punishment on learning. The "victim", a trained confederate, actually received no electric shock but was instructed to exhibit pain and to protest when the voltage,

²³ Jerome D. Frank, "Experimental Studies of Personal Pressure and Resistance," Journal of General Psychology, XXX (January, 1944), p. 40.

²⁴ Stanley Milgram, "Behavioral Study of Obedience," Journal of Abnormal and Social Psychology, LXVII, No. 4 (October, 1963), pp. 371-378.

²⁵ Arnold H. Buss and Timothy C. Brock, "Repression and Guilt in Relation to Aggression," Journal of Abnormal and Social Psychology, LXVI, No. 4 (April, 1963), pp. 345-350.

which was increased with every learning error, reached a certain level. In an exploratory study, involving forty adults drawn from New Haven and the surrounding communities, Milgram found that, "26 obeyed the orders of the experimenter to the end, proceeding to punish the victim until they reached the most potent shock available on the shock generator."²⁶ In a second study,²⁷ the laboratory situation was varied by employing different experimenters and laboratory settings and by altering the spatial immediacy of the victim. Results showed that when either the experimenter or the laboratory setting lacked authenticity and thus legitimacy, the amount of obedience elicited decreased accordingly. Further, the immediacy of the victim also affected results in that the amount of obedience increased as the victim was increasingly removed from the situation.

Personality correlates to susceptibility to social influence are vague and rather inconsistent in social psychological literature. There is insufficient empirical evidence at present to attempt to ascertain a specific "conforming personality" type. Occasionally, various investigations have shown certain personality correlates of individual tendencies to conform to experimental social pressures. Centers and Horowitz²⁸ found that outer-directed (other-directed)

²⁶ Stanley Milgram, "Behavioral Study of Obedience," Journal of Abnormal and Social Psychology, LXVII, No. 4 (October, 1963), p. 376.

²⁷ Stanley Milgram, "Some Conditions of Obedience and Disobedience to Authority," Human Relations, XVII, No. 1 (February, 1965), pp. 57-76.

²⁸ Richard Centers and Miriam Horowitz, "Social Character and Conformity," Journal of Social Psychology, LX (June-August, 1963), pp. 343-349.

subjects were consistently more susceptible to influence attempts than were inner-directed subjects. Several studies have employed a measure of conformity designed by Richard Crutchfield²⁹ in an attempt to correlate certain personality features with susceptibility to social influence. Sistrunk and McDavid,³⁰ for example, obtained scores from a personality measure (EPPS) designed to measure achievement and affiliation needs. They found a positive correlation between achievement needs and conforming behavior but affiliation needs were not related. A related study³¹ sought to correlate scores obtained from forty measures of personality and motivational characteristics with Crutchfield-type conformity scores. Scores of some two hundred college students were assessed. The authors concluded that conformity is related to timidity, deference, avoidance of conflict, and strong needs for acceptance and/or approval.

Investigations which have attempted to correlate various measures of conforming behavior to authoritarianism, as measured by the F

²⁹ Richard S. Crutchfield, "Conformity and Character," American Psychologist, X, No. 5 (May, 1955), pp. 191-198.

³⁰ Francis Sistrunk and John W. McDavid, "Achievement Motivation, Affiliation Motivation, and Task Difficulty as Determinants of Social Conformity," Journal of Social Psychology, LXVI (June-August, 1965), pp. 41-50.

³¹ John W. McDavid and Francis Sistrunk, "Personality Correlates of Two Kinds of Conforming Behavior," Journal of Personality, XXXII, No. 3 (September, 1964), pp. 420-435.

scale,³² stem perhaps from a treatment of the problem by Rokeach.³³ Studies by Canning and Baker³⁴ and by Nadler³⁵ discerned that the greatest conformity occurred among subjects who were highly authoritarian. Steiner and Johnson³⁶ obtained similar findings but further ascertained that unless subjects were presented with unanimous agreement by others, high-authoritarian persons tended to show significantly less conforming behavior than did low-authoritarians. Despite some level of uniformity, it is as yet too early to predict, with any consistency, the type of individual who is most likely to be socially influenced. A great deal of additional research must be accumulated before questions about the personality characteristics of compliant individuals and the conformer can be fully and finally answered.

Various other characteristics of the influenced person have been

³²Theodor W. Adorno et al., The Authoritarian Personality (New York: Harper and Brothers, 1950), pp. 222-288.

³³Milton Rokeach, "Authority, Authoritarianism, and Conformity," Conformity and Deviation, ed. Irwin A. Berg and Bernard M. Bass (New York: Harper and Brothers, 1961), pp. 230-257.

³⁴Ray R. Canning and James M. Baker, "Effect of the Group on Authoritarian and Non-Authoritarian Persons," American Journal of Sociology, LXIV, No. 6 (May, 1959), pp. 579-581.

³⁵Eugene B. Nadler, "Yielding, Authoritarianism, and Authoritarian Ideology Regrading Groups," Journal of Abnormal and Social Psychology, LVIII, No. 3 (May, 1959), pp. 408-410.

³⁶Ivan D. Steiner and Homer H. Johnson, "Authoritarianism and Conformity," Sociometry, XXVI, No. 1, (March, 1963), pp. 21-34.

investigated as related to conforming behavior. Crutchfield³⁷ produced evidence that extreme consistency in conforming to group norms may be associated with neuroticism and chronic anxiety. He further discerned that highly intelligent people are more resistant to pressures to conform or to comply than are duller people. This implication was supported by Nakamura³⁸ and by Di Vesta.³⁹

Developmental aspects of conforming behavior have not been widely explored. Generally speaking, as a child grows older he becomes more self-sufficient in terms of guidance and control by others. As a result, tendencies toward blind and automatic conformity appear generally to decrease with age.⁴⁰ On the other hand, compliant behavior or conformity may also become a means of learning and "getting ahead."⁴¹

Educational effects on compliance and conformity have also been largely neglected. A relatively recent study by Tuddenham⁴²

³⁷ Richard S. Crutchfield, "Conformity and Character," American Psychologist, X, No. 5 (May, 1955), pp. 191-198.

³⁸ Charles Y. Nakamura, "Conformity and Problem Solving," Journal of Abnormal and Social Psychology, LVI, No. 3 (May, 1958), pp. 315-320.

³⁹ F. J. DiVesta, Susceptibility of Pressures Toward Uniformity of Behavior: A Study of Task, Motivational and Personality Factors in Conformity Behavior, U.S. Air Force Office of Scientific Research, No. 58-70 (Washington, 1958).

⁴⁰ Ruth W. Berenda, The Influence of the Group on the Judgments of Children (New York: Kings Crown Press, 1940).

⁴¹ Ernest R. Hilgard, "Success in Relation to Level of Aspiration," School and Society, LV, No. 1424 (April, 1942), pp. 423-428.

⁴² Read D. Tuddenham, "Correlates of Yielding to a Distorted Group Norm," Journal of Personality, XXVII, No. 1 (March, 1959), pp. 272-284.

ascertained that a substantial number of college students complied with the majority viewpoint despite the fact that many of the items to which they agreed were not only erroneous but totally absurd. Edmonds⁴³ likewise found that group consensus played a significant role in determining compliant behavior among graduate students. Eight of ten candidates for the master's degree complied with the group decision while six of ten candidates for the doctoral degree were influenced by the erroneous majority. This difference between educational levels could not be specifically accounted for by Edmonds although he did assert that the differential compliance did not reflect differences in reasoning ability. He concluded that the difference was seemingly due to one of two variations. "Candidates for the Doctor's degree may be, for some biographical reason, less compliant than candidates for the Master's degree before they enter school. Or, candidates for the Doctor's degree may become less compliant than candidates for the Master's degree after they enter school."⁴⁴

The complexity of interaction between the multitude of variables associated with the exertion of social pressure makes it difficult if not impossible to specify certain isolated characteristics as always associated with tendencies toward conformity or compliance. Neither type of behavior is the simple phenomenon it is often thought to be

⁴³Vernon H. Edmonds, "Logical Error as a Function of Group Consensus: An Experimental Study of the Effect of Erroneous Group Consensus Upon Logical Judgments of Graduate Students," Social Forces, XLIII, No. 1 (October, 1964), pp. 33-38.

⁴⁴Ibid., p. 37.

when people speak globally of "conformers" and "deviants."

Implications of the Review of the Literature

Investigations involving many of the potentially significant variables associated with compliance and conformity have been both exhaustive and multitudinous. As the review of the literature indicates, however, there exists a paucity of research concerning the relationship between the formal education process and social influence in the form of either compliance or conformity. Studies which have dealt with this relationship suggest that although college students will comply with a unanimous majority, the more advanced students are somewhat more independent.

The formal education process, especially higher education, has increasingly come under fire in recent years by those who wish to teach the student to question. This investigation has thus attempted to ascertain something of the nature of the relationship between compliance to authority and the process of formal education. In addition, this study has endeavored to supplement previous studies which deal with the connection between socially influenced behavior and authoritarianism.

CHAPTER III

METHODOLOGY

Hypotheses

Following a review of pertinent available literature, this investigator took the initial steps toward an empirical assessment of the relationship between the formal education process and the dependent variable, compliance to authority. An empirical appraisal of the relationship between compliance to authority and authoritarianism was also initiated. The following hypotheses were formulated:

- H₁: The amount of compliance to authority exhibited by students* in the College of Business will be significantly (p. <.05) greater than the amount of compliance to authority exhibited by students in the College of Arts and Sciences.
- H₂: The amount of compliance to authority exhibited by freshmen will be significantly (p. <.05) greater than the amount of compliance to authority exhibited by seniors.
- H₃: The amount of compliance to authority exhibited by students who display a high degree of authoritarianism will be significantly (p. <.05) greater than the amount of compliance to authority exhibited by students who display a low degree of

*Restrictions placed on the definition of the term "student" are discussed on page 25.

authoritarianism.

Definition of Concepts

The act of obeying involves a person doing what another person tells him to do. Obedience, however, is a general and somewhat ambiguous term which may refer to various forms of human behavior. To insure a greater degree of precision, this investigation will employ the term compliance in lieu of obedience. The definition of compliance utilized by this endeavor is drawn from a study completed by Pollis and Montgomery who assert that "it would be methodologically and theoretically profitable to use the term 'compliance' to refer to those instances where individuals are behaving in a manner contrary to already established judgmental scales."¹ It is this author's contention that the behavior elicited by subjects in the present study is of this nature. Ideationally, the socialization process from which these subjects are drawn has taught them to regard it as fundamentally immoral to hurt another person against his will. A previous study by Milgram² indicates that a sizable number of people will inflict pain upon another person when commanded to do so. However, as Milgram states, "it is clear from the remarks and outward behavior of many participants that in punishing the victim they are often acting against their own values."³

¹Nicholas P. Pollis and Robert L. Montgomery, "Conformity and Resistance to Compliance," The Journal of Psychology, LXIII, First Half (May, 1966), pp. 35-41.

²Stanley Milgram, "Behavioral Study of Obedience," Journal of Abnormal and Social Psychology, LXVII, No. 4 (October, 1963), pp. 371-378.

³Ibid., p. 376.

The second variable, authoritarianism, will be obtained through use of a revised version of the F scale as designed by Adorno⁴ and his associates. The elements which are included in their definition of authoritarianism are as follows:

- a. Conventionalism: Rigid adherence to conventional, middle-class values.
- b. Authoritarian Submission: Submissive, uncritical attitude toward idealized moral authorities of the ingroup.
- c. Authoritarian Agression: Tendency to be on the lookout for, and to condemn, reject, and punish people who violate conventional values.
- d. Anti-intraception: Opposition to the subjective, the imaginative, the tender-minded.
- e. Superstition and Stereotypy: The belief in mystical determinants of the individual's fate; the disposition to think in rigid categories.
- f. Power and "Toughness"; Preoccupation with the dominance-submission, strong-weak, leader-follower dimension; identification with power figures; over-emphasis upon the conventionalized attributes of the ego; exaggerated assertion of strength and toughness.
- g. Distructiveness and Cynicism: Generalized hostility,

⁴Theodor W. Adorno et al., The Authoritarian Personality (New York; Harper and Brothers, 1950), pp. 222-288.

vilification of the human.

- h. Projectivity: The disposition to believe that wild and dangerous things go on in the world; the projection outwards of unconscious emotional impulses.
- i. Sex: Exaggerated concern with sexual "goings-on."⁵

The Sample

A random sample of 40 males was drawn from the student population in the College of Business and the College of Arts and Sciences at Oklahoma State University. To be classified as a student from a given college, freshmen must have been enrolled in that college for at least one semester. Seniors were required to have been enrolled in their respective colleges for at least two years. A table of random digits was employed to facilitate selection of the sample. Twenty students were drawn from each college. Each of these groups contained an equal number of freshmen and seniors. All subjects were volunteers, no rewards were offered for participation in the experiment. Care was taken to ensure equal representation from all types of living groups. Virtually equal numbers of students were selected from town apartments, dormitories, and fraternities. Further precaution was taken to include subjects from various disciplines within each college. Students from biological, physical, and social sciences as well as students of the arts were selected from the College of Arts and Sciences. The College of Business was represented by students from management, accounting, and economics.

⁵Ibid., p. 228.

Twenty-one of the subjects came from cities of fifty-thousand or larger while nineteen subjects were from small towns or rural areas. Father's occupation and level of education was widely varied and ranged from tenant farmer to Doctor of Medicine. Mother's occupation was predominantly listed as housewife or homemaker while the level of educational achievement usually included high school and occasionally one or two years of college work. Eleven students from the College of Business were married, two of which were freshmen. Of the students from the College of Arts and Sciences, nine were married, all were seniors. Nine of the students had some affiliation with the military. Four freshmen were enrolled in ROTC (Reserve Officers Training Corps) and one was a member of an Army Reserve Unit. Two seniors were also in ROTC, while one had completed a "hitch" in the Marine Corps. Another was attending school on an Air Force scholarship.

Methodological Procedure

The focus of this investigation concerns the amount of electric shock a subject is willing to administer to another person when directed by the experimenter to give the victim increasingly more severe punishment. While there is no voltage used in this experiment, the respondent is under the impression that he is actually shocking another person. The experimental technique was adopted in part from an earlier study by Stanley Milgram.⁶ In general, the procedure utilized in this study involves directing a naive subject to administer electric shocks to a victim who is actually a confederate trained to elicit standardized

⁶Stanley Milgram, "Behavioral Study of Obedience," Journal of Abnormal and Social Psychology, LXVII, No. 4 (October, 1963), pp. 371-378.

responses ranging from mild dismay to extreme pain.

Shortly after the arrival of the respondent and the accomplice, a general explanation of the purpose of the experiment is given which refers to a lack of knowledge concerning the effects of punishment on patterns of learning. Consequently, the subject is told that he is participating in a very important learning experiment. The accomplice, who always arrives late and looking rather lost, has been instructed beforehand to ask certain questions concerning the experiment.

The bogus learning experiment consists of learning a list of ten paired associations. Each paired item contains a letter of the alphabet and a number. The subject is told that he is to read the list, including both letter and number, and is then to repeat only the letter. The colluder is to respond with the correct number. Each time he emits an incorrect response, the subject is to deliver the electric shock. After each shock is given, the voltage is turned up twenty-five volts to the next highest level. As has been prearranged, the victim errs on seven out of ten paired associations.

The simulated shock generator used in this research is supposedly capable of delivering five-hundred volts of electricity. A voltmeter indicates a span from zero to five-hundred volts and bears verbal designations ranging from "Slight Shock" to "Danger: Severe Shock." The meter is clearly marked to indicate twenty voltage levels. The upper right-hand corner of the generator is labeled Heathkit Variable Voltage Regulated Power Supply, The Heath Co., Benton Harbor, Michigan. The apparatus was prepared and specially wired by the Department of Electrical Technology, Oklahoma State University. The instrument was carefully prepared to insure authenticity and legitimacy. An electrical buzzing

sound was emitted upon depression of the switch. The experimenter wore a white lab coat during all experiments to further lend legitimacy to the procedure.

Following the explanation of the experimental procedure, both individuals were asked about any second thought concerning the experiment. (Several subjects wished to withdraw at this point. None did after learning that they would not be shocked but would do the shocking.) A rigged drawing was then held in which the individual to be tested always drew teacher since both cards contained the word "teacher". The experiment then moved to the laboratory.

Upon entering the laboratory, the victim was led to a steel chair. After being strapped securely to the chair ("to avoid excessive movement" the subject was told) electrodes were attached to the sides of his head just behind the ears. The subject was allowed to watch and it was explained that by pasting the electrodes behind the ears a better connection could be effected. The respondent was assured that, although the victim could receive a very sound jolt and could experience extreme pain, no permanent physical damage could be done since the electrical current contained only voltage and no amperage.

The subject was then taken to an adjacent section of the room which was separated from the victim by means of a partition. The subject could hear the learner but visual contact was not possible. The learning experiment was then commenced. As indicated earlier, the accomplice provides many wrong answers. As the voltage level was increased, the victim registered increasingly stronger protests beginning at the two hundred-fifty volt level or the tenth shock. When the voltage level reached three hundred, the victim shouted loudly when shocked and

crashed his chair against the partition. He then vehemently demanded that the experiment be terminated. Attempts to reassure him were made. At this point he declared that the experiment was over for he would refuse to respond to the experimental stimuli. Both victim and respondent were then informed that a lack of response would necessarily be treated as an incorrect response and the victim would be shocked for such refusal. The experimenter explained that the experimental model dictated that every experiment must be concluded, whether by successful completion of the learning material or by arrival at the maximum level of five hundred volts. If at this time the subject expressed a desire to terminate the experiment, three standardized "prods" were given by the experimenter. They were as follows:

Prod 1: We would like you to continue.

Prod 2: It is necessary that you go on.

Prod 3: You have no other choice, you must go on.

The prods were employed successively. That is, Prod Two could not be utilized until Prod One had been used. If the respondent refused to comply with the directions of the experimenter after Prod Three, the experiment was terminated and the voltage level recorded. If the prods were successful, the experiment continued; and the sequence of prods began anew if on any occasion the subject balked again.

The experiment continued when the respondent gave the next cue. The accomplice, as planned, emitted no response. When the electric shock was administered (three hundred and twenty-five volts) the victim elicited no vocal sound but thrashed about loudly while crashing his chair against the partition. Upon administration of the three hundred fifty volt shock, the victim emitted no sound of any type. Thereafter,

he was completely silent. The experimenter did not investigate this "unexpected" silence. If the subject expressed concern, an explanation was offered to the effect that the learner was "probably" steeling himself against the voltage.

Upon completion of the experiment, subjects were asked to complete a revised version of the Fascism Scale or the F scale (reproduced in Appendix A). This scale was originally devised by Adorno⁷ and his associates to measure antidemocratic trends and elements of the authoritarian personality. Four items were discarded because they were no longer pertinent or timely or because they had been originally shown to be ineffective in discriminating between high and low scores on the scale.

Following the administration of the questionnaire, a careful dehoax treatment was tendered. All subjects were told that the victim had not received electric shocks. They were given the opportunity to test the electrodes themselves, and friendly reconciliation with the unharmed victim was effected. A lengthy post-experimental discussion was held in which totally compliant subjects were assured that their behavior was quite normal and that their feeling of conflict and anxiety were shared by other participants. During the course of the discussion a complete explanation of the experiment was given. Non-compliant subjects also received a full explanation of the experiment. This was done in such a way as to support their decision for not complying with experimental commands. Subjects were again assured of complete anonymity and were told that they would receive a comprehensive report at the

⁷Theodor W. Adorno et al., The Authoritarian Personality (New York: Harper and Brothers, 1950), pp. 222-288.

conclusion of the experimental series. In all cases, the subject's part in the experiment was treated in a dignified manner and their behavior in the experiment respected.

With collection of the data completed, observed responses were coded, punched on IBM cards; and a number of runs made through the computer in order to complete statistical analysis and test the formulated hypotheses.

Statistical Procedure

The experiment was completed when the subject being tested either refused to give the next higher level of shock or reached the maximum voltage level. A quantitative value was assigned to the subject's performance based on the maximum intensity shock he is willing to administer. Thus any given score may range from zero to five hundred.

In an attempt to ascertain whether or not the differences found among the various samples of this investigation were not simply due to chance, the Kruskal-Wallis one-way analysis of variance by ranks was employed. This statistical test will determine whether or not the differences found, concerning compliance to authority, between the samples referred to in the first and second hypotheses, are sufficiently large to be rejected as having occurred by chance. According to Siegel, the assumptions associated with the Kruskal-Wallis one-way analysis of variance are "that the variable under study has an underlying continuous distribution" and "it requires at least ordinal measurement of that variable."⁸ The data satisfied these assumptions.

⁸Sidney Siegel, Nonparametric Statistics for the Behavioral Sciences, (New York: McGraw-Hill Book Company, Inc., 1956), p. 185.

Some argument could be made to classify the numerical values obtained from the experiment as interval data and to employ the most powerful parametric test, the F test. The assumptions underlying the F test are very restrictive and tend perhaps to decrease the generality of the results. Hence, to avoid making any unrealistic assumptions concerning the data, the nonparametric analysis of variance was employed. Very little was lost by pursuing such a course, for the Kruskal-Wallis test, as compared to the F test, has a power-efficiency rating of ninety-five and five-tenths per cent if the assumptions associated with the F test could conceivably be made.

The Mann-Whitney z_u test was employed to determine between what categories a difference actually existed if a significant difference was detected by the Kruskal-Wallis test. This statistical test was used to test whether two independent groups have been drawn from the same population. The assumptions associated with this test are identical to those underlying the nonparametric analysis of variance. The Mann-Whitney z_u is among the most powerful nonparametric tests. Its counterpart among parametric tests is the t test. If the assumptions associated with the t test are possibly applicable, the Mann-Whitney test, when used, achieves a power-efficiency rating of ninety-five and five-tenths per cent. The investigator's rationale for rejecting the powerful t test were virtually the same as those expressed for preferring the Kruskal-Wallis to the F test.

Statistical analysis of the F scale was effected by allowing six choices of response for each item on the questionnaire: slight, moderate, or strong agreement, with the same degrees of disagreement. No middle or neutral category was included. Each subject indicated the

degree of his agreement by marking +1, +2, or +3, disagreement by -1, -2, or -3.

The responses were converted into scores by a uniform scoring system adapted from the original study.⁹ Since higher scores were intended to express increasing authoritarianism, all responses were scored as follows:

-3 = 1 point	+1 = 5 points
-2 = 2 points	+2 = 6 points
-1 = 3 points	+3 = 7 points

It will be noted that the scoring skips from 3 to 5 points between -1 and +1. Four points represented the hypothetical neutral response, and was assigned when the item was omitted. This system also reflects the greater psychological difference between +1 and -1. Scores are obtained for each individual by computing the mean.

Two items on the revised scale were eliminated after statistical analysis indicated that they failed to discriminate between high and low scorers based on the total authoritarianism score. The Likert¹⁰ "Discriminatory Power" technique was employed for this purpose. This procedure involves computing the difference between the mean score of the high-authoritarian quartile on any given item and the mean score of the low-authoritarian quartile. The two items rejected had a Discriminatory Power of less than one.

Statistical analysis was undertaken to compare scores obtained

⁹Theodor W. Adorno et al., The Authoritarian Personality (New York: Harper and Brothers, 1950) pp. 222-288.

¹⁰Gardner Murphy and Rensis Likert, Public Opinion and the Individual (New York: Harper and Brothers, 1938), pp. 283-291.

from the experiment with those garnered from the authoritarian scale by utilizing the Spearman Rank Correlation Coefficient (r_s). This nonparametric statistical test requires at least ordinal measurement. It was utilized to determine the correlation between two variables, X and Y, which were obtained from two disparate measures. By converting each individual's scores to ranks, comparison is facilitated. The value obtained was tested for significance with a procedure recommended by Siegel.¹¹

¹¹Siegel, Nonparametric Statistics for the Behavioral Sciences, p. 210-212.

CHAPTER IV

RESULTS

As indicated previously, the point at which the respondent refuses to administer the electric shock is designated as the act of non-compliance and is assigned a quantitative value based on the maximum voltage reached. The first hypothesis in this investigation was designed to indicate the relationship between compliance to authority and college of enrollment. To test this hypothesis, the Kruskal-Wallis (H) value was computed. As the data in Table I indicate, when comparing students from the two colleges regardless of the level of college

TABLE I
(N=40)

COMPLIANCE TO AUTHORITY BY COLLEGE OF ENROLLMENT

	Compliance To Authority	
	Group Means ^{1/}	
	Arts and Sciences	Business
Freshmen	461.0	481.5
Seniors	409.5	428.0

H=4.513*

^{1/} Raw scores are shown in Appendix B.

* Not significant

experience, there is no significant difference in the amount of compliance to authority exhibited. The null hypothesis of no difference is accepted.

The second hypothesis was formulated to determine the relationship between compliance to authority and the level of college experience. The Mann-Whitney (z_u) value was computed to test this hypothesis. The data in Table II indicate that there is a significant difference between freshmen and seniors as to the amount of compliance to authority exhibited. The null hypothesis of no difference is thus rejected and the research hypothesis that freshmen are more compliant than are seniors is tenable.

TABLE II
(N=40)

COMPLIANCE TO AUTHORITY BY LEVEL
OF COLLEGE EXPERIENCE

	Freshmen	Seniors
	Group Means <u>1/</u>	
Compliance to Authority	471.25	418.75

$$z_u = 1.974^*$$

1/ Raw scores are shown in Appendix B.

* $p \leq .05$

The third hypothesis was designed to indicate the relationship between compliance to authority and authoritarianism as determined by the revised scale. The Spearman Rank Correlation Coefficient (corrected for ties) was utilized to test this hypothesis. The resulting

value was then tested for significance. As evidenced by the data in Table III, there is a highly significant correlation between compliance scores obtained in the experiment and the authoritarian scores derived from the revised questionnaire. The null hypothesis of no difference is therefore rejected and the third research hypothesis which posits greater compliance for high authoritarian individuals is accepted.

With virtually no exceptions subjects were completely convinced of the reality of the experimental situation, that they were administering shocks to another person, and the most potent shocks were very painful. During the dehoax treatment, one individual even stated that he felt the voltage when he was asked to grip the electrodes. In spite of the above dehoax responses, the majority of the respondents had applied the maximum voltage.

Of the forty subjects tested, six refused to comply with the experimental commands beyond the three-hundred volt level, the point at which the accomplice demanded to be released. Four more subjects administered one further shock and then refused to continue. Two subjects broke off at the three-hundred-seventy-five volt level. Thus, a total of twenty-eight students continued to punish the victim on command while a total of only twelve subjects defied the experimenter. It may be instructive to reprint their remarks at the point of defiance.

We volunteered, we've got a right to quit. I'm not going on if he isn't.....Run the d--- thing yourself, I'm not going to....Those shocks are getting powerful. There's no way I'll hurt anyone whom I have no reason to hurt, especially if he objects....If I was that guy I'd tell you to hang your f----- data.....I know you're ego-involved, but this is too much, it's against what I believe in to do this when he's not willing....I'm sorry, but I'm afraid

TABLE III
(N=40)

SCORES ON COMPLIANCE TO AUTHORITY AND AUTHORITARIANISM

Student Number	Ranks	
	Compliance to Authority	Authoritarianism ^{1/}
1	24	20.5
2	24	27
3	8	17
4	24	18
5	24	15.5
6	24	39
7	24	33.5
8	24	20.5
9	24	28
10	24	36
11	24	29
12	7	1
13	24	11
14	24	30
15	24	3
16	24	38.5
17	24	10
18	24	35
19	24	8
20	3.5	13
21	24	33.5
22	24	20.5
23	3.5	14
24	24	32
25	3.5	6
26	11	12
27	24	31
28	24	20.5
29	10	9
30	24	7
31	24	24
32	3.5	25
33	24	4
32	24	38.5
35	3.5	15.5
36	12	23
37	3.5	5
38	24	26
39	24	40
40	9	2

$r_s = .442^*$

^{1/} Individual mean scores are shown in Appendix C

* $p \leq .01$

I'll hurt him, he's not talking. Has he passed out?

These twelve subjects often exhibited a high degree of anxiety. Frequently, subjects became angry. One student, in particular, raced to the opposite side of the partition and released the victim himself. One respondent left the laboratory in such haste that the dehoax had to be implemented twenty minutes later in his apartment. At times, however, verbal protest was minimal. Several students simply switched off the apparatus and indicated that they wished to leave the laboratory.

Several students who administered the maximum voltage also displayed anxiety or anger. As a rule, however, protest was seldom evidenced. Many of these students experienced considerable conflict. In the course of the experiment, subjects were observed to fidget, sweat, and occasionally laugh. Upon completion of the experiment, many subjects sighed in relief, rubbed their faces, or hurried to check the victim. Other respondents had remained calm throughout the session, and exhibited few signs of tension.

A considerable number of the compliant subjects expressed fears similar to those who terminated the experiment. An often repeated question referred to the victim's state of consciousness once he became totally silent. Although it did not seem to alleviate their fears, these subjects appeared willing to accept the experimenter's explanation that the learner was probably bracing himself against the shock. In many cases, subjects hurried to finish the experiment thereafter by increasing the shock level more than the necessary twenty-five volts or by flipping the electrical switch very rapidly in hope of decreasing the voltage output. Various other subjects had

to be reminded to increase the voltage level after each shock.

The interview following the experiment yielded several interesting comments. When asked why they had continued to punish the victim despite his protests and their own reluctance, a variety of responses were given. Several subjects indicated that they proceeded knowing that the shock could not permanently injure the victim. Others replied that they felt the victim should not have volunteered if he could not follow through to the end. Various respondents pointed out that they knew how important the investigation was to science and that they did not wish to confound the results. One subject indicated that he wanted to help "prove once and for all, that punishment does not accomplish anything." Another particularly anxious individual replied that as a result of the learner's silence, he knew the learner could "take it" if he was bracing himself. If the victim had been rendered unconscious, it offered him (the respondent) the chance to complete the experiment without actually causing any pain. Virtually all subjects interviewed emphasized that they were not sadistic.

When the true nature and objectives of the study were explained, the majority of the subjects expressed an interest in the details of the experiment and in the results obtained to that point. All were relieved to learn that the victim had not actually received electric shock. Participants were allowed a full expression of their thoughts and feelings concerning both the worth of the experiment and their own behavior. With one exception, the subjects expressed very positive attitudes about the merit of the experiment and several felt that more studies of this sort should be carried out. Several subjects indicated that they had learned a great deal by participating

in the experiment. One subject stated that it provided him with an opportunity to learn something of importance about himself as well as about human action in general.

Summary of Results

In the course of this investigation, statistical tests were made for three hypotheses which were stated at the outset of the study. The data upon which statistical tests were made came from a total of forty male students who were enrolled as second semester freshmen and fourth year seniors in the Oklahoma State University College of Arts and Sciences and College of Business in the Spring of 1968.

In this section, results of the present study are summarized with the hypotheses that were tested. The types of statistical tests utilized in testing the various hypotheses are also given. Conclusions and recommendations based on these findings are presented in the final chapter of this report.

I. Hypothesis

The amount of compliance to authority exhibited by students in the College of Business will be significantly greater than the amount of compliance to authority exhibited by students in the College of Arts and Sciences.

Statistical Test

Kruskal-Wallis one-way analysis of variance, one-tailed.

Results

The amount of compliance to authority exhibited by students in the College of Business did not significantly differ from the amount of compliance to authority exhibited by students in the College of

Arts and Sciences. A probability of .20 was indicated. As stated previously, this was not sufficient for confirmation of the research hypothesis.

Disposition of Hypothesis

Null: Accepted

Alternate: Not confirmed

II. Hypothesis

The amount of compliance to authority exhibited by freshmen will be significantly greater than the amount of compliance to authority exhibited by seniors.

Statistical Test

Mann-Whitney U test, one-tailed

Results

Freshmen exhibited significantly higher amounts of compliance to authority than did seniors. A probability equal to or less than .05 was found to be associated with rejection of the null.

Disposition of Hypothesis

Null: Rejected

Alternate: Confirmed

III. Hypothesis

The amount of compliance to authority exhibited by students who display a high degree of authoritarianism will be significantly greater than the amount of compliance to authority exhibited by students who display a low degree of authoritarianism.

Statistical Test

Spearman Rank Correlation Coefficient, followed by a one-tailed test of significance of the rho coefficient.

Results

High-authoritarian students tended to exhibit higher amounts of compliance to authority than did low-authoritarian students. A probability equal to or less than .01 was found to be associated with rejection of the null.

Disposition of Hypothesis

Null: Rejected

Alternate: Confirmed

CHAPTER V

LIMITATIONS, INTERPRETATIONS, AND RECOMMENDATIONS

Limitations

In interpreting the findings of this investigation, the reader should be cognizant of certain associated limitations. A brief discussion will be presented here of factors which may have substantially influenced the results reported herein.

This investigation possesses all the inherent limitations recognized as attributable to experimental procedure. Care was taken to avoid various of these limitations, however, in that the technique utilized by this study was primarily adopted from a series of earlier studies by Milgram.¹ All possible precautions (which were employed by Milgram) to avoid bias were incorporated in this investigation. This investigator improved upon these safeguards by drawing a random sample, giving no reward, and by utilizing various statistical tools in analyzing the data.

In spite of the best of intentions and possible precautions, bias could have been introduced by the experimenter, the accomplice, or the questionnaire. Reactive effects of research and measurement in which the subject knows he is being tested are also a source of bias. One

¹Milgram, Human Relations, XVIII, pp. 57-76.

particular awareness reaction has been referred to by Webb² and his associates as "role selection." In effect, the individual being tested assumes the role of subject. He may select this particular role from among the many "true" selves which he represents. This type of bias may be especially confounding when the research is novel or different, particularly when the subjects are not familiar with testing procedures and have had little formal schooling. This latter condition does not perhaps effect the results of this study to any significant degree because all subjects were members of the college community. Nonetheless, the possibility does exist that this investigation could be measuring role selection rather than compliance to authority.

The novel investigation may, however, be advantageous. The participants are not as likely to respond with passivity or distaste as they might toward the "wasted" laboratory hour in which one usually feels trivial or useless knowledge is forthcoming. In this case, the novel experiment might even have taught certain individuals something of interest and importance about themselves.

The generality of this study's findings may be limited for any of the reasons cited above. One might reject the results as possessing only "ecological validity" in that they may be meaningful only because the tendency to comply may be built into the experiment. It is this author's contention that there are many similar "real life" situations in which compliance is equally built into the behavior pattern. Therefore, the findings may well be meaningful precisely because the situation

²Eugene J. Webb et al., Unobtrusive Measures: Nonreactive Research in the Behavioral Sciences (Chicago: Rand McNally and Company, 1966), pp. 16-18.

is structured,

The experimental setting, in short, is not devoid of shortcomings or sources of bias. If these are recognized, however, validity is facilitated. With these limitations in mind, interpretation will be undertaken.

Interpretations

The empirical objectives of the study were as follows: to define the relationship between two divergent types of college educational experience and compliance to authority; to assess the impact of college educational experience upon compliant behavior tendencies; and to ascertain the relationship between compliance to authority and authoritarianism.

Failure to substantiate the first hypothesis, which relates compliance and type of education, indicates that the process of education between various colleges differs very little when compared on the basis of personal development. This similarity appears to exist despite differences in subject matter and differences between the expected occupations for which the students are being prepared. This finding would seem to refute the generally accepted notion that individuals who receive their professional training in the business sphere are well indoctrinated with the impersonal doctrines of bureaucracy and human engineering. This idea implies a general lack of human compassion which logically should not exist and evidently does not if the findings of this investigation provide any insight.

The second hypothesis relates level of education and compliance to authority and posits that freshmen will exhibit significantly more

compliance than will seniors. This hypothesis was accepted at the .05 level of significance. Three freshmen from a total of twenty terminated the experiment compared to ten seniors. This difference may well be explained as a result of the process of higher education. It is possible and highly probable that college experience tends to decrease the frequency and magnitude of compliant behavior as a result of a generally negative attitude toward dogmatic acceptance of "facts" and ideas.

The differing amounts of compliant behavior may, however, be attributed to a much simpler condition of the educational process. The freshman is still somewhat enamored by the terms science, scientist, and experiment. These terms represent the highest of logical, rational ideals. The scientist is the very essence of the intelligent, well-paid academician and researcher. He is, in addition, a source of potential answers to many of the problems of today. In the activist society or perhaps era from which these freshmen were drawn, these attributes command respect. The senior, on the other hand, has a different and perhaps more realistic image of the scientific and academic world. He very possibly has learned that it requires much more than a lab coat and/or a degree to qualify as a scientist or an educator. Skepticism comes more easily to the advanced student.

The senior may also tend to be less compliant as a function of age, a higher level of maturity, or intelligence. The possible relationship between compliance to authority and age or intelligence has been documented in the review of the literature.

The attrition rate of the educational process may contribute to the differential compliance obtained by this investigation. The more compliant individuals may not withstand the rigors of higher education as

well as do the less compliant students. Social class could further effect the attrition rate and thus confound results. These influences undoubtedly will have some effect on any possible relationship between compliance to authority and education. The important point remains, however, that this study has indicated a relationship between level of education and compliance to authority. This finding lends support to the results of an earlier investigation by Edmonds³ and provides a tentative answer to the question which he raises concerning differences found between doctoral and master's candidates. The conclusions reached by this investigation suggest that the more advanced student may have acquired his non-compliant tendencies.

The third hypothesis concerns the possible connection between authoritarianism and compliance to authority. As related in the review of the literature, several studies have found a positive correlation between these two variables. The results of this study lend further empirical verification to these findings. It seems a tenable assumption to suggest that those individuals who possess elements of the authoritarian personality also tend to rely more strongly upon authority to guide their actions and perhaps tend to submit to authority in spite of their own belief system. This is not to say that anyone who relies upon authority is devoid of reason in his decision-making processes. It does, however, emphasize the importance of approaching an authority with an open, questioning mind rather than with a closed, dogmatic outlook.

One rather disquieting, though not unexpected, result of this study was the impressive number of people who continued to punish the victim

³Edmonds, Social Forces, pp. 33-38.

through the highest voltage level despite his unwillingness. Twenty-eight persons complied with the experimenter's commands. Although a few individuals cited personal motives for continuing the experiment, the great majority completed the experiment simply because they were told to do so. Certain situational features of the experimental procedure may have partially determined the high degree of compliance exhibited by these subjects. The experiment was conducted under the auspices of an institution of higher learning and presumably was designed to attain a worthy purpose. Both subject and learner volunteered for the experiment and although neither was offered a reward, they had in some degree incurred an obligation to the experimenter. The fact that the learner later becomes an involuntary subject does not alter the fact that he initially consented to participate. The presumed chance factor that he (the subject) might well have been the victim may also tend to increase the probability of compliant behavior.

Substantiation of the second hypothesis would seem to indicate that educational experience tends to decrease the likelihood of compliant behavior. Evidently, however, the educators are not sufficiently fullfilling their obligations to teach the student to question authority before carrying out its dictates. When seventy per cent of any group of individuals are persuaded to punish another individual against his will, steps should be taken to correct the situation. Perhaps this experiment was purposeful beyond the relative merits of its empirical findings. The experimenter, in this case, is not just any authority, he is an authority who instructs the subject to act harshly and inhumanely against another man. If this study could inculcate a skepticism of this type of authority through participation, it may lend

itself to an even higher value.

Recommendations

This investigation has tentatively established a relationship between compliance to authority and education. The exact nature of such a relationship can be revealed only after further extensive investigation. Numerous potential variables such as social class, grade point, degree of extracurricular activity, and political orientation should be included in any future research. Furthermore, since the sample employed in the present research was relatively small, future studies should include a more adequate and perhaps more representative population.

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APPENDIX A

PUBLIC OPINION QUESTIONNAIRE

The following statements refer to opinions regarding a number of social groups and issues, about which some people agree and others disagree. Please mark each statement in the left-hand margin according to your agreement or disagreement, as follows:

- | | |
|---------------------------------|---------------------------------------|
| +1: slight support, agreement | -1: slight opposition disagreement |
| +2: moderate support, agreement | -2: moderate opposition, disagreement |
| +3: strong support, agreement | -3: strong opposition, disagreement |

- _____ 1. Obedience and respect for authority are the most important virtues children should learn.
- _____ 2. A person who has bad manners, habits, and breeding can hardly expect to get along with decent people.
- _____ 3. If people would talk less and work more, everybody would be better off.
- _____ 4. The business man and the manufacturer are much more important to society than the artist and the professor.
- _____ 5. Science has its place, but there are many important things that can never possibly be understood by the human mind.
- _____ 6. Every person should have complete faith in some supernatural power whose decisions he obeys without question.
- _____ 7. Young people sometimes get rebellious ideas, but as they grow up they ought to get over them and settle down.
- _____ 8. What this country needs most, more than laws and political programs, is a few courageous, tireless, devoted leaders in whom the people can put their faith.
- _____ 9. No sane, normal, decent person could ever think of hurting a close friend or relative.
- _____ 10. Nobody ever learned anything really important except through suffering.

- _____ 11. What the youth needs most is strict discipline, rugged determination, and the will to work and fight for family and country.
- _____ 12. An insult to our honor should always be punished.
- _____ 13. Sex crimes, such as rape and attacks on children, deserve more than mere imprisonment; such criminals ought to be publicly whipped, or worse.
- _____ 14. There is hardly anything lower than a person who does not feel a great love, gratitude, and respect for his parents.
- _____ 15. Most of our social problems would be solved if we could somehow get rid of the immoral, crooked, and feebleminded people.
- _____ 16. Homosexuals are hardly better than criminals and ought to be severely punished.
- _____ 17. No weakness or difficulty can hold us back if we have enough will power.
- _____ 18. People can be divided into two distinct classes: the weak and the strong.
- _____ 19. Most people don't realize how much our lives are controlled by plots hatched in secret places.
- _____ 20. Human nature being what it is, there will always be war and conflict.
- _____ 21. Nowadays when so many different kinds of people move around and mix together so much, a person has to protect himself especially carefully against catching an infection or disease from them.
- _____ 22. Nowadays more and more people are prying into matters that should remain personal and private.
- _____ 23. The wild sex life of the old Greeks and Romans was tame compared to some of the goings-on in this country, even in places where people might least expect it.

APPENDIX B

COMPLIANCE TO AUTHORITY BY COLLEGE OF ENROLLMENT
AND LEVEL OF COLLEGE EXPERIENCE

Classification and College	Student Number	Raw Scores
		Compliance to Authority
Freshmen Business	1	500
	2	500
	3	315
	4	500
	5	500
	6	500
	7	500
	8	500
	9	500
	10	500
Freshmen Arts and Sciences	11	500
	12	310
	13	500
	14	500
	15	500
	16	500
	17	500
	18	500
	19	500
	20	300
Seniors Business	21	500
	22	500
	23	300
	24	500
	25	300
	26	355
	27	500
	28	500
	29	325
	30	500

Classification and College	Student Number	Raw Scores
		Compliance to Authority
Seniors Arts and Sciences	31	500
	32	300
	33	500
	34	500
	35	300
	36	375
	37	300
	38	500
	39	500
	40	320

APPENDIX C

INDIVIDUAL MEAN AUTHORITARIAN SCORES

Classification and College	Student Number	Authoritarianism
Freshmen Business	1	3.82
	2	4.18
	3	3.73
	4	3.77
	5	3.68
	6	5.18
	7	4.59
	8	3.82
	9	4.23
	10	4.96
Freshmen Arts and Sciences	11	4.36
	12	1.41
	13	3.36
	14	4.40
	15	2.36
	16	5.09
	17	3.27
	18	4.68
	19	3.00
	20	3.59
Seniors Business	21	4.59
	22	3.82
	23	3.64
	24	4.50
	25	2.77
	26	3.55
	27	4.45
	28	3.82
	29	3.08
	30	2.82

Classification and College	Student Number	Authoritarianism
Seniors Arts and Sciences	31	4.05
	32	4.09
	33	2.46
	34	5.09
	35	3.68
	36	4.00
	37	2.68
	38	4.13
	39	5.27
	40	1.95

VITA

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Candidate for the Degree of

Master of Science

Thesis: AN EXPLORATORY ANALYSIS OF COMPLIANCE TO AUTHORITY AND AUTHORITARIAN TENDENCIES AMONG SELECTED STUDENTS OF HIGHER EDUCATION

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