An Analysis of Dogmatism and Military Experience

Hoeschen
AN ANALYSIS OF DOGMATISM AND MILITARY EXPERIENCE

by

Daniel C. Hoeschen

A Thesis
Submitted to the
Faculty of The Graduate College
in partial fulfillment
of the
Degree of Master of Arts

Western Michigan University
Kalamazoo, Michigan
December, 1970
ACKNOWLEDGEMENTS

In carrying out the research reported in this thesis, I have received consistent constructive criticism, suggestions, and encouragement from Professors Stanley Robin, James Schellenberg, and Morton Wagenfeld. As a Graduate Research Assistant in the Department of Sociology, the opportunity to gain knowledge of the field and be intellectually stimulated by extensive contact with many faculty of the Department has been mine. Without the cooperation and suggestions of Juanita Weaver and Aaron Wolfgang of the Behavioral Science Laboratory at Walter Reed Army Medical Center this research would not have been possible. It is a pleasure to express my genuine gratitude to all who have provided greatly needed assistance. Of course, all responsibility for this thesis is mine alone.

Daniel C. Hoeschen
MASTER'S THESIS

HOESCHEN, Daniel Carl
AN ANALYSIS OF DOGMATISM AND MILITARY EXPERIENCE.

Western Michigan University, M.A., 1970
Sociology, general

University Microfilms, A XEROX Company, Ann Arbor, Michigan
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACKNOWLEDGEMENTS</td>
<td>ii</td>
</tr>
<tr>
<td>LIST OF TABLES</td>
<td>v</td>
</tr>
<tr>
<td>Chapter</td>
<td></td>
</tr>
<tr>
<td>I. INTRODUCTION TO THE PROBLEM</td>
<td>1</td>
</tr>
<tr>
<td>The Military Experience</td>
<td>2</td>
</tr>
<tr>
<td>The University Experience</td>
<td>16</td>
</tr>
<tr>
<td>The Belief-Disbelief System</td>
<td>22</td>
</tr>
<tr>
<td>The Closed Belief-Disbelief System</td>
<td></td>
</tr>
<tr>
<td>Dogmatism</td>
<td>29</td>
</tr>
<tr>
<td>Functioning of the Belief-Disbelief System</td>
<td>32</td>
</tr>
<tr>
<td>The Military as a Closed Organization</td>
<td>35</td>
</tr>
<tr>
<td>The University as an Open Organization</td>
<td>40</td>
</tr>
<tr>
<td>II. DESIGN AND METHOD</td>
<td>46</td>
</tr>
<tr>
<td>University Experience and Dogmatism</td>
<td>46</td>
</tr>
<tr>
<td>Applicability of the Concept of Dogmatism</td>
<td>49</td>
</tr>
<tr>
<td>The Dogmatism Scale</td>
<td>50</td>
</tr>
<tr>
<td>Parameters of Military Experience and the</td>
<td></td>
</tr>
<tr>
<td>Population</td>
<td>58</td>
</tr>
<tr>
<td>Summary</td>
<td>63</td>
</tr>
<tr>
<td>Method</td>
<td>65</td>
</tr>
<tr>
<td>Data Analysis</td>
<td>66</td>
</tr>
<tr>
<td>III. RESULTS</td>
<td>69</td>
</tr>
<tr>
<td>Descriptive Findings</td>
<td>70</td>
</tr>
<tr>
<td>Zero Order Correlations and Multiple</td>
<td></td>
</tr>
<tr>
<td>Regression Analysis</td>
<td>77</td>
</tr>
<tr>
<td>Fifth Order Associations Between Dogmatism</td>
<td></td>
</tr>
<tr>
<td>and Each Variable</td>
<td>80</td>
</tr>
<tr>
<td>The Estimation of Dogmatism from Months</td>
<td></td>
</tr>
<tr>
<td>in the Army and An Added Independent</td>
<td>86</td>
</tr>
<tr>
<td>Variable</td>
<td></td>
</tr>
</tbody>
</table>

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
<table>
<thead>
<tr>
<th>Chapter</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Summary</td>
<td>90</td>
</tr>
<tr>
<td>IV. DISCUSSION</td>
<td>91</td>
</tr>
<tr>
<td>Conclusions</td>
<td>91</td>
</tr>
<tr>
<td>Limitations</td>
<td>101</td>
</tr>
<tr>
<td>Indications for Future Research</td>
<td>102</td>
</tr>
<tr>
<td>Final Statement</td>
<td>103</td>
</tr>
<tr>
<td>APPENDIX</td>
<td>105</td>
</tr>
<tr>
<td>BIBLIOGRAPHY</td>
<td>109</td>
</tr>
</tbody>
</table>
# LIST OF TABLES

<table>
<thead>
<tr>
<th>Table</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Average Months in the Army, Social Position, Education and Dogmatism (based on all scores)</td>
<td>71</td>
</tr>
<tr>
<td>2. Average Months in the Army, Social Position, Education and Dogmatism Based on Draft Status, Occupational Status and Vietnam Experience</td>
<td>72</td>
</tr>
<tr>
<td>3. Average Social Position, Education and Dogmatism Based on Months in the Army</td>
<td>74</td>
</tr>
<tr>
<td>4. Months in the Army, Education and Dogmatism Based on the Index of Social Position</td>
<td>75</td>
</tr>
<tr>
<td>5. Months in the Army, Social Position and Dogmatism Based on Educational Attainment</td>
<td>76</td>
</tr>
<tr>
<td>6. Zero Order Correlation Coefficients Between all Variables</td>
<td>78</td>
</tr>
<tr>
<td>7. The Relationship of Dogmatism (Y) and Months in the Army (X₁), Independent of all Other Variables</td>
<td>81</td>
</tr>
<tr>
<td>8. The Relationship of Dogmatism (Y) and Social Position (X₂), Independent of all Other Variables</td>
<td>82</td>
</tr>
<tr>
<td>9. The Relationship of Dogmatism (Y) and Education (X₃), Independent of all Other Variables</td>
<td>83</td>
</tr>
<tr>
<td>10. The Relationship of Dogmatism (Y) and Draft Status (X₄), Independent of all Other Variables</td>
<td>83</td>
</tr>
<tr>
<td>11. The Relationship of Dogmatism (Y) and Occupational Status (X₅), Independent of all Other Variables</td>
<td>84</td>
</tr>
<tr>
<td>Table</td>
<td>Page</td>
</tr>
<tr>
<td>-------</td>
<td>------</td>
</tr>
<tr>
<td>12. The Relationship of Dogmatism ($Y$) and Vietnam Status ($X_6$), Independent of all Other Variables</td>
<td>85</td>
</tr>
<tr>
<td>13. Beta Coefficients of Five, Two-Independent-Variable Regression Equations in Comparison to the Beta Coefficient of Months in the Army as the Only Predictor of Dogmatism (DS)</td>
<td>88</td>
</tr>
</tbody>
</table>
CHAPTER I

INTRODUCTION TO THE PROBLEM

This chapter describes essential elements involved in individual participation in military and university settings. These descriptions outline the military as a closed, rigid, authoritarian experience and the university as an open, flexible, and democratic experience. These discussions are ideal-typical in nature, and therefore empirical settings would vary in the extent to which the ideal properties are found. Following these descriptions, Rokeach's\(^1\) theory of a continuum of open and closed belief systems is explored. Parallels are drawn between the ideal types of the military as a closed organization and the closed belief system. Such parallels are in sharp contrast with the parallels subsequently found in describing the ideal types of the university as an open organization and the open belief system.

The opposing dimensions of the ideal types of military and university settings provide the theoretical argument for expectations of respectively contrasting socialization influences of each institution. Specifically the university, as an open organization, is expected to

\(^{1}\text{Rokeach, Milton, } \textit{The Open and Closed Mind.} \text{ New York: Basic Books, Inc., 1960, pp. 31-70.}\)
facilitate decreases in dogmatism\textsuperscript{1} and the military, as a closed organization, is expected to facilitate increases in dogmatism. Thus university experience is discussed in this introductory chapter as a means by which a logical argument and testable propositions are developed. Once this is accomplished, we can focus on parameters of the military setting to test hypotheses which rationally follow from the discussion in this chapter.

The Military Experience

The initial first hand exposure a young man has to the military is his "pre-induction physical." One or two months before induction, the draftee receives orders to present himself for the pre-induction physical and is warned that failure to appear can result in his immediate induction. Pre-induction physicals are conducted on military bases. During the Vietnam war, involving a large monthly draft, several hundred potential soldiers are processed through this physical a day at each of the many induction centers. Thus, the first raw glimpse a young man acquires of the military involves rough orders and waiting in lines for hours while being naked the entire time, in addition to seeing hundreds of other naked bodies

\textsuperscript{1}Studies of dogmatism in collegiate settings have consistently shown decreased dogmatism to be related to university experience. These studies are outlined in the following chapter.
doing the same. Impersonal strangers demand group behaviors to obtain personal information ranging from collecting samples of urine and blood to bending over in lines so that a doctor can walk behind the line and check for gross physical abnormalities. Whether the young potential soldier consciously thinks about it or not, one cannot help but feel, at some level, the cold dehumanization. The similarity to what occurs in stockyards cannot go unnoticed.

At the outset of the recruit's association with the Army, it is clear that failure to comply with demands can result in drastic negative sanctions (immediate induction as noted above). It is also clear that individuality must be sacrificed to the group. Undoubtedly, an individual who desires to be in the military may not interpret the situation in the above manner, nevertheless some of these feelings probably exist even in the volunteer.

Upon actually entering the Army the soldier is isolated both socially and geographically from his former life. The footing he had in his family and friends is no longer there. Often he is seeking a new reference group to fill the gap his new isolation has caused. The younger recruit, seventeen or eighteen years of age, who very often has a fluid and receptive view of life or belief system, is particularly open to feelings of isolation. He becomes a part of the only group available--other recruits who are also isolated from their former ties. To be a respected member of the training group
which offers the only possibility of social contact becomes very important. Thus it can be seen that the recruit, young and isolated, is often extremely receptive to anything that will assure his good standing within his new world. In military training this receptivity aids in successfully orienting the recruit into military life.

Another aspect of entering the Army for most young men is that it is a break away from the normative expectations in our society. Entering the Army cannot be considered a step in the direction of what society defines as "success." More often it is seen as an obligation for those who cannot find a way to avoid it. The inductee faces an uncertain future, often has negative expectations, and has usually been told by well-wishers, "don't volunteer for anything." Since entering the Army is such a departure from societal success expectations, this also adds to the isolation the inductee experiences. Due to such isolation, the importance of obtaining acceptance in his new group is given added weight.

The inductee, seeking to establish himself in this new military environment, is faced with three primary elements of basic training. These are ideological indoctrination, authority, and regimentation. During the ten weeks of basic training the recruit is steeped in all three of these elements from morning to nightfall. Following this basic training period these elements usually become more lax but continue to remain essential parts of the military life.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
Military indoctrination

Military indoctrination begins in an informal manner with a definition of masculinity. It is pointed out that the trainee is now merely a "boy," but when and if he finishes training he will know that he is a "man." Thus, for the isolated recruit who must be accepted in the only group available, the challenge of proving his manhood is made before he can gain such acceptance. To participate fully in group activities takes on the meaning of proving one's masculinity and allows one to "belong." The recruit's masculine self-esteem is contingent on being recognized as a good potential soldier.

On a more formal level, training is aimed at inculcating the trainee with a sense of dedication to his country, branch of the service, and his particular unit. This process usually involves a presentation of an "enemy." The indoctrination programs employ films, posters, pamphlets, lectures, and directed discussions to convince the trainee of the importance of his role in the defense of his country. He is made aware of the threat of Communism to the American way of life.

Another thing we must do is be willing to defend it. (Personal Freedom) Many of the potential or actual enemies of America are seeking to destroy the concept of personal freedom. For example, Communism with its many idealistic promises, never mentions the fact that in the accomplishment of its
selfish aims, it destroys personal freedom.

The concept of "enemy" as presented in military indoctrination includes any ideology or group which is seen as a threat to "our way of life." The "enemy" is portrayed as less than human, i.e., incapable of love, unprincipled, and something to be hated. The hope is that the trainee will develop pride in being a member of a fighting team defending American democracy from external and internal threats.

Another aspect of this indoctrination is the call on the part of the trainee to make his life meaningful through commitments to something bigger than himself.

Devotion to any worthwhile cause or job fills your life with a sense of worth. It makes you want to live. Like Nathan Hale, it also makes you wish you had more lives to give for your country. There is a sense of satisfaction here that cannot be measured.

This commitment to one's country is hopefully developed in the trainee to the point where he is willing to sacrifice his life.

No amount of money can ever compensate a man for risking or giving his life as the soldier may be called upon to do on a battlefield. He must have a cause greater than money, promotion, medals or honors, prestige, or any other material reward. Only a cause equal to his country, his fellow soldier,

---


or his God can justify this kind of sacrifice.¹

A related aim of indoctrination places commitment on a more personal level and joins it with the military definition of masculinity.

Each of us should develop a personal code of honor that induces the same sense of commitment to the ideals of our nation that the founding fathers possessed. A soldier's personal code of honor becomes his internal guidance system which reflects favorable upon himself, his country, and the Army. Such a man will become known as a person whose word is his bond and who can be depended upon to perform his duties well.²

It is evident that military indoctrination aims at developing within the recruit an attitude of absolute commitment to his country. The recruit's masculine integrity should become dependent on his willingness to sacrifice himself in defense against enemies of the ideals of American democracy. Hoffer³ comments on the similarities of mass movements and armies. He includes several factors which have been discussed previously.

... both mass movements and armies are collective bodies; both strip the individual of his separateness and distinctiveness; both demand self-sacrifice, unquestioning obedience and singlehearted allegiance; both make extensive use of make-believe to promote daring and united action . . . .

¹Headquarters, Department of the Army, Duty-Honor-Country, op. cit., p. 12.

²Headquarters, Department of the Army, Our Moral Heritage, op. cit., pp. 1-5.

Thus we see that military indoctrination includes a narrow sense of masculinity, a view of America as the bastion of freedom which is constantly threatened by "enemies," and a willingness for self-sacrifice for your country.

**Military authority**

The second basic element of military training and life which the recruit faces is the pervasive and rigid military authority system.

The basic difference between a soldier and a civilian in the United States is that the soldier accepts some temporary limitations upon such rights as freedom of speech and assembly. . . . Orders and directives are not matters for discussion or group debate. Understanding this is one of the basic facts for the new soldier to comprehend and accept as he makes the transition from civilian to military life.¹

As the above quotation euphemistically phrases it, the recruit must obey commands, without question, regardless of how inconvenient, noxious, or irrational such commands may be. The questioning of orders by the trainee results in vociferous verbal reprimand, extra duties, or physical exercise, as well as the possibility of long-term punishment which may result from a court-martial. The severity of the response by the military depends on the extent of questioning the trainee may engage in.

¹Headquarters, Department of the Army, *Our Moral Heritage*, op. cit., pp. 2-4.
Coates and Pellegrin have described the recruits' introduction to military authority.

Although few American adults in modern times are totally uninformed about the rigors of formal military discipline, the incoming recruit may nevertheless become dramatically cognizant of the far reaching demands of his military role when he hears recounted the severe penalties specified for each of the wide variety of acts viewed by the military as insubordination, unauthorized absences, desertion, etc... Thus the trainee becomes aware of the authority, backed by possibilities of severe punishment, which oversees all aspects of his life.

The trainee is confronted with two levels of authority in the military, formal and informal. The formal aspect of military authority is spelled out in the Uniform Code of Military Justice. Every Army trainee receives instruction in the tenants of this new code of justice under which he now lives. The trainee learns of the types of court-martials for various levels of offenses. He is told that getting a dishonorable discharge from the military not only means harsh punishment in a military stockade, but also means the possibilities of acquiring a good job as a civilian are sharply diminished. Thus the negative threats to one's future military and civilian life for not cooperating are made rather explicit.

Another component of the formal military authority system is

---

the caste system of officers and enlisted men. Stouffer\(^1\) characterizes this aspect of the military experience in this manner,

> The Army contrasts with civilian institutions in its authoritarian organization, demanding rigid obedience. . . . It is a highly stratified social system in which hierarchies of deference are formally and minutely established by official regulation, on and off duty.

In the military, officers have separate and unequal dining, living, duty, and recreational quarters. The segregation of officers and enlisted men pervades all aspects of military life. Whenever, by chance, an enlisted man comes in the presence of an officer, he must be alert, stand, salute, greet him with "sir," and finally salute again when the officer decides to leave. This rigid interaction pattern in which the enlisted man must nearly display a reverence toward the officer is spelled out by Army regulation. Failure to display such deference is viewed as insubordination.

On a more informal level authority is evident in all aspects of the soldier's life. The training sergeant is the personification of such authority. To earn the sergeant's disfavor, for any of an uncountable multitude of misdemeanors, means some form of authoritarian reprisal or punishment. Informal authority includes the consensus of the training group. If an individual trainee deviates from the will of the training sergeant, the training unit as a whole

---

is often punished. When the training unit is eating, sleeping, and training together, it is always known whom the deviant individual is. As might be expected, group resentment is directed toward him. It is not unknown for a training sergeant to point out such a person to the group. This often involves a questioning of the person's masculinity. Activities such as the "blanket party," consisting of tying up a deviant individual in blankets and beating or throwing him down a flight of stairs, result.

For the military, the necessity of rigid authority especially in a training group is based on the following rationale.

Self-discipline and ready obedience are hallmarks of soldierly character. An offense against military order is not merely an individual breakdown. It is a potential threat to wreck the whole structure designed to accomplish the military mission with maximum protection for all involved.  

Since a breakdown in discipline is viewed with this seriousness, we can see why the Army maintains such an elaborate authority structure.

In summary, military authority is seen operating on two levels. Formal authority is invested in the harsh provisions of the Uniform Code of Military Justice and the caste system rigidly separating officers and enlisted personnel on an unequal basis. Informal

---

authority is seen in the living situation of the soldier which is controlled by sergeants and group pressure to conform.

Military regimentation

In addition to indoctrination and authority, the third basic element the recruit faces upon entering the military is regimentation. What the inductee faces for a limited time during the pre-induction physical, now becomes the style of life.

In the Army, as is true in any situation where we live with others, we have had to make adjustments in our habits of living. Instead of a room in a home we live in barracks where the lights must be out at a certain hour, our clothes must be arranged and our bed made in a certain fashion. We no longer dress as we please, and we even have our hair cut in an approved manner. Everything we do as members of the group is done by the numbers.¹

Probably the most telling segment of the foregoing quotation is the final sentence. In the Army everything is done "by the numbers."

This includes getting up, dressing, shaving, formations, exercising, drill, classes, eating, and going to bed. Of course, this means waiting in line for each event. Most all activities in the Army become group activities. This means regimentation is the only mode of operating. The soldier waits in line to be issued clothing, immunizations, I.D. cards, pay, and often to perform essential bodily functions. It is emphasized that you, as a trainee, are one

¹Headquarters, Department of the Army, Our Moral Heritage, op. cit., pp. 3-2.
unit of a larger unit. This fact becomes very evident, indeed.

Another significant aspect of regimentation is the military regulation of appearance. Such regulation becomes abruptly clear to the inductee when, during the first day or two of military life, he receives his first "GI haircut." Uniformity is the rule not only in shortage of hair, but of course, also in dress. The compulsive uniformity demanded by the military in terms of dress, making a bunk, and displaying equipment are all well-known.

Resulting from the pressure to conform to regimented group activities and personal appearance, is a lack of individuality.

The trainee in the military service finds himself at the bottom of his new structure, and quickly discovers that his role in this environment is related to his subordinate status. As "low man on the totem pole" there is no one that he can order around, and there are only limited ways open to him for expressing his individuality.¹

All of the many forms of military regimentation vividly and continually point out to the trainee the importance of conforming to the group regardless of his individual desires.

Of course, military regimentation has a further implication. Within the military carrying out an activity or even thinking in an unusual manner is frowned upon. Stouffer² puts it this way, "There is an emphasis on traditional ways of doing things and a discourage-

¹Headquarters, Department of the Army, Our Moral Heritage, op. cit., pp. 2-5.

²Stouffer, op. cit., p. 57.
ment of initiative. Conformity is rewarded while initiative is repressed--'don't stick your neck out'. With severe negative sanctions imposed for deviating from an environment of strict regimentation, the soldier often becomes cautious, oriented to rules, and submissive.

**Military obligation**

Finally, the involuntary nature of the military obligation must be considered. The new soldier is uprooted from family and friends, often not because he wants to join, but because this is the law and not to obey it means facing imprisonment. This blunt fact is often not consciously recognized by the inductee since the idea of refusing induction is relatively seldom thought of as a viable alternative. Nonetheless, upon induction every recruit steps forward to take an oath of submission to the Army. In taking this initial step, the recruit literally gives himself up to the military. In taking this step he gives recognition to the total and absolute control the Army has over his life.

This total control, to which the soldier initially submits himself continues for as long as he is in the Army. Regardless of his desires, the soldier cannot terminate his services for a minimum of two years. A civilian factory worker or a student can, if at some point he feels overwhelmed, quit the job or school. Of course, it can be
argued that this is not usually a feasible option for a factory worker or student. Nevertheless, the knowledge that this action can be taken in the extreme probably has considerable psychological significance.

In summary, it must be pointed out that the characteristics of military experience which have been described under the rubrics of indoctrination, authority, and regimentation should not be viewed as separate entities. Indoctrination, authority, and regimentation are interrelated and mutually supportive at every level of the military structure. Much of the military indoctrination program aims at showing the need for authority and regimentation. Of course, regimentation is a constant reminder to the soldier that he is subject to a pervasive authority system. Therefore, it is clear that the characteristics which have been outlined as elements of military experience combine to produce the effect desired in the military socialization of the individual soldier, i.e., an individual who sees his masculine identity in a courageous acceptance of self-sacrifice for his country, who is willing to kill an "enemy," who carries out orders without question, and readily submits to regimentation.

The dynamic force behind all military indoctrination, authority, and regimentation is the threat of some form of either immediate or long term punishment for deviation from expectations. As described previously, such threats are made and carried out on both
formal and informal levels.

Having described basic elements of the military experience, we shall now outline elements of university experience. As stated in the introduction to this chapter, we are focusing on authoritarian aspects of military experience and democratic aspects of university experience.

The University Experience

As in the case of entering the Army, entering the university or college is a new experience in which the individual is usually leaving a former life both geographically and socially. The student is most often submissive and a bit afraid of the unknown challenges he may face, but what expectations he has are almost always positive. For the student, entering college usually means the fulfilling of his parents' expectations and the chance to be on his own, possibly with friends he already knows. The student looks forward to learning or succeeding in a field which will positively affect the rest of his life. It is evident that entry into college is an important step on the road to what societal norms define as "success." Entering into this new university experience is thus, to state the obvious, a voluntary commitment on the part of the student in which he invests money and effort to obtain knowledge and skills which are expected to better the quality of his life.
University ideology

Aside from the development of skills leading to a more secure and rewarding career, the university has traditionally been viewed as an experience in which the student, hopefully, grows as an individual. Higher education usually means that more complex views are developed from introspective thinking and discussions with peers and faculty members. Often the student establishes his rationale for accepting or rejecting beliefs which his family may have inculcated. Though no specific ideology is promulgated, exposure to many ideas and varied cultural customs frequently make the student aware of the relativity of the cultural norms and values in which he lives. Therefore, more often than not, the student becomes more tolerant of differences in opinions and attitudes.¹

Implicit in the ideals of higher education is the value of individual development. Though the above ideal does not function without fail, the collegiate experience usually maintains it. Individual initiative is most always rewarded. Evaluations are normally based on individual accomplishment. The fact that individual evaluations are made so frequently in college work is evidence of individual attention and recognition.

In the undergraduate catalog of Western Michigan University

¹This trend is documented by studies reported in the following chapter.
are statements of goals made by the various schools which lend credence to the above thoughts. The School of Liberal Arts and Sciences states,

... the School offers a variety of subjects that combine to develop a student who will be at home in the world of ideas, and whose experience of living will be deepened by an understanding of his cultural heritage. It aims to offer him training in thinking objectively, critically, and creatively.¹

Such goals are not exclusively held by the School of Liberal Arts and Sciences. The School of Applied Arts and Sciences states first the technical and practical training aspects of its educational goals. However, this is followed by another aim,

Second, the School recognizes the personal values that should accrue to the individual from a well-planned educational program. It accepts the responsibility of contributing to the student's understanding and appreciation of himself and his surroundings, and to his emotional, physical and intellectual growth.²

The first objective of the School of Business is stated as follows.

A foundation of liberal arts and sciences in full recognition that as a future leader in the business and industrial world, the student will need a sound understanding of his relationships to social, economic, political, and cultural needs.³

It can be seen from these statements that the university proposes to "educate" in a broad sense not only students in the arts and humanities, but also those in the more applied fields of business, sciences,

¹Undergraduate Catalog, Western Michigan University, Kalamazoo, Michigan, 1967-1968, 252.

²loc. cit., p. 88.

³loc. cit., p. 168.
and specific technical training programs. The value of individual fulfillment is evident.

Dissent in the university

During the past decade, there has been a growing phenomenon on university campuses which cannot be overlooked. The student in the contemporary collegiate scene in the United States would be hard pressed to avoid the sight of demonstrations for or against social and political issues.

Student activism during the 1960's appears, however, to have unprecedented qualities. Compared to earlier activism, that of the 1960's involves more students and engages them more continuously, is more widely distributed on campuses throughout the country, is more militant, is more hostile to established authority and institutions (including radical political organizations), and has been more sustained.¹

Social and political events in the 60's have incited the traditional idealism of college youth from rumination to activity. The "radicalization" process among students has developed during a decade of social turmoil. Many students have lost any confidence in the determination of the federal government to resolve or even make progress with the problems of racial inequality, poverty, the draft, and the Vietnam War. The perceived lack of progress in the above areas and others has led student militants to question the legitimacy of the entire "establishment" authority structure.

More recently students have directed their activities at the university itself. The traditional view of the university as an apolitical institution, wherein the "search for knowledge" took place, is no longer accepted. Students feel that universities are a part of the "establishment," producing skilled manpower to fill technical slots within the "establishment" structure. Students point to direct cooperation between the universities and the Department of Defense. Such a direction in the thinking of militants had led to increasing violence on campus, both in degree and frequency.

To obtain a view of the extent of involvement of students in the "movement," a research report was presented in *Fortune* 1 magazine. Based on in-depth interviews of a cross-section of young Americans, age 18-25, representative as to race, sex, marital status, family income, and geographic region, we see that the "activist trend" is not simply a "fringe" movement involving only a few "radicals." This study identified two basic groups in the college population. The first, labelled as "practical minded" comprised about 58%. For them, college is seen primarily as a practical matter which will allow them to enjoy a better position in life. Forty-two percent of the students interviewed are identified as "forerunners." This group is not really concerned with the practical

---


Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
benefits of college. They see college more as an opportunity to change rather than an opportunity to make out well within the existing system. About two-thirds of the forerunners support draft-resistance. About half of the forerunners could not support any of the 1968 presidential candidates. About half the forerunners believe that the U.S. is a "sick society." From this report it is clear that although relatively few students are violently militant, many students agree and sympathize with the militants' views of our society.

In summary, it can be said of the university setting today that although the militants proclaim the rigidity of the university establishment, the development of the ideology and behavior of the new left, in the college setting, testifies to the possibilities of innovation flourishing within the university. It should also be noted that militants have voluntarily placed themselves in this setting.

In comparing the university and military institutions, we have considered both aspects of process and content. The contrasts which have been described are primarily in the content, but discrepancies have also been noted in matters of process. The primary problem of this thesis is the question of what affect military experience may have on soldiers. Before directly considering this question, it is necessary to examine the nature of belief systems.
The Belief-Disbelief System

Rokeach has postulated the conception of a continuum of belief-disbelief systems ranging from open to closed. This theoretical conceptualization is not concerned with specific beliefs or judgments but rather with the organization of all beliefs for any given individual. Therefore Rokeach's view of belief systems deals with structure and interconnections of beliefs and cognition rather than single beliefs and cognitions.

This conception of belief systems is based on the contention that there are structural similarities in the way one believes and the way one cognizes. The theoretical belief-disbelief system is concerned with structural characteristics of the organization of belief and disbeliefs which affect cognitive functioning. Ideology and thoughts are seen as interdependent. Certainly, thought takes place within a framework of beliefs and disbeliefs. Conversely, beliefs and disbeliefs are formed through cognition.

The belief-disbelief dimension

The organization of the belief-disbelief system is based on three fundamental dimensions. First, beliefs are organized in two interdependent parts--beliefs and disbeliefs. The disbelief system

\[1\text{op. cit., pp. 31-70.}\]
is not viewed as the mirror image of the belief system, but rather as consisting of several subsystems. Therefore, the disbelief system is seen as having greater breadth than the belief system. This reflects the fact that for every belief an individual accepts there are several alternative beliefs that he necessarily rejects. Such rejection is not an absolute matter. Disbeliefs which are more similar to the belief system are seen as more acceptable than less similar ones.

Another property of the belief-disbelief dimension is isolation. If two beliefs are intrinsically related to each other, isolation occurs to the degree that an individual is reluctant to see them as related. Indications of isolation include the following: (1) the coexistence of logically contradictory beliefs within the belief system (the psychoanalytic phenomenon of compartamentalization). An example of this is believing in freedom for all, but also believing that certain groups should be restricted. (2) the accentuation of differences and minimization of similarities between belief and disbelief systems. An example of this is an individual who is an ardent proponent of the United States and denies any similarity with the Soviet Union. Such accentuations of differences and minimization of similarities are seen as attempts to ward off threat to the validity of one's own system. Structurally, this is viewed as isolation between belief and disbelief systems. (3) Another indication of isolation is when a
person judges as "irrelevant" what may well be relevant by objective standards. Often the perception of "irrelevance" points to isolation between belief and disbelief systems. (4) A final indicator of isolation is the denial of contradiction. We have all seen this occur when a fact which contradicts a point of view is simply called "absurd" or an "exception to the rule."

Another property of the belief-disbelief dimension is differentiation. Belief-disbelief systems vary considerably in the extent of articulation and depth. Not only does the total system vary in differentiation but each part of the total system may vary. Thus it can be asked if one disbelief subsystem is more differentiated than others. The following are indicators of differentiation: (1) Differentiation varies with the amount of knowledge a person knows about things he believes in and disbelieves in. The ratio of knowledge one has about his belief system as opposed to the knowledge one has about his disbelief subsystems would provide an estimation of this indicator. (2) Another indicator of the level of differentiation is the extent to which two disbelief subsystems are perceived as "the same" or "different." An example of low differentiation in this respect is the tendency of many people to perceive protesters, disloyalty, and students with long hair as "the same." Thus they are displaying low differentiation by classifying disparate phenomena into one broad disbelief category. It is also suggested that the closer a disbelief
subsystem is to the belief system the greater the differentiation will be.

The final major property of the belief-disbelief dimension is the comprehensiveness or narrowness of the system. This refers to the total number and range of disbelief subsystems represented within a given belief-disbelief system. An example of a lack of comprehensiveness and narrowness is the case in which alchemy is a part of one's disbelief system, but to another, it is simply an unknown.

The central-peripheral dimension

The second dimension of the organization of the belief-disbelief system is called the central-peripheral dimension. This dimension is divided into three regions which we will now discuss in some detail.

The central region of the central-peripheral dimension consists of "primitive beliefs." These beliefs are distinguished largely by their content. These are beliefs formed relatively early in life and provide a view of the world one lives in. Primitive beliefs have to do with the nature of physical reality and the world we live in. Secondly, primitive beliefs are concerned with the social world—that is, whether it is friendly or unfriendly and can be trusted or feared. Third, there are primitive beliefs about the self-identity, independence, and esteem, etc. Primitive beliefs are differentiated
from other beliefs in that they are beliefs that virtually everyone else is also seen as having. Thus primitive beliefs are rarely the subject of controversy—they are usually unstated.

The intermediate region of the central-peripheral dimension consists of beliefs about the nature of positive and negative authority. Authority, here, is defined as any source to whom we look for information about the universe, or to check information we already possess. Since everyone depends on authorities for some information, this, in itself, does not signify a high authoritarian. High and low authoritarians vary in their ideas about the nature of authority. Such variations range from a tentative, rational reliance on authority at one extreme to an absolute reliance on the other extreme. Authority is seen not only as positive, but also as negative. The former guides us to what is "true" about the world and the latter "tips us off" as to what is "false." In regard to negative authority, it is proposed that it is worthwhile to conceive of a "pantheon" of negative authorities arranged along a continuum of similarity to positive authority. It is also pointed out that in the case of rational reliance on authority, the psychological distinction between positive and negative authority is not nearly as great as in the case of arbitrary reliance on authority.

Another set of beliefs within the intermediate region are beliefs about people. When authority is seen as absolute, those who dis-
agree with a particular belief may be rejected as enemies and those who agree may be accepted, but only so long as they continue to agree. Thus we can see a connection between the way in which an individual accepts or rejects ideas and the way he may accept or reject people. Indications of this can be seen in statements of "opinionated rejection" and "opinionated acceptance." These labels refer to statements that imply rejection or acceptance of a belief and at the same time a qualified rejection or acceptance of those who agree or disagree with the belief. It is also suggested that a conception of a "disbeliever continuum" is productive. Adherents to various disbelief subsystems may also be seen by a person in terms of a continuum of similarities to adherents of his own belief system.

The third and final region of the central-peripheral dimension is called the peripheral region. Represented here is every specific belief and disbelief emanating from positive and negative authority. Of significance for understanding peripheral beliefs is not the specific content of the beliefs but rather the structural interconnections between the primitive, intermediate, and peripheral regions. To see these interconnections, it is useful to view the dynamics of information processing within the belief-disbelief system.

Processing of new information is seen as beginning with an initial screening for compatibility with primitive beliefs. This may
lead to the rejection or narrowing out of the information so that nothing further need be done with it. Even if new information is compatible with primitive beliefs, it may be incompatible with one's intermediate (authority) beliefs. Such incompatibility may result in people selectively avoiding contact with stimuli, people, events, books, etc., that threaten the validity of their ideology. This type of narrowing may also occur at the institutional level. This is seen in screening that is done by one's authority rather than the individual himself. For example, in the Army, any literature the new recruit brings with him is literally confiscated, with the exception of a Bible. Also, the Army selects literature which may be seen in any troop lounging area. The final step in processing new information is the altering or rationalizing of this information with one's authority sources and then the filing of this information into one's world outlook (peripheral belief region). It is these dynamic interconnections between central, intermediate, and peripheral beliefs that gives the total theoretical system its integrated and systematic character. This is not to say that the belief-disbelief system is logical in content, but rather that it is organized in structure.

The time-perspective dimension

The third and final dimension of the belief-disbelief system is its organization along a time-perspective dimension. Time
perspectives are viewed as varying from narrow to broad. A broad
time perspective is one in which the person's past, present, and
future are all represented within the belief-disbelief system, and
the person sees them as related to each other. A narrow time per-
spective is one in which the person overemphasizes or fixates on
the past, present, or future without recognizing the continuity and
connections that exist among them. Rokeach is primarily concerned
with those who have narrow time perspectives which are future-orien-
ted. If there is little concern for the past or present, any
means may be justified to bring about the all-important future which
this individual believes in.

This theoretical belief-disbelief system as outlined above varies
in individuals to the extent that it is open or closed. We shall now
consider indications of whether a particular belief-disbelief system
should be viewed as on the open or closed end of the continuum. A
belief-disbelief system on the closed end of the continuum is called
dogmatic. We shall describe the characteristics of the ideal type
closed system. Of course, an open belief system is conceptualized
as being the logical opposite of the closed system.

The Closed Belief-Disbelief System: Dogmatism

First, with respect to the belief-disbelief dimension, in the
closed belief-disbelief system there is considerable isolation
between beliefs, between beliefs and disbeliefs, and between the
various disbelief subsystems. Thus, in the closed belief system
there will be logically contradictory beliefs between the beliefs with-
in the belief system and differences between belief and disbelief
systems will be accentuated while similarities will be minimized.
This person will often judge a relevant objective fact as "irrele-
vant." He will also display a propensity to deny the validity of
objective contradictions in his belief-disbelief system.

Also with respect to the belief-disbelief dimension, in a closed
belief-disbelief system there will be little differentiation. Both the
belief and disbelief subsystems will be shallow and relatively unartic-
ulated. Such lack of differentiation is indicated by a relative lack of
knowledge regarding his beliefs and disbeliefs. Another indicator
of lack of differentiation is a tendency for an individual to view two
disparate disbelief subsystems as "the same."

A final characteristic of the belief-disbelief dimension reflect-
ing a closed belief-disbelief system is the overall narrowness of
the belief-disbelief dimension. This simply refers to a tendency for
the closed belief-disbelief system to be aware of fewer alternative
beliefs. Thus the disbelief subsystems are seen as relatively nar-
row. With respect to the central-peripheral dimension, for the
closed belief-disbelief system, the basic content of primitive beliefs
centers on a view of the world which is essentially threatening.
Since the basic beliefs that form the central region are often questioned in new situations, this leads to anxiety. Being motivated to reduce anxiety, this person is highly attentive to irrelevant internal and external pressures and, therefore, is less able to evaluate information independent of source.

The functioning of the intermediate region is not unrelated to a view of the world that is essentially threatening. In the closed system, the power of authority does not depend on cognitive correctness, but on the ability of authority to mete out reward and punishment. Thus for the closed belief-disbelief system authority is seen as absolute and sensitivity to external authority is extreme. Negative authority is also absolute and provides an instant view of what is "false" about the world. It should also be noted that when authority is viewed as absolute, there is a concomitant tendency to accept or reject people according to whether they agree or disagree with a particular authority.

With respect to the time-perspective dimension, the closed belief-disbelief system is seen as narrowly oriented in the past or future. There is little interconnection or continuity between the past, present, and future. Particularly when the time-perspective is oriented in the future, the individual is more likely to evaluate information on an irrational basis rather than on the basis of other information garnered from the present situation. An overriding
concern with the future is also related to a tendency to believe in a utopia. Force may be used to get rid of the unhappy present and bring about the longed for idealistic future.

Functioning of the Belief-Disbelief System

This theoretical belief-disbelief system, whether more open or closed, functions to serve two conflicting motives at the same time: the need for a cognitive framework to know and to understand and the need to ward off threatening aspects of reality. To the extent that the cognitive need to know is predominant and the need to ward off threat absent, open systems result. This adjustive function of opinions is noted by Smith, Brunner and White, *

\[ \text{...one's opinions and attitudes serve as mediators between the inner demands of the person and the outer environment---the material, social, and most immediately the informational environment of the person.} \]

The belief-disbelief system is seen by Rokeach as an approach that combines ideology, cognition, and personality. Though it is not concerned with the content of any of these, the system provides a structural context from which to view their interconnections. The extent to which it influences behavior and to which it is open or closed at any particular moment is jointly influenced by situational conditions interacting with personality.

\[ ^{1} \text{Smith, Brewster M., J. S. Brunner, and R. W. White, Opinions and Personality. New York: John Wiley & Sons, Inc., 1956, 39.} \]
Though the structural condition of the belief-disbelief system is relatively stable when compared to fluctuations in single opinions or judgments, situational conditions are considered as having an affect on belief systems. That a contemporary social environment can affect opinions has been shown in early socio-psychological literature. The classic work of Sherif\(^1\) with the auto-kinetic phenomenon demonstrated the dramatic influence "group norms" may have on individual perceptions of an indefinite stimulus field. In another classic research effort, Asch\(^2\) found that group pressure could modify individual judgments of clearly structured perceptual relations (matching the length of a given line with three unequal lines). There was a significant propensity for the naive individual to modify his judgments to conform to the judgments of the "majority" who were instructed to make incorrect judgments. Of equal significance was the fact that 25% of Asch's subjects were entirely independent of the "majority" and that the degree of independence increased with the distance of the "majority" from correctness. Thus Asch's work demonstrated not only the effect of group pressure on judgment, but also the effect of increased clarity in the

---


objective perceptual task. In terms of the belief-disbelief system this task corresponds to the questioning of a primitive belief and suggests that even these can be altered by group pressure.

Changes in the structural condition of the belief-disbelief system which affect its functioning may be expected from periods of long term situational threat which would tend to produce closed belief systems. This occurs as the individual becomes more motivated to ward off threat and, in turn, less able to view the world with objectivity. Reports of changes in the functioning of belief systems as a result of "brainwashing" techniques seem to involve prolonged situational threat. In commenting on such reports, Rokeach states

... under such conditions as isolation, absolute control of information from the outside world, and the removal of the usual group supports, there is a loss of ego and group identity, and with the substitution of new group supports, the way is paved for the emergence of new identities, changes in ideology, voluntary confession, and collaboration.¹

It appears, that under extreme conditions, the functioning and structure of belief systems can be considerably altered. Having considered the nature of the closed belief system and the functioning of belief-disbelief systems, we shall now outline military experience as an experience in the ideal type of the closed organization.

¹Rokeach, M., Beliefs, Attitudes, and Values. San Francisco: Josey-Bass, 1968, p. 60.
The Military as a Closed Organization

A basic point in the development of the argument of this thesis lies in the parallels that can be drawn between the defining elements of dogmatism as the ideal type of the closed belief-disbelief system and the content and structure of a closed organization as found in the military experience. The first defining characteristic of dogmatism is considerable isolation between beliefs and disbeliefs. In the military experience isolation is seen in the denial as "irrelevant" any information that contradicts the military point of view. The military accentuates differences between its definition of "masculine" and what is not considered masculine. An inherent contradiction exists in the structure of the military as opposed to its ideology. The ideology states a belief in freedom for all and yet the freedom of soldiers is restricted by military structure. Whether or not this restriction of freedom is necessary is, of course, not the concern of this research.

Another basic element of dogmatism is a lack of differentiation of beliefs and disbelief subsystems. Within the military experience the recruit is exposed to one point of view, which is not well articulated, and other views are not considered. If alternative beliefs are brought up by recruits they are cast aside as simply unpatriotic or not the "Army way of thinking." Another characteristic of a
closed belief-disbelief system is narrowness. In the Army, narrowness is seen in the emphasis placed on tradition. New ideas and initiative are not welcomed. Certainly, in the military, there is a lack of awareness of alternative approaches to problems. An illustration of this is seen in what is called S. O. P. --Standard Operating Procedure. This is a rigid list of steps that must be taken to carry out any activity within the military. Following S. O. P. is mandatory, the failure to do so results in punishment. It is not surprising that the pervasive use of S. O. P. results in a narrowing of approaches to duties.

In discussing the elements of the central-peripheral dimension of the closed belief-disbelief system, the parallels with the content and structure of the ideal type of the military as a closed organization become even more direct. The dogmatic person's primitive beliefs are oriented in a view of the world which is essentially threatening and cannot be trusted. The new recruit is made aware of the threat of Communism and other potential enemies of the "American Way of Life." This ideology is inculcated by way of lectures, films, posters, etc. Not only is the content of military ideology filled with a threatened view of the world but the structure of military organization is based on threat. The new recruit is isolated socially and geographically in a new situation in which he faces the threat of not being accepted into the only primary group
available--other recruits; he faces the threat of not being a "man" as defined in the narrow military sense; he faces the continual threat of punishment from superiors; and finally, he faces the threat of a dishonorable discharge which he is told will ruin any civilian career he may have in mind. All of these threats are built into the military experience in order to assure cooperation. Given this setting of pervasive threat, the soldier's beliefs are called into question. He often becomes primarily motivated toward reducing the resultant anxiety. This leads the soldier to become more attentive to irrelevant internal and external pressures and, therefore, he is less able to evaluate information independent of the source. With prolonged situational threat we may expect increased anxiety and increased attentiveness to irrelevant internal and external pressures. Though not stated in the above terms, this is one of the most important characteristics which the military desires in the "good" soldier. He is extremely attentive to external pressure.

The functioning of the intermediate region is not unrelated to primitive beliefs centered on a threatening view of the world. It will be recalled that the intermediate region involves the nature of authority. In the military setting the absolute nature of the authority structure was detailed previously. The parallel between interconnections of primitive beliefs based on threat and an intermediate region that accepts authority as absolute, with interconnections
found in the military structure which is based on absolute authority and backed by direct and indirect threat, is striking. The enforced regimentation in the military is a constant reminder of authority. The recruit cannot escape recognizing the authority of the Army when it has socially and physically displaced him, often against his will. As in the closed system, the power of authority does not depend on cognitive correctness, but on the ability of authority to mete out reward and punishment, so it is in the military setting. The recruit is taught to unquestioningly obey orders, whether irrational or not. Questioning of military authority results in immediate punishment and the threat of long term punishment.

Thus we see the interconnections of authority and threat in the military structure. The correspondence between this closed organization and the closed belief system is most evident in this area. It should be noted that soldiers are urged to reject anyone who does not cooperate with military authority. Of course soldiers are taught to hate the enemy. Similarly, in a closed belief system there is a tendency to accept or reject people according to whether they agree or disagree with a particular authority.

Finally, the parallel between the ideal types of a closed belief-disbelief system and the military as a closed organization has partial applicability with respect to the time-perspective dimension. The closed time perspective is characterized by a lack of continuity.
between past, present, and future. It is usually fixated on an idealized future and information is evaluated in terms of the future rather than the present. The use of force may be seen as necessary to bring about the longed-for future. In the military the future is often feared rather than idealized. Since the military is an arm of the establishment which is in power, there is an inherent value placed on the status quo. Hoffer\(^1\) has commented on the contrasting time-perspectives of the military and the mass movement,

> But the army is mainly an instrument for the preservation or expansion of an established order—old or new. . . . The mass movement comes to destroy the present. Its preoccupation is with the future, it derives its vigor and drive from this preoccupation.

Thus, for the military, the future holds only possibilities of disrupting the present. In this respect, the parallel between the ideal types does not hold. On the other hand, it can be pointed out that the military does lack the continuity between past, present, and future which is found in open belief systems. In the military setting, the glory of selected traditions of the past is idealized. The historical traditions of honor, liberty, and courage are accentuated in military ideology. Less favorable aspects of national history, particularly when it involves the military, are ignored. The present and future are seen as being filled with threats to the status quo and those traditions of the

\(^1\)op. cit., p. 57.
past which are idealized. The military does have an integrated
time-perspective in one area--technology. Present and future tech-
nological advances are eagerly awaited and sought. This is in sharp
contrast to military attitudes toward changes in political, economic,
and ideological structures. Therefore, in the military, the use of
force is accepted as a means of maintaining the present structures.

To summarize, we can see that the military ideology does not
idealize the future, rather it narrowly focuses on favorable aspects
of the past which are used to justify the application of force when
the stability of the present is in some way threatened. Thus, we
see in the military a lack of integration of past, present, and future
with a corresponding belief in the use of force which parallels these
characteristics in the time-perspective dimension of the ideal type
closed belief-disbelief system. Now that we have outlined the par-
allels between the ideal type closed belief system and the military
as the ideal type closed organization, we shall briefly draw parallels
between the ideal type open belief system and the university as the
ideal type open organization.

The University as an Open Organization

Using the parameters of the ideal type belief-disbelief system,
we shall briefly describe characteristics of the university setting.
In the open system there is little isolation of beliefs. The university
is founded on a principle which emphasizes free communication and debate of ideas. Because of the relative openness of communication in the university setting, contradictory ideas usually cannot be denied as irrelevant when they are relevant. Therefore, relatively little isolation is found in the collegiate scene.

Another characteristic of the open belief-disbelief dimension is extensive differentiation of belief-disbelief subsystems. It is submitted that the development of well differentiated beliefs and disbeliefs is probably the primary goal of the university organization and experience. As mentioned earlier, initiative and new ideas on the part of students are normally rewarded. Thus narrowness and one traditional approach to problems and issues are not usually compatible with the ideals and process of higher education.

In regard to the primitive beliefs of the central-peripheral dimension, the ideal type of the open system is characterized by a lack of threat. The new student usually faces the university experience with positive expectations. He is there voluntarily and often feels it is a road to "success." On the other hand, it is a fact that the beginning college student does face the possibility of failure. Some students feel this possibility is remote and experience little anxiety while for others the threat of failure is acute and much anxiety is present. For those students who succeed, the initial anxiety dissipates. A few students remain on the borderline of
failure throughout college and must continue with an anxiety level that remains high. In spite of the latter case, the threat and anxiety which may be produced in the university setting must be distinguished from the institutionalized use of threat and anxiety in the military setting.

Even though there are students for whom the university setting is threatening, this student feels that the institutionalized use of threat and anxiety in the military to influence and coerce soldiers to cooperate must be distinguished from the anxiety which is sometimes a by-product of the collegiate experience. In the collegiate setting the student is almost always assigned a counselor who usually can mitigate the anxieties the student may have. In addition most universities have counseling centers for students with personal problems, residence halls have advisors, in the first unit of study the "passing" requirements are lower, and there is a general atmosphere of encouragement. In contrast, the use of threat and anxiety to obtain cooperation of soldiers is the basis of authority in the military. Rather than policies and agencies aimed at the reduction of anxiety and threat, as are found in collegiate settings, the functioning of the military tends to include policies which maintain threat and anxiety. Thus, it is fair to conclude that the university setting comes closer to the ideal type of open belief system (which is characterized by a lack of threat) than does the military.
With respect to the intermediate region of the central-peripheral dimension, the open system is characterized by a limited and tentative acceptance of authority. In the structure of the university setting, the authority of the professor is limited to behavior in the classroom and to grades. Though the student usually finds himself living with others, there is very little regulation imposed by authority. The student comes and goes when he wants, often doesn't have to attend classes if he chooses, and certainly can dress the way he wants. There is much room for expression of individuality. What regulations there traditionally have been, are now almost uniformly more lax or abolished. A more significant trend, is the tendency of more and more students to be active participants in the power structure of the university. Not only do professors evaluate students, but students are increasingly evaluating professors and publishing the results. What a contrast to the relationship of officers and enlisted men in the military! Thus, it is clear that the structure of authority in the university is limited and becoming more shared.

The content of higher education regarding authority is consistent with the limited nature of the university authority structure. As stated previously, the evaluation of ideas tends to be based on objective criteria which can be rationally debated rather than on the authoritarian source of ideas. That the nature of authority in the university parallels its limited nature in the open belief system is
Finally, with respect to time-perspective in the ideal type open belief system, it may be recalled, there is an emphasis on the present. The past, present, and future possess continuity and are well integrated. It is safe to say that higher education also seeks to develop an awareness of the continuity of the past, present, and future. The broad time-perspective which is encouraged in the university setting in turn discourages the use of force to bring about a utopian future.

Summary

We have seen, from descriptions of military and university experiences, a significant contrast in both structures and ideological content. Rokeach's theory of belief-disbelief systems and the various defining properties of the continuum of ideal type open and closed systems have been examined. Using the defining properties of open and closed belief-disbelief systems, it was seen that rather direct parallels could be found when the military and university experiences were conceptualized as ideal types of closed and open organizations. It has been pointed out that both these organizations are major socialization influences for many young men in our society, after they leave their families. Due to the opposite character of these organizations, we may expect their respective socialization influences to
be in contrast. From exposure to the relatively open content and structure of the university experience we would expect a tendency toward more open belief-disbelief systems among students (this trend is documented in the following chapter). This leads us to argue that due to the relatively closed content and structure of the military experience we would expect a tendency toward more closed belief-disbelief systems among soldiers. In the following chapter we shall specify the variables and exact questions involved in the research paradigm appropriate for testing various aspects of this proposition.
CHAPTER II
DESIGN AND METHOD

This chapter aims at making the general argument that increases in dogmatism are associated with military experience in contrast to collegiate experience more explicit by first discussing research in university settings which demonstrates a trend toward open belief systems associated with collegiate experience. Next, the applicability of the concept of dogmatism as it is to be used in this setting is discussed. The characteristics and use of the Dogmatism Scale as a measure of closed belief systems is then examined. Leading up to specific testable propositions regarding the effect of military experience on belief systems, we next discuss the various parameters of military experience in the context of the descriptions given in the introductory chapter. This leads to a statement of the hypotheses. Following the hypotheses is a description of the method of data collection and the population. Finally, the statistical analyses to be used for each of the hypotheses are specified.

University Experience and Dogmatism

It has been proposed that there will be a general increase in
dogmatism associated with greater time spent on active duty in the military. In contrast to this expected trend in the military, research in university settings consistently points to decreased levels of dogmatism as associated with greater time spent as a student.

Dressel and Mayhew\(^1\) used the Inventory of Beliefs and found a decrease in authoritarianism over a one-year period in eleven out of thirteen college groups studied. When administering the F scale at Vassar, Sanford\(^2\) reported Seniors scoring considerably lower than Freshmen. Lehmann\(^3\) at Michigan State University found decreases in dogmatism from freshmen to senior years. Marcus\(^4\) reports decreased levels of dogmatism during college and medical school. In summary, it is a rather consistent finding to see decreased levels of dogmatism associated with collegiate experience.


\(^2\)Sanford, N., "Personality Development During the College Years." Journal of Social Issues, XII (No. 4 - 1956), 3-70.

\(^3\)Lehmann, I. J., "Changes in Critical Thinking, Attitudes, and Values from Freshmen to Senior Years." Journal of Educational Psychology, LIV (December 1963), 305-315.

Plant has raised a question about the advisability of attributing these changes solely to the collegiate experience. He found that comparison groups, subjects not in college over a four-year period, also show significant decreases in authoritarianism, dogmatism, and ethnocentrism in the same fashion as did students in college for four years. Plant's results suggest the college experience may simply accelerate a change going on in young persons of college caliber whether or not they attend college. This possibility was given support by testing students completing varying amounts of community college work in a period of two years. Plant found those who completed three or four semesters in the two-year period had lower mean dogmatism scores than did other educational attainment groups, but all groups decreased significantly, including those completing no college.

It appears that decreased dogmatism is a phenomenon of this age group which occurs whether in college or not, but is enhanced by collegiate experience. It is suggested that an explanation for

---


---

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
the greater openness of belief systems which is associated with college experience lies in the open character of the university. If an opposite trend is found associated with military experience, it is suggested that an explanation for it can be found in the closed character of this organization. Plant's finding of significant decreases in dogmatism in groups completing no college gives greater weight to the above explanation for the expected increase in dogmatism associated with military experience.

Applicability of the Concept of Dogmatism

Dogmatism was chosen as the dependent measure primarily because it seems uniquely applicable, in its theoretical meaning, to the military setting. This student feels that the structure and dynamics of the closed belief system directly parallel a description of the structure and dynamics of military organization. Another reason for the use of dogmatism is the importance of the concept for the viability of a democratic society. The functioning of our political institutions depends on a population with a large proportion of fairly open belief systems. This general argument has been advanced by both Fromm\(^1\) and Adorno.\(^2\) What effect military


experience has on belief systems of the large number of men who spend at least two years in this organization has considerable importance. Finally, the concept of dogmatism has been used widely in sociopsychological literature. Its relationship to the F scale, ¹ which has been used in a few military settings, is fairly well established. Exactly how dogmatism has been researched and its relationship to the F scale will now be discussed.

The Dogmatism Scale

The theoretical concept of dogmatism or closed belief system as previously outlined is operationally specified in the form of The Dogmatism Scale (DS).² Form E of this scale consists of forty statements reflecting the theoretical dimensions of closed belief-disbelief systems. If an individual strongly agrees with such statements it is assumed he possesses one extreme of the characteristics being tapped, and if he strongly disagrees, that he possesses the opposite extreme.

Reliability and Validity

Reliability measures reported for the DS have been generally

¹loc. cit., pp. 222-262.

high for adult (e.g., Ehrlich\textsuperscript{1}: Lichtenstein, Quinn and Hoer\textsuperscript{2}) and high school populations (Kemp and Kohler\textsuperscript{3}). Ehrlich\textsuperscript{4} reported a test-retest correlation separated by five years of .55.

The validity of the instrument was initially substantiated by Rokeach.\textsuperscript{5} Psychology graduate students were asked to select from among their friends and acquaintances one or two who were extremely high and extremely low in dogmatism. The group judged to be highly dogmatic scored about 55 points higher than the group judged to be low in dogmatism. This difference was statistically significant.

A similar study with professors as judges of high and low dogmatic students failed to be so differentiated on the DS. This was explained by the possibility that the student-professor relationship introduces a "masking" effect on the professor's judgment that is

\begin{itemize}
\item \textsuperscript{1}Ehrlich, H. J., "Dogmatism and Learning." Journal of Abnormal and Social Psychology, LXII (January 1961), 148-149.
\item \textsuperscript{3}Kemp, C. G. and E. W. Kohler, "Suitability of the Rokeach Dogmatism Scale for High School Use." Journal of Experimental Education, XXXIII (Summer 1965), 383-385.
\item \textsuperscript{4}Ehrlich, H. J., "Dogmatism and Learning: A Five Year Follow-up." Psychological Reports, IX (October 1961), 283-286.
\item \textsuperscript{5}The Open and Closed Mind, op. cit.
\end{itemize}
not present in the peer's judgment.

Since items on the DS are positively scored statements, with high agreement yielding high scores, several investigators have directed their attention toward studying agreement or disagreement response set. Couch and Keniston, employing a specially constructed scale designed to measure a subject's tendency to agree with items regardless of content found a significant relationship between their scale and the DS scores. Lichtenstein, et al. also found a significant relationship between DS scores and two measures of acquiescence. On the "disagreement" side, Katz and Katz attributed changes in college student's dogmatism scores to the development of a disagreement response set. Although the question of response bias is open, the substantive differences found between high dogmatics and low dogmatics in various studies which have been reviewed by Rokeach indicate more than a response bias is operating.

---


The DS and the F scale

An important claim is made for the DS as a measure of authoritarianism. As compared with Adorno's F scale which was aimed at measuring fascist potential or right-wing authoritarianism, the dogmatism scale aims at identifying "general authoritarianism" regardless of its orientation to the right or left extremes of the political spectrum. To accomplish this goal each statement in the scale was designed to transcend specific ideological positions in order to penetrate to the formal and structural characteristics of all positions.

To validate this claim, Rokeach administered left and right opinionation scales to several political groups among English university students. The Communists were highest on left opinionation and lowest on right opinionation. The Conservatives show exactly the opposite trend, being lowest on left opinionation and highest on right opinionation.

Three groups between these form a clear-cut ordering which ascends on left opinionation and descends on right opinionation. It is most informative that the mean dogmatism scores followed no particular order in relation to left-rightness while the Conservatives

---

1 op. cit., pp. 222-262.

2 The Open and Closed Mind, op. cit., pp. 129-130.
scored highest on the F scale and the means decrease from groups on the political right to the political left. Plant\(^1\) substantiated Rokeach's contention that the DS is a better measure of general authoritarianism than the F scale on a large sample (N=2350) of American students. Recently, Hanson\(^2\) demonstrated that dogmatism, as measured by the DS, taps general authoritarianism, whereas the F scale taps only right authoritarianism. Thus, it is suggested that the DS is relatively content free and focuses on the structure of belief-disbelief systems. It must be pointed out that in Rokeach's studies politically right-oriented groups did consistently score slightly higher than left-oriented groups. "Chances are somewhat better than even that a closed minded person will be conservative rather than liberal in his politics."\(^3\) Rokeach feels this phenomenon is probably due to a discrepancy between content and structure of left wing groups. Left wing ideology is primarily humanitarian and anti-authoritarian, yet the discipline and hierarchical structure of most extreme left wing parties is based on author-

---

\(^1\)Plant, W. T., "Rokeach's Dogmatism Scale as a Measure of General Authoritarianism." Psychological Reports, VI (February 1960), 164.

\(^2\)Hanson, D. J., "Dogmatism and Authoritarianism." Journal of Social Psychology, LXXVI (October 1968), 89-95.

\(^3\)Rokeach, The Open and Closed Mind, op. cit., p. 129.
ity. Therefore, it is argued, due to this inherent inconsistency, the left wing extremist may have a sense of disillusionment. With right wing groups there is no such conflict between structure and content. Not only is the structure of extreme right wing groups authoritarian but so is their ideological content. It is suggested that this distinction may be responsible for the greater affinity of right wing extremist groups to closed belief systems. Though not substantiated, this is an interesting and plausible explanation.

Even though the DS has been shown to be a measure of general authoritarianism when compared to the F scale which indicates right authoritarianism, theoretically, we would expect to find a positive correlation between the two. For seven groups that Rokeach\textsuperscript{1} tested at Michigan State University, New York, and in England, the correlations range from .57 to .77. With left wing extremists, even though their mean dogmatism is high and their mean F score is low, Rokeach still obtained a positive correlation between the two. Using large samples at San Jose State College, Plant\textsuperscript{2} substantiated this relationship. With an N of 1007 males, a correlation of .75 was obtained. Pettigrew\textsuperscript{3} reported a correlation of .82 on a sample of

\textsuperscript{1}Rokeach, The Open and Closed Mind, op. cit., p. 121.

\textsuperscript{2}op. cit.

North Carolina students.

Kerlinger and Rokeach\textsuperscript{1} have factor analyzed the F scale and the D scale item intercorrelations obtained from administering the two scales to over a thousand subjects in three different states. Factor analyzing ten oblique, first order factors, they found three second order factors which were interpreted as dogmatism, fascist authoritarianism, and authoritarian aggression and submission. It was concluded that the substantial correlations found between the F and D scale total scores and the predominantly positive correlations among first order factors speak for an underlying unity. But within this broad unity, there are distinguishable factors as evidenced by the second order analysis. Since consistent positive correlations have been found between the DS and F scales and content similarities in factor analytic analysis, it appears the two scales are both measuring "authoritarianism." However, the F scale is apparently more sensitive to the authoritarianism on the right end of the political spectrum. Therefore, studies using Adorno's F scale in military settings have some meaning for this research effort.

Use of the F scale in military settings

Christie\(^1\) administered the F scale to 182 white inductees in an Army basic training center prior to and after six weeks of infantry training. A slight but insignificant increase was obtained. Four subgroups were formed in terms of acceptance or rejection by peers and superiors. Those recruits more accepted than rejected by both groups were found to become significantly more authoritarian. Campbell and McCormack\(^2\) studied the effect of military experience on attitudes toward authority by testing a group of Air Force cadets in their first week of training and again one year later and by comparing populations with varying periods of military experience. They found a significant decrease in authoritarian attitudes using the F scale. This was contrary to the hypothesized expectation of increased authoritarianism. One explanation offered is that since the Air Force has a high proportion of officers, the great bulk of working contacts are with other officers. These contacts would be expected to be less affected by considerations of formal rank and authority than are working relationships involving officers and en-


listed men or those among enlisted personnel. Thus, perhaps, in other military settings the expected findings would hold. This student has found no studies using the DS in military settings. At this time, there is little objective research evidence to suggest what effect military experience may have on belief systems. Having discussed the few investigations of authoritarianism in military settings, we shall now focus on variables of interest in the present research setting.

Parameters of Military Experience and the Population

The military experience has been outlined as an experience in a closed organization which parallels the dimensions of the ideal type closed belief system. The degree to which any soldier's experience in the Army approaches the ideal type may be influenced by the following three contextual variables: occupational status--infantry or support, Vietnam status--yes or no and, number of months in the Army. The influence military experience may have on the soldier may be affected by the following three population variables: draft status--volunteer or draftee, education level, and social position. We shall now identify the ways in which these contextual and population variables have theoretical significance. All six variables will be utilized in the research design as a means of formulating specific propositions.
Contextual variables

The occupational specialty to which the soldier is assigned determines several important aspects of his experience in the military organization. All military occupations can be bifurcated on one principle, that is, whether the occupation is essentially front-line infantry or some form of "support" occupation. The infantry soldier is sent to advanced infantry training for eight weeks following his basic training. In this advanced training the infantry soldier receives extended ideological and combat instruction, similar to that of basic training, but more intensive. Then the infantry soldier is sent to a permanent duty station either in a combat zone or in an infantry unit. In contrast, upon completion of basic training, support personnel are sent to advanced technical training. Such training is usually must less regimented than basic training.

An example of this is the "finance specialist." His advanced training consists of going to classes, learning to type, becoming familiar with adding machines, and learning military accounting procedures. Following advanced training, the finance specialist is sent to a base to work in an office, usually with regular office hours. The support personnel duties are more limited in time and regimentation than are his counterpart's duties in an infantry unit. Though support personnel are subjected to the military as a closed organization, it is suggested that infantry personnel are exposed to the
most pure and extreme form of the closed organization for the longest duration of time. Since these experiences may have differential effects on belief systems, it will be meaningful to include this factor in the research design.

Another contextual variable of interest concerns the soldiers who have completed a tour of duty in Vietnam. The same rationale can be applied here as we have applied to infantry status. A twelve month tour of duty in a combat zone will also tend to expose the soldier to the more perfect form of the military as the ideal type of a closed organization. Most all aspects of the military experience which have previously been discussed under the rubrics of indoctrination, authority and regimentation become more pronounced in a combat zone. For the soldier in a non-combat area military experience is likely to be more relaxed. Since Vietnam experience enhances the closed nature of the military organization it will be meaningful to include this factor in the design.

The final contextual variable is the most basic to the design of this study. The length of time a soldier has been in the Army must be considered since, other factors being equal, this reflects the amount of exposure the individual has had to the closed structure and content of military life. The longer an individual is in the Army the more he will be exposed to all dimensions of the ideal type of closed organization. It is felt that the longer the experience in the
military, the more receptive the soldier becomes to the ideology, authority, and regimentation as a part of his life. Since months in the Army is the logical equivalent of military experience, this will be the primary independent variable in the research design.

**Population Variables**

The draft status of the soldier, whether he has volunteered or was drafted, can be taken as an indication of the soldier's amenability to military experience. Among volunteers, will be those who agree to extend their duty from two to three years during the first few days in the Army. All voluntary personnel have committed themselves to three years of service while the draftee has a two-year obligation. It is felt that the willingness to stay in the Army beyond two years may reflect a tendency to accept the closed nature of the military experience. Therefore, the military experience may have differential effects on the belief systems of volunteers and draftees.

Education is the second population variable of interest. As we have previously discussed it, research in university settings strongly suggests a negative relationship between education and dogmatism. Therefore we will expect military experience to have less effect on soldiers of higher educational attainment. The relationship of education to DS scores and military experience will provide an indirect
check of the "university as an open organization" and that part of
the theoretical argument presented in this thesis. For these
reasons education must be included in this research design as an
important population variable.

The final population variable of interest is socio-economic sta-
tus. Though this variable is partially based on the education of the
soldier's father, it will be more dependent on the father's occupation
and thus will indicate the "style of life" which the soldier has had.
It is intended to reflect the family and cultural influences on the
belief system of the soldier. Frumkin\(^1\) has found a significant nega-
tive association between higher socio-economic status and dogma-
tism. For these reasons it will be of value to consider this factor
in the military population.

Socio-economic status will be estimated by Hollingshead's Two-
Factor Index of Social Position.\(^2\) This index consists of classifying
each individual on two seven point scales, one for education and one
for occupation. A multiple regression equation was used to deter-
mine the appropriate weight which would be given to each factor.

\(^1\)Frumkin, Robert M., "Dogmatism, Social Class, Values, and
Academic Achievement in Sociology." Journal of Educational
Sociology, XXXIV (May 1961) 398-403.

\(^2\)A summary of this Index is found in Bonjean, Charles, et al.
Sociological Measurement: An Inventory of Scales and Indices, San

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
Occupation is given a weight of seven and education is given a weight of four. Since all individuals to be sampled are on active duty in the Army and many will not have completed their education or established a career, each person will be classified on the basis of his father's occupation and education. Once so classified, the occupation score will be multiplied by seven and education by four. Then they are added together, the sum being the score for the Index of Social Position. It should be noted that the higher the index score, the lower is the social position. The range of scores in each class, designated by Hollingshead, is as follows: class 1 11-17, class 2 18-31, class 3 32-47, class 4 48-63, and class 5 64-77. Extensive studies have been made of the reliability and validity of the index.

With the parameters of military experience and population explained, we shall summarize the development of the argument and state the hypotheses.

Summary

To summarize the development of the argument it must first be noted that we began with a discussion of the content and structure of military experience as an experience in a closed organization and of the university experience as an experience in an open organization.

---

1These are the procedures carried out by Hollingshead in formulating the Index.
The theoretical dimensions of the belief-disbelief system and the closed (dogmatic) belief system were examined. In applying this theoretical organization of belief systems to the military and university as organizations we found the ideal type of the closed system best fits the military while the ideal type of the open system best fits the university. At this point it was suggested that experience in these organizations may have a contrasting effect on belief systems.

In order to focus on the nature of the influence military experience may have, the effects of social pressure on attitude formation and change, as it relates to belief systems, was discussed. To specify the direction of the expected contrasting change in belief systems with experience in these organizations we examined research carried out in university settings and found a rather consistent trend of accelerated change toward openness of belief systems associated with collegiate experience. It was then suggested that we may find an opposite trend in the military setting due to the closed character of this organization. Previous studies using the F scale in military settings were found to be inconclusive. Next, six parameters of the military experience and population were examined in relationship to the effect each may be expected to have on over-all influence of military experience on belief systems. This now leads us to the statement of the hypotheses.
Hypotheses

The primary hypothesis is that, independent of all other variables in the design, there is a positive association between dogmatism and length of time in the Army. Independent of all other variables in the design, the following relationships are also hypothesized: social position is negatively associated with dogmatism; education is negatively associated with dogmatism; volunteer status is positively associated with dogmatism; infantry status is positively associated with dogmatism; and prior military service in Vietnam is positively associated with dogmatism. In addition, it is hypothesized that the ability to estimate dogmatism will be greater if months in the Army and any one of the other five independent variables are used as predictors than if only months in the Army is used.

Method

The population used in this research consists of active duty enlisted United States Army personnel "processing in" for duty at Walter Reed Army Medical Center in Washington, D.C. This involved a random selection of personnel and no bias that this student is aware of. The Behavioral Science Laboratory, where the data has been collected, is in the Radiation Therapy Service of the hospital and is a required stop among approximately ten others on the base for all enlisted personnel assigned to Walter Reed. Most
personal information needed is on the "processing card" which the soldier must have signed. The Behavioral Science Laboratory has been established to study psychological and behavioral effects of radiation exposure and has tested "processes" as a means of collecting control data to be compared with data collected from patients who are undergoing radiation treatments for cancer. This is explained to the processee and he is then given the DS scale. Prior to his responding to the scale, the soldier is told that the results of the tests are kept confidential.

Data Analysis

Of course, the appropriate methods for data analysis are determined by what will provide confirming or disconfirming evidence of the tenability of the hypotheses. Let us first label the one dependent and six independent variables and then specify the hypotheses and the appropriate statistical analyses to test them. The following symbols will be used to identify the variables in the design: $Y=DS$ Score, $X_1 =$ months in the Army, $X_2 =$ social position, $X_3 =$ years of education completed, $X_4 =$ draft status, $X_5 =$ occupational status, and $X_6 =$ Vietnam status.

The first set of hypotheses states that independent of all other variables, each independent variable ($X_1, X_2, \ldots X_6$) is associated with dogmatism ($Y$). To test these hypotheses, we shall utilize
fifth order partial correlation coefficients between each independent variable and dogmatism; partialling out the effects of the other five independent variables \(r_{YX_1 X_2 X_3 X_4 X_5 X_6}, r_{YX_2 X_1 X_3 X_4 X_5 X_6}, r_{YX_3 X_1 X_2 X_4 X_5 X_6}, r_{YX_4 X_1 X_3 X_5 X_6}, r_{YX_5 X_1 X_4 X_6}, r_{YX_6 X_1 X_5}\).

Fifth order partial correlations will be used since all six independent variables are likely to be associated with each other. Therefore, a significant zero order correlation between one independent variable and dogmatism could be partially due to indirect effects from the other five independent variables. The fifth order partial correlations will indicate what the association of each independent variable with dogmatism would be if all other five variables had no association with the independent variable being tested. Therefore, this statistic will provide the information necessary to confirm or disconfirm the first group of six hypotheses. A \(t\) test will be employed to test whether these partial correlation coefficients are significantly different from zero.

It is also hypothesized that the ability to estimate dogmatism will be greater if both months in the Army and any one of the other five independent variables are used as predictors than if only months in the Army is used. Since the six independent variable regression equation includes all variables in the design, it will not provide the data needed to test these hypotheses. It is clear that this hypothesis requires the use of five different estimation models of
three variables each. In each model dogmatism (Y) is the dependent variable and months in the Army (X_1) is one of the two independent variables used as a predictor. What changes in each model is the second independent variable to be used as a predictor (X_j). These will be the following five variables: social position (X_2), education (X_3), draft status (X_4), occupational status (X_5), and Vietnam status (X_6). The above hypotheses can be tested by means of Beta coefficient analyses which will be calculated from the regression coefficient of the five, two-independent-variable, multiple linear regression equations required (Y=a + b_1X_1 + b_2X_2, Y=a + b_1X_1 + b_3X_3, Y=a + b_1X_1 + b_4X_4, Y=a + b_1X_1 + b_5X_5, Y=a + b_1X_1 + b_6X_6).

From the Beta coefficient analyses we can determine the relative importance of months in the Army and each other independent variable in the estimation of dogmatism. The relative increase in predictive power from the addition of the third variable will also be obtained. Such data will provide the information necessary to accept or reject the hypothesis regarding the estimation of dogmatism from months in the Army and an added independent variable.
CHAPTER III
RESULTS

This chapter presents the results of the collected data and statistical analysis. First is a general description in terms of means and standard deviation of the six independent variables included in the design. We then describe the zero order correlation coefficients between the independent variables. This is followed by a summary of the general findings of a six independent variable, multiple linear regression analysis. From these results, fifth order partial correlation coefficients and t-values are presented. These statistics are used to test the first set of hypotheses regarding the association between dogmatism and each independent variable with the effects of all other variables partialled out.

In the second phase of the data analysis, the beta coefficients resulting from five, two independent variable multiple linear regression equations are analyzed. Following the presentation of each Beta coefficient for each equation, the added proportion of total variation in dogmatism scores, explained by the introduction of the second independent variable, is summarized. Finally, the meaning of each phase of the analysis is discussed and summarized.
Descriptive Results

All measures are based on scores obtained from 170 active duty United States Army soldiers, stationed at Walter Reed Army Medical Center. The data was collected from September 1969 to July 1970. The sample's mean months in the Army equals 26.45 with a standard deviation of 47.52 and a range of 2 to 264. The mean Index of Social Position score is 47.33 with a standard deviation of 14.58 and a range of 11 to 77. This range includes the lowest possible score (77) and the highest possible score (11) on Hollingshead’s Two-Factor Index. The mean years of educational attainment is 13.71 with a standard deviation of 2.33 and a range of 8.5 to 19 years. The mean dogmatism score is 148.57 with a standard deviation of 27.58 and a range of 74 to 239. The theoretical limits to scores on the Dogmatism Scale range from a possible low score of 40 to a possible high score of 280. These results are summarized in Table 1 below.

From these results, it is clear that the number of months spent in the Army by these soldiers greatly varies. This reflects the fact that our sample includes soldiers just out of basic training as well as soldiers with 20 years of completed service. The other fact worth noting is that the soldiers in the sample have an average

\[1\text{The size of this standard deviation indicates that months in the Army is not normally distributed.}\]
TABLE 1

AVERAGE MONTHS IN THE ARMY, SOCIAL POSITION
EDUCATION AND DOGMATISM
(based on all scores)

<table>
<thead>
<tr>
<th>Months in Army ($X_1$)</th>
<th>Social Position ($X_2$)</th>
<th>Education ($X_3$)</th>
<th>Dogmatism ($Y$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>$\bar{X}$: 26.45</td>
<td>47.33</td>
<td>13.71</td>
<td>148.57</td>
</tr>
<tr>
<td>SD: 47.52</td>
<td>14.58</td>
<td>2.33</td>
<td>27.58</td>
</tr>
<tr>
<td>N: 170</td>
<td>170</td>
<td>170</td>
<td>170</td>
</tr>
</tbody>
</table>

education of about two years of college. This is probably higher
than would be found in most Army populations and reflects the fact
that many military personnel sent to Walter Reed are selected on
the basis of specialized education and training.

By splitting the sample on the basis of the three dichotomized
independent variables, we can obtain the mean scores for the result-
ing six groups. These data are presented in Table 2 below.

In Table 2 we see a rather consistent trend for three of the non-
dichotomous variables. Draftees, support personnel, and those with
no Vietnam experience all have a higher mean social position, higher
mean education, and lower mean dogmatism scores. It should be
noted that the differences between these groups in social position is
small compared to the differences in education and dogmatism. The
above trend does not apply to the fourth non-dichotomous variable,
months in the Army. Volunteers and Vietnam veterans have, on the
<table>
<thead>
<tr>
<th></th>
<th>Draft Status ($X_4$)</th>
<th>Occupational Status ($X_5$)</th>
<th>Vietnam Experience ($X_6$)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Volunteer</td>
<td>Infantry</td>
<td>Support</td>
</tr>
<tr>
<td><strong>Months in Army (X₁)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$\bar{X}$</td>
<td>40.45</td>
<td>30.52</td>
<td>25.82</td>
</tr>
<tr>
<td>SD</td>
<td>57.23</td>
<td>32.92</td>
<td>49.48</td>
</tr>
<tr>
<td>*<em>Social Position</em> (X₂)**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$\bar{X}$</td>
<td>47.84</td>
<td>48.00</td>
<td>47.22</td>
</tr>
<tr>
<td>SD</td>
<td>13.28</td>
<td>17.11</td>
<td>14.21</td>
</tr>
<tr>
<td><strong>Education (X₃)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$\bar{X}$</td>
<td>13.03</td>
<td>12.28</td>
<td>13.93</td>
</tr>
<tr>
<td>SD</td>
<td>2.18</td>
<td>2.22</td>
<td>2.27</td>
</tr>
<tr>
<td><strong>Dogmatism (Y)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$\bar{X}$</td>
<td>153.77</td>
<td>161.22</td>
<td>146.59</td>
</tr>
<tr>
<td>SD</td>
<td>27.01</td>
<td>21.33</td>
<td>27.98</td>
</tr>
<tr>
<td>n</td>
<td>102</td>
<td>23</td>
<td>147</td>
</tr>
</tbody>
</table>

*Note: higher score indicates lower social position*
average, many more months in the Army than draftees and those without Vietnam experience. There is very little difference between infantry and support personnel in how long they have been in the Army. Finally, it is evident that draftees, support personnel, and those with no Vietnam experience, all have lower average dogmatism scores than volunteers, infantry personnel, and Vietnam veterans. Thus we see that these differences are in the hypothesized direction.

Each of the three independent interval variables can be divided into meaningful units. By dividing months in the Army into ordinal categories, we can view social position, education, and DS scores as presented in Table 3 below.

Table 3 shows a fairly consistent trend toward lower social position, lower education, and higher DS scores with greater time in the Army. The only inconsistency is that those with 5 to 11 months in the Army have a slightly higher social position mean and a slightly lower average DS score. It should be noted that 99 of the 170 soldiers in the sample have less than one year of service in the Army. However, those in the three categories beyond 11 months, are rather evenly distributed.

The Two-Factor Index of Social Position, as discussed previously, can be divided into five classes. Once accomplished, the average scores for the derived groups on the other interval
<table>
<thead>
<tr>
<th></th>
<th>Months in the Army ($X_1$)</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>4 or less</td>
<td>5-11</td>
<td>12-23</td>
<td>24-35</td>
<td>36 or more</td>
</tr>
<tr>
<td>Social Position</td>
<td>$\bar{X}$</td>
<td>46.61</td>
<td>45.44</td>
<td>47.59</td>
<td>49.27</td>
</tr>
<tr>
<td>($X_2$)</td>
<td>SD</td>
<td>15.47</td>
<td>15.70</td>
<td>14.73</td>
<td>14.28</td>
</tr>
<tr>
<td>Education</td>
<td>$\bar{X}$</td>
<td>14.91</td>
<td>14.02</td>
<td>13.86</td>
<td>12.79</td>
</tr>
<tr>
<td>($X_3$)</td>
<td>SD</td>
<td>2.63</td>
<td>1.95</td>
<td>1.90</td>
<td>2.21</td>
</tr>
<tr>
<td>Dogmatism</td>
<td>$\bar{X}$</td>
<td>144.76</td>
<td>141.85</td>
<td>154.86</td>
<td>152.69</td>
</tr>
<tr>
<td>(Y)</td>
<td>SD</td>
<td>25.64</td>
<td>25.48</td>
<td>29.18</td>
<td>28.83</td>
</tr>
<tr>
<td>n</td>
<td>38</td>
<td>61</td>
<td>22</td>
<td>26</td>
<td>23</td>
</tr>
</tbody>
</table>

measures have been obtained. These data are presented in Table 4 below.

From Table 4, it is notable that educational attainment is directly related to the Index of Social Position. Although the Index of Social Position is based on the father's education and occupation, it appears that this is not unrelated to the educational attainment of the son. Dogmatism levels, as expected, tend to be lower for those of higher social position. However, this trend does not apply between classes 2 and 3. The relationship between social position and months in the Army appears to be bell-shaped and skewed to the right. Those in class 3 have the highest average months in the
TABLE 4

MONTHS IN THE ARMY, EDUCATION AND DOGMATISM
BASED ON THE INDEX OF SOCIAL POSITION

<table>
<thead>
<tr>
<th>Social Classes ($X_2$)</th>
<th>1 (11-17)</th>
<th>2 (18-31)</th>
<th>3 (32-47)</th>
<th>4 (48-63)</th>
<th>5 (64-77)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Months in Army ($X_1$)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$\bar{X}$</td>
<td>5.25</td>
<td>10.35</td>
<td>32.17</td>
<td>29.91</td>
<td>19.47</td>
</tr>
<tr>
<td>SD</td>
<td>1.71</td>
<td>9.12</td>
<td>55.91</td>
<td>52.21</td>
<td>25.51</td>
</tr>
<tr>
<td>Education ($X_3$)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$\bar{X}$</td>
<td>16.13</td>
<td>14.98</td>
<td>14.19</td>
<td>13.18</td>
<td>12.60</td>
</tr>
<tr>
<td>SD</td>
<td>1.32</td>
<td>2.00</td>
<td>2.26</td>
<td>2.26</td>
<td>2.32</td>
</tr>
<tr>
<td>Dogmatism (Y)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$\bar{X}$</td>
<td>146.75</td>
<td>146.20</td>
<td>143.70</td>
<td>150.28</td>
<td>157.86</td>
</tr>
<tr>
<td>SD</td>
<td>15.44</td>
<td>31.93</td>
<td>29.11</td>
<td>26.44</td>
<td>23.64</td>
</tr>
<tr>
<td>n</td>
<td>4</td>
<td>20</td>
<td>54</td>
<td>71</td>
<td>21</td>
</tr>
</tbody>
</table>

Army. Classes 4 and 5 are considerably higher in months in the Army than are classes 1 and 2. It is also evident that the frequency distribution is skewed to the right with 92 soldiers rated in classes 4 and 5 and only 24 in classes 1 and 2.

Educational attainment can meaningfully be divided into four categories: less than high school, high school graduate, college attendance, and college graduate. For these categories, means on the other interval measures are presented in Table 5.

It is clear from the data in Table 5 that the greater the educational attainment of the soldier the less likely is he to spend more


**TABLE 5**

MONTHS IN THE ARMY, SOCIAL POSITION AND DOGMATISM BASED ON EDUCATIONAL ATTAINMENT

<table>
<thead>
<tr>
<th></th>
<th>Years of Education (X₃)</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(16+)</td>
<td>(12 1/2 - 15 1/2)</td>
<td>(12)</td>
<td>(11 1/2 or less)</td>
</tr>
<tr>
<td>Months in Army</td>
<td>X</td>
<td>10.09</td>
<td>24.50</td>
<td>32.56</td>
</tr>
<tr>
<td></td>
<td>SD</td>
<td>19.83</td>
<td>42.28</td>
<td>48.87</td>
</tr>
<tr>
<td>Social Position</td>
<td>X</td>
<td>42.72</td>
<td>44.09</td>
<td>50.84</td>
</tr>
<tr>
<td></td>
<td>SD</td>
<td>15.91</td>
<td>15.17</td>
<td>10.74</td>
</tr>
<tr>
<td>Dogmatism</td>
<td>X</td>
<td>136.11</td>
<td>153.00</td>
<td>150.66</td>
</tr>
<tr>
<td></td>
<td>SD</td>
<td>24.69</td>
<td>31.49</td>
<td>25.19</td>
</tr>
<tr>
<td>n</td>
<td>53</td>
<td>46</td>
<td>50</td>
<td>21</td>
</tr>
</tbody>
</table>

than two or three years in the military setting. Of course, this only applies to enlisted personnel. Most important, it appears that college graduates are considerably less dogmatic than those with less education. In addition, the soldiers with less than a high school education have an average dogmatism score substantially higher than any of the other educational groups. There appears to be little difference in average dogmatism scores between high school graduates and those having completed some college.

In summary, the descriptive results suggest that average dogmatism scores tend to be higher for soldiers with more time in the Army, lower social position, lower education, volunteers, infantry,
and Vietnam veterans. Such trends indicate that we may be dealing with a complex of interrelated independent variables. To obtain summary measures of these relationships, zero order correlations and multiple regression analysis results will be presented.

Zero Order Correlations and Multiple Regression Analysis

First, the zero order correlation coefficients between each independent variable and dogmatism will be discussed. The association which exists between the various independent variables will also be presented. From the descriptive survey of the data, it appears that many of the independent variables will be significantly associated. Though the interval measures (social position, education, and months in the Army) were categorized into ordinal groups for presentation in tables, all analyses are based on interval scales, except, of course, for the dichotomous variables. The analysis to be considered at this time and all future analyses are based on 170 observations of each measure involved. Table 6 below summarizes

1All statistical analyses are obtained from a multiple linear regression computer program. Coefficients between nominal and interval scales, where the assumption of a bivariate normal distribution are not met, are computed by non-parametric procedures which result in comparable figures, if parametric measures could be used. For a detailed presentation of parametric and non-parametric measures of association, see Linton C. Freeman, Elementary Applied Statistics: For Students in Behavioral Sciences. New York: John Wiley & Sons, Inc., 1965, pp. vii - 283.
TABLE 6
ZERO ORDER CORRELATION COEFFICIENTS BETWEEN ALL VARIABLES

<table>
<thead>
<tr>
<th></th>
<th>Months in Army (X₁)</th>
<th>Social Position (X₂)</th>
<th>Education (X₃)</th>
<th>Draft Status (X₄)</th>
<th>Occupational Status (X₅)</th>
<th>Vietnam Status (X₆)</th>
<th>Dogmatism (Y)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Months in Army (X₁)</td>
<td></td>
<td>-.089</td>
<td>-.325</td>
<td>.362</td>
<td>.034</td>
<td>.661</td>
<td>.212</td>
</tr>
<tr>
<td>Social Position (X₂)</td>
<td></td>
<td></td>
<td>-.043</td>
<td>-.018</td>
<td>-0.71</td>
<td>-.137</td>
<td></td>
</tr>
<tr>
<td>Education (X₃)</td>
<td></td>
<td>-.365</td>
<td>-.356</td>
<td>-.243</td>
<td>-.278</td>
<td>-.345</td>
<td></td>
</tr>
<tr>
<td>Draft Status (X₄)</td>
<td></td>
<td></td>
<td>-.212</td>
<td>.408</td>
<td>.232</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Occupational Status (X₅)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.308</td>
<td>.182</td>
<td></td>
</tr>
<tr>
<td>Vietnam Status (X₆)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.270</td>
</tr>
<tr>
<td>Dogmatism (Y)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
the zero order correlation coefficients between all seven variables in the research design.

With Degrees of Freedom of 150, a coefficient of .134 can be considered significant at the .05 level of probability for a one-tailed test. Utilizing this criterion, all independent variables have significant zero order correlation coefficients with dogmatism. It can also be seen from Table 6 that of the 15 correlation coefficients among the six independent variables, 9 are significant. Due to the interrelated nature of most of the independent variables, it is possible that some of the six significant zero order correlations with dogmatism are partially the result of indirect effects from other variables in the design. To measure these relationships, holding the other five independent variables constant, fifth order partial correlation coefficients can be used.

Prior to considering the data on associations between the dependent and independent variables with all other variables partialed out, the salient findings of the multiple linear regression analysis, with six-independent-variables, are summarized. The multiple correlation coefficient for all seven variables \( R(y_1, x_2, \ldots, x_7) \) equals .399 \((P < .01, D.F. = 163 & 7)\). Thus, there is a significant relationship among all variables.

When the multiple regression equation is computed, indicating the relative weights of all six independent variables, the total
prediction of dogmatism by all independent variables results in an
$F$ value of 5.17 ($P < .001$, D.F. = 163 & 6). It appears that the
explanation of variability of dogmatism scores given by the factors
in the research paradigm cannot be expected by chance. On the
other hand, taking all independent variables into account only about
33% ($B_1X_1 + B_2X_2 + \ldots + B_6X_6)^2$ of the total variation in dogmatism
scores is accounted for. It is evident that prediction from all the
independent variables combined involves considerable error. Now
let us consider the results of the multiple regression analysis which
will allow us to ascertain the strength of associations of each inde­
dependent variable with dogmatism, independent of the other variables.

Fifth Order Associations Between Dogmatism
And Each Independent Variable

Utilizing fifth order partial correlation coefficients and $t$ tests, each hypothesis of association between the dependent and independent variables is discussed.

Dogmatism and months in the Army

The first hypothesis is that there is a positive relationship
between dogmatism and months in the Army, independent of all

\[ t = \frac{rYX_j}{\sqrt{(1 - rYX_j X_i X_i X_i X_i X_i)^2 / N - 7}} \]

other variables. The association between these two variables results in the data given in Table 7 below.

**TABLE 7**

**THE RELATIONSHIP OF DOGMATISM (Y) AND MONTHS IN THE ARMY (X), INDEPENDENT OF ALL OTHER VARIABLES**

<table>
<thead>
<tr>
<th>Zero Order r</th>
<th>Fifth Order r</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>rYX₁</td>
<td>rYX₁ .X₂X₃...X₆</td>
<td>(rYX₁ .X₂X₃...X₆)</td>
</tr>
<tr>
<td>.212</td>
<td>.012</td>
<td>.153</td>
</tr>
</tbody>
</table>

The above results indicate that when the effects of all other variables are partialled out, there is virtually no association between months in the Army and dogmatism. Therefore, the hypothesis of a positive relationship between these variables must be considered unsupported. The large difference between the fifth and zero order coefficients indicate that other independent variables, those most highly associated with months in the Army and dogmatism, are largely responsible for the zero order association between dogmatism and months in the Army.

**Dogmatism and social position**

The second hypothesis is that there is a negative relationship between dogmatism and social position. The association between dogmatism and social position results in the data given in Table 8
TABLE 8

THE RELATIONSHIP OF DOGMATISM (Y) AND SOCIAL POSITION (X2), INDEPENDENT OF ALL OTHER VARIABLES

<table>
<thead>
<tr>
<th>Zero Order r</th>
<th>Fifth Order r</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>(rYX2)</td>
<td>rYX2·X3·...·X6</td>
<td>(rYX2·X3·...·X6)</td>
</tr>
<tr>
<td>-.137</td>
<td>-.031</td>
<td>.396</td>
</tr>
</tbody>
</table>

The above results indicate that when the effects of all other variables are partialled out, there is no relationship between dogmatism and social position. Therefore, the hypothesis of such a relationship, independent of all other variables, must be rejected. Again, the magnitude of the zero order coefficient must be due to indirect effects of other variables.

Dogmatism and education

The third hypothesis is that there is a negative relationship between dogmatism and education. The association between these variables results in the data given in Table 9 below.

These data indicate that when the effects of all other variables are partialled out, the relationship of dogmatism and education remains significant. The hypothesis of a negative association between these variables, independent of all other variables, is supported.
TABLE 9

THE RELATIONSHIP OF DOGMATISM (Y) AND EDUCATION (X₁), INDEPENDENT OF ALL OTHER VARIABLES

<table>
<thead>
<tr>
<th>Zero Order r</th>
<th>Fifth Order r</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>rYX₃</td>
<td>rYX₃ X₁ X₂ X₄ X₅ X₆</td>
<td>(rYX₃ X₁ X₂ X₄ X₅ X₆)</td>
</tr>
<tr>
<td>-.345</td>
<td>-.217</td>
<td>2.84*</td>
</tr>
</tbody>
</table>

*P < .01, D. F. = 163

Dogmatism and draft status

The fourth hypothesis is that there is a relationship between dogmatism and draft status. The association between dogmatism and draft status results in the data given in Table 10 below.

TABLE 10

THE RELATIONSHIP OF DOGMATISM (Y) AND DRAFT STATUS (X₄), INDEPENDENT OF ALL OTHER VARIABLES

<table>
<thead>
<tr>
<th>Zero Order r</th>
<th>Fifth Order r</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>rYX₄</td>
<td>rYX₄ X₁ X₂ X₃ X₅ X₆</td>
<td>(rYX₄ X₁ X₂ X₃ X₅ X₆)</td>
</tr>
<tr>
<td>.232</td>
<td>.069</td>
<td>.883</td>
</tr>
</tbody>
</table>

The above results indicate that when the effects of all other independent variables are partialled out, there is no relationship between dogmatism and draft status. Therefore, the hypothesis of a relationship between these variables, independent of all other...
variables, must be rejected. The size of the zero order association must be largely due to effects of other independent variables.

**Dogmatism and occupational status**

The fifth hypothesis is that there is a relationship between dogmatism and occupational status. The association between these two variables results in the data given in Table II below.

**TABLE II**

THE RELATIONSHIP OF DOGMATISM (Y) AND OCCUPATIONAL STATUS (X₅), INDEPENDENT OF ALL OTHER VARIABLES

<table>
<thead>
<tr>
<th>Zero Order r</th>
<th>Fifth Order r</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>rᵧX₅</td>
<td>rᵧX₅.X₁X₂X₃X₄X₆</td>
<td>(rᵧX₅.X₁X₂X₃X₄X₆)</td>
</tr>
<tr>
<td>.182</td>
<td>.069</td>
<td>.883</td>
</tr>
</tbody>
</table>

The above results indicate that when all other variables are partialed out, there is no relationship between dogmatism and occupational status. Therefore, the hypothesis of a relationship between dogmatism and occupational status must be considered unsupported. The magnitude of the zero order association must be due to indirect effects of the other variables.

**Dogmatism and Vietnam status**

The sixth hypothesis is that there is a relationship between Vietnam status and dogmatism. The association between these two
variables results in the data given in Table 12 below.

**TABLE 12**

THE RELATIONSHIP OF DOGMATISM ($Y$) AND VIETNAM STATUS ($X_6$), INDEPENDENT OF ALL OTHER VARIABLES

<table>
<thead>
<tr>
<th>Zero Order $r$</th>
<th>Fifth Order $r$</th>
<th>$t$</th>
</tr>
</thead>
<tbody>
<tr>
<td>$r_{YX_6}$</td>
<td>$r_{YX_6.X_1X_2...X_5}$</td>
<td>(r_{YX_6.X_1X_2...X_5})</td>
</tr>
<tr>
<td>.270</td>
<td>.107</td>
<td>1.37</td>
</tr>
</tbody>
</table>

These data indicate that when all other variables are partialled out the relationship between dogmatism and Vietnam status is not statistically significant. Therefore, the hypothesis of a relationship between these two variables is unsupported. However, since only 23 of the 170 soldiers in this sample have been to Vietnam, these results must be interpreted cautiously.

In summary, the results of the fifth order partial correlations indicate that education is the only independent variable which is clearly related to dogmatism, independent of all other variables. It is also of interest that the zero order coefficient of every independent variable is substantially reduced when the effects of other variables are partialled out. This finding reflects the interrelated character of the independent variables. Some indication of the nature of these interrelations, as they influence the relative weights of months in the Army and each other independent variable in the
prediction of dogmatism, can be gained from the analysis required to answer the final hypothesis.

The Estimation of Dogmatism from Months in the Army and an Added Independent Variable

The final hypothesis states that the ability to estimate dogmatism will be greater if months in the Army and any one of the other five independent variables are used as predictors than if only months in the Army is used. This hypothesis concerns the relationship between three variables, that is, dogmatism ($Y$) - the dependent variable, months in the Army ($X_1$) - the equivalent of military experience, and a second independent variable to be introduced to each model. Since there are five independent variables which must be added (social position $X_2$, education $X_3$, draft status $X_4$, occupational status $X_5$, and Vietnam status $X_6$), five models of three variables each are derived, which are represented by the values of five, two independent variable, multiple linear regression equations.

Standardized Beta coefficients ($BY_{X_1}.X_j$, $BY_{X_j}.X_1$) which can be compared to discern the relative importance of each variable as

\[ Y = a + b_1 X_1 + b_2 X_2; \quad Y = a + b_1 X_1 + b_3 X_3; \quad Y = a + b_1 X_1 + b_4 X_4; \quad Y = a + b_1 X_1 + b_5 X_5; \quad Y = a + b_1 X_1 + b_6 X_6. \]
a predictor of dogmatism, are calculated by multiplying the net regression coefficients \((b\times X_j, X_j, b\times X_j)\) in each multiple regression equation by the ratio of the standard deviation of their attached variable to the standard deviation of the dependent variable. By squaring Beta coefficients the additional proposition of the total variations explained by the introduction of the second independent variable can be ascertained. With this data the hypothesis, proposing that the addition of a second independent variable to the regression equation will result in increased predictive ability, can be tested.

In Table 13, Beta weight values are given for each of five, two-independent-variable regression equations and compared with the proportion of total variation in dogmatism accounted for by the prediction of dogmatism from months in the Army alone. By comparing the sum of each of the two Beta weights with the Beta coefficient (.2114) obtained for months in the Army as the only predictor of dogmatism \((Y = a + b_1X_1)\), the increment in prediction is given in the last column of Table 13. It is clear that education adds the greatest amount of predictive ability and is followed by occupational status. Social position and draft status add about the same predictive ability. Vietnam status adds the least to the prediction of dogmatism from months in the Army. Since all independent variables, added to months in the Army as predictors of dogmatism, resulted in a slightly greater proportion of total variation accounted for.
### TABLE 13

**BETA COEFFICIENTS OF FIVE, TWO-INDEPENDENT-VARIABLE REGRESSION EQUATIONS IN COMPARISON TO THE BETA COEFFICIENT OF MONTHS IN THE ARMY AS THE ONLY PREDICTOR OF DOGMATISM (DS)**

<table>
<thead>
<tr>
<th>Beta coefficients for months in army and the added independent variable</th>
<th>Total weight of each two-independent-variable equation</th>
<th>% of increment in prediction of DS by two variables over months in army, alone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Months in Army Social Pos.</td>
<td>.2010</td>
<td>.3201</td>
</tr>
<tr>
<td>Months in Army Education</td>
<td>.1111</td>
<td>.4205</td>
</tr>
<tr>
<td>Months in Army Draft Status</td>
<td>.1469</td>
<td>.3248</td>
</tr>
<tr>
<td>Months in Army Occupation</td>
<td>.2056</td>
<td>.3806</td>
</tr>
<tr>
<td>Months in Army Vietnam Status</td>
<td>.0746</td>
<td>.2989</td>
</tr>
</tbody>
</table>

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
than by months in the Army alone, the hypothesis that the ability to estimate dogmatism will be greater if months in the Army and any one of the other five independent variables are used as predictors than if only months in the Army is used, is only weakly supported.

The Beta coefficient (.2114) obtained for months in the Army as the single predictor of dogmatism, can also be compared with the Beta weight for months in the Army when the effects of one variable is partialled out (BYX_j, X_j). The smaller the value is, and the greater the weight of the added variable, the greater indirect influence the added variable has on the relationship between months in the Army and dogmatism. From Table 13 it can be seen that education has the greatest indirect effect. This is followed by Vietnam status and draft status. Social position and occupation status have very little influence on the relationship between dogmatism and months in the Army. This finding suggests that educational differences, between those with relatively short and relatively long time in the Army are responsible for most of the significant zero order association between months in the Army and dogmatism. Since the effect of education is operating in the Beta weights obtained for Vietnam and draft status, it is clear that their respective indirect influences, if education were partialled out, would be relatively small.
Summary

Fifth order partial correlation coefficients have been computed between dogmatism and each independent variable. The hypotheses that each independent variable is associated with dogmatism, independent of all other variables were not supported, except for the relationship between education and dogmatism. Months in the Army, social position, draft status, occupational status, and Vietnam status were found to have no relationship with dogmatism.

By comparing Beta weights obtained from five, two-independent-variable regression models, the hypothesis that the addition of each variable to months in the Army as predictors of dogmatism will provide greater predictive ability than prediction from months in the Army alone, was found to be weakly supported. Education was found to be the primary contributor to months in the Army in the prediction of dogmatism.

These findings indicate that the contextual variables (months in the Army, occupational status, and Vietnam status), which reflect aspects of military experience, account for less variation in dogmatism than do the population variables (social position, education and draft status). In addition, the proportion of total variation in dogmatism explained by all six independent variables combined is relatively small.
CHAPTER 4
DISCUSSION

This discussion begins with a summary of the conclusions which may be drawn from the results as they concern the relationships of military experience, education and dogmatism. These results are compared with findings obtained in other studies. Consideration is also given to possible theoretical explanations for the results. This part of the discussion is followed by an outline of the limitations and weaknesses of this research effort. Finally, ideas for further research to explore various hypotheses in different settings are presented.

Conclusions

The conclusions and their explanation are discussed under two rubrics of primary and theoretical importance--the relationships of dogmatism to military experience and to educational experience. The other variables in the research design are introduced as they clarify the dynamics involved in these two major topics.
Dogmatism as a function of military experience

The primary aim of this research effort is to gain knowledge of the influence military experience may have on the belief systems of soldiers. To accomplish this, military experience has been operationally specified as months in the Army, since it is assumed that greater time in the Army necessitates greater contact with all aspects of the military organization. Two other contextual properties were introduced into the design as factors which logically enter into the conceptual model of the military as the ideal type of a closed organization. These are occupation (infantry or support) and Vietnam experience. Two population variables, education and social position, which have been shown to be related to dogmatism, were also introduced into the research design. Finally, a third population variable, draft status, was included, predicated on the rationale that the volunteer may be more amenable to the closed properties of military experience.

The conclusions which can be drawn regarding the influence of military experience on the openness or closedness of soldiers' belief-disbelief systems, from the results based on the properties included in the research paradigm, are the following: (1) Military experience is not associated with increased levels of dogmatism for soldiers in this sample, (2) There may be a tendency for Vietnam veterans to be more dogmatic, and (3) The association between
increased levels of dogmatism and greater time in the Army is primarily due to the fact that the soldiers in the Army longer tend to have less education and to be Vietnam veterans. Each of these conclusions will now be discussed in terms of their etiology and possible explanations.

The conclusion that military experience has not increased dogmatism levels is derived from the finding that when all other variables were partialled out, months in the Army had a very insignificant partial correlation with dogmatism. It is evident that for the soldiers in this sample, following basic training, longer exposure to the elements of military life has not led to closed belief systems. On the other hand, there is no consistent decrease in dogmatism over time, even for those who have been in college or are graduates. It may be recalled that Plant found decreased levels of dogmatism associated with attendance in junior colleges. More important, as pointed out previously, he found consistent decreases in control groups not attending college. It was concluded that decreased dogmatism may simply be a phenomenon of young people, whether or not in college. Since there were no consistent decreases in dogmatism associated with time in the Army for any of the educational

\(^1\)"Changes in Personality for Groups Completing Different Amounts of College Over Two Years," op. cit.
groups, it could be interpreted that military experience has prevented the reduction in dogmatism which normally occurs. Of course, this is an extrapolation which needs to be directly researched.

The fact that no increase in dogmatism was found requires explanation. The most obvious possibility is that many soldiers may not be as receptive to military ideology, authority, and regimentation as are students to the open character of the collegiate setting. It is quite possible that many soldiers in the Army several years decide to remain in, not because they enjoy military life, but rather because they see no job in civilian life which offers as many benefits as the military. This student has heard comments from some career soldiers which were just as critical, if not as broad, as criticisms of the young draftee.

Another facet of this explanation is the possibility that, when not in training or a combat zone, the properties of the closed belief system which characterize the ideal type closed military organization are not functioning to the extent necessary to alter belief systems. It will be recalled that Rokeach theorized that the primary motivation underlying a closed belief system is the desire to ward off threat and anxiety. It was also suggested that anxiety and isolation, as in concentration camps, are primary factors necessary to
alter belief systems. It is quite possible that following basic training, the threat and anxiety dissipate as time progresses. Results obtained in this study direct our attention to the possibility of this explanation.

As noted in describing the results, both high school graduates and soldiers with some college show substantial drops in average dogmatism from the groups with four months or less time in the Army (recently completing basic training) to the 5 to 11 month groups.

This trend is also found for draftees and volunteers. Based on all scores, the 5 to 11 month group has a lower average dogmatism score than does the group with four or less months in the Army. It may be that those just completing basic training have higher scores due to this preceding experience, and that after spending some time in a setting where there is less threat and anxiety, dogmatism tends to decrease.

Another aspect of the results which also directs our attention to the above speculation concerns the conclusion that Vietnam experience may lead to greater dogmatism. With all other variables held constant, Vietnam status had the second-highest partial correlation coefficient, which was almost twice as large as any of the other variables. Though not statistically significant, there does appear to

---

1Rokeach, Beliefs, Attitudes, and Values, op. cit.
be a trend which might be more pronounced if there were more than 45 in this group. The possibility is of interest since it can be assumed that, similar to basic training, experience in Vietnam is likely to involve threats and anxiety. Combat experience or the loss of a friend, coupled with the possibility of loosing one's own life, may induce the anxiety which may predispose the altering of belief systems. In addition, within a combat zone the military ideology and authority are more absolute than in non-combat zones. Since many of the Vietnam veterans tested had recently returned, it is possible that the trend toward higher dogmatism in this group is associated with Vietnam experience.

Given this information, it is suggested that non-training and non-combat military settings have not led to more closed belief-disbelief systems for the soldiers in this sample. The most likely explanation is that many soldiers may maintain a distance which allows for critical judgments of aspects of the military even though they stay in the Army. A related explanation is that the longer one is in the military, its threatening aspects may lessen, thereby not providing the conditions required to alter belief systems.

The final conclusion regarding the relationship between dogmatism and military experience is that the zero order association between dogmatism and months in the Army has nothing to do with military experience, but is attributable to the fact that those in the
Army longer tend to be less educated and Vietnam veterans. These variables were found to have the largest indirect influence on dogmatism through months in the Army. Since the regression of dogmatism on months in the Army and education alone accounts for the greatest addition of the variation explained by all six variables, and the prediction of dogmatism is weighted 3 to 1 on education, it is accurate to state that the relationship between dogmatism and months in the Army is primarily due to education. Vietnam experience makes a contribution, but it is relatively small. At this point, it is appropriate to discuss the results and conclusions which can be drawn regarding the relationship of dogmatism to educational attainment.

Dogmatism as a function of education

It is of interest to compare our results for the four educational categories with results reported in other settings. In a summary of normative DS scores on form E, Alter and White\(^1\) report that women score consistently lower than men and suggest that the difference may be due to a few items in the Scale. These authors also found wide variations in the means reported which indicates that the DS may be sensitive to subcultural differences. For these reasons we shall consider only data reported for males and the comparisons

must be interpreted with the knowledge that there may be subcultural influences operating.

Based on male students at six California junior colleges, Telford and Plant report DS scale means which range from 162.37 to 169.44 for samples ranging in size from 133 to 734. For a sample of 1000 male students (70% Mormon), Alter and White report a mean DS score of 151.95. Marcus, at U. C. L. A., reports a mean DS score of 146 for 143 college freshmen (male and female), and a mean of 138 for 52 first year medical students at the same institution. Based on male students at these different universities, Plant published the following mean DS scores: San Jose State College students, $\bar{X} = 155.86$, $N = 778$; University of Southern California students, $\bar{X} = 166.0$, $N = 287$; Michigan State University students, $\bar{X} = 168.19$, $N = 1436$. Unfortunately, many studies report means for "high" and "low" dogmatism but do not give total sample means. Also, many fail to differentiate male and female scores.

This study resulted in an overall mean dogmatism score of 148.57

1op. cit.
2ibid.
3op. cit.
4"Longitudinal Changes in Intolerance and Authoritarianism for Subjects Differing in Amounts of College Over Four Years," op. cit.
and mean education of 13.71 for 170 soldiers. The 53 college graduates obtained a mean of 136.11 and the 46 with some college experience obtained a mean of 153.00; a mean of 150.66 for the 50 high school graduates and a mean of 165.29 for the 21 soldiers with less than a high school education (Table 5). The mean dogmatism score for college graduates is very close to the mean for first year medical students at U. C. L. A. (136 and 138 respectively). This was the only mean score for male college graduates found in the literature. Generally, the mean dogmatism scores for the high school graduates and those with some college appear to be slightly lower than means reported for college students on various campuses. However, the means for soldiers of these educational groups are well within the range of some means reported at various colleges (University of Utah, U. C. L. A., and San Jose State College). Surprisingly, the mean dogmatism scores obtained for soldiers with less than a high school education is very close to means reported at several universities (California Junior colleges, U. S. C., and Michigan State). However, this fact should not be interpreted to mean that the present study resulted in a rather narrow range of dogmatism scores. The standard deviation obtained fits quite well within the range of those reported in other studies. A possible explanation for the relatively low scores obtained by non-college soldiers in this sample is that the studies cited above were all conducted in the early 1960's. Social
events and issues may have had a lowering effect in dogmatism levels since that time.

It appears that the dogmatism scores in this study approximate those collected in many university settings. As we have seen, the trend toward lower dogmatism associated with higher education is supported by the results of this study. The fact that this finding has been supported on soldiers in this military setting leads to the conclusion that the influence of higher education on belief systems has not been significantly altered by military experience. (From the perspective of a student who was recently drafted for two years, this is a gratifying conclusion!) Let us discuss this finding in terms of the conceptual model of open and closed organizations.

College experience was introduced into the theoretical argument as an experience in the ideal type of an open organization. It was proposed that the open nature of this experience leads to an accelerated decrease in dogmatism among students. This trend was shown to be consistently supported by research in university settings. These findings are affirmed by the present study. In addition, finding this trend among soldiers who have all gone through basic training indicates that the influence of higher education is not simply a temporary decrease during the college years. Apparently, the association of higher education and relatively open belief systems has enough stability to be relatively unaffected by induction and Army basic
training. Having considered the major conclusions and explanations, the limitations of this research effort will be discussed.

Limitations

Probably the greatest limitation of this study is the after only, cross-sectional design. As in any research design of this type, there is the possibility that the sample groups may differ in some important properties not included in the design, and not compensated for by the methods of partial correlation and multiple regression. Of course, there are factors which have not been considered. Potentially one of the most important is religious affiliation and participation. Several studies have indicated a relationship between commitment to religion and dogmatism.¹

Other factors which have not been considered are race, geographical area of permanent residence, and non-combat overseas experience. With a before and after design, there would be a greater potential for controlling these and other variables. However, in the present case, the extent to which they may be influencing the variation of dogmatism scores is unknown. The fact that a relatively small proportion of the total variation in dogmatism scores is accounted for by all six independent variables in the design suggests that there are

important variables which have not been considered.

Another limitation of the present study lies in the possible unrepresentativeness of the sample. As mentioned previously, many soldiers processing into Walter Reed Army Medical Center are selected on the basis of specialized training or education. This is particularly true for those with only four months or less time in the Army.\(^1\) This fact is reflected by the very high average education of this group (14.91) and by the relatively high education for the sample as a whole (13.71). For this reason the trend toward lower education with greater time in the Army is probably higher than it would be in the general Army population. This same selectivity has resulted in a spuriously high proportion of support personnel (147) over infantry soldiers (23). Though the regression analysis partially controls these factors, the number of infantry in cells based on time in the Army is probably too small to obtain any significant trend. Thus the lack of any trend on this factor may not be a reliable finding.

**Indications for Future Research**

To determine the effects of basic training and experience in a combat area, before and after administrations of the dogmatism scale to these groups and controls would be of great value. Such longitudinal

---

\(^1\) Further analysis, distinguishing between career and non-career personnel (those with over three years of service contrasted with less than three years), might result in a significant difference in dogmatism.
controls would answer many of the questions left open by the present study. Of course, such studies of other branches of the military, such as the Marines or Special Forces, where the properties of the ideal type of closed organization may be found in the more "pure" form would be fertile research grounds. It would be also of interest to test military officers.

The relationship of dogmatism and educational experience needs further exploration. Are the same results obtained at technical institutions as in liberal arts schools or for different academic majors? What is the role of social position in the trend toward lower dogmatism during college? Are there decreases in dogmatism during college among militants and "sympathizers" in the New Left? Would decreases in dogmatism be found in military schools such as West Point?

This researcher has found very little research on factors affecting dogmatism levels prior to college. Criteria for classifying families as relatively "open" or "closed" could be developed. Such an approach may provide information on the development of relatively open or closed belief systems.

Final Statement

The present research effort is a first attempt to investigate dogmatism and military experience. The complicated nature of the
many referents of military experience has left more questions than answers in attempting to understand the manner in which these experiences may influence belief systems. It is evident that military experience is a multifarious concept involving many properties. It is suggested that a wide variety of follow-up research in settings which reflect the many properties of military experience only touched upon thus far is needed. The value of future research in military settings involving stress, where the role of anxiety and dogmatism could be explored, is particularly indicated by the present analysis. Longitudinal, before and after designs would be most appropriate for obtaining information on the various aspects of military experience as they may be related to dogmatism.
APPENDIX

DOGMATISM SCALE

The following is a study of what the general public thinks and feels about a number of important social and personal questions. The best answer to each statement below is your personal opinion. We have tried to cover many different and opposing points of view; you may find yourself agreeing strongly with some of the statements, disagreeing just as strongly with others, and perhaps uncertain about others; whether you agree or disagree with any statement, you can be sure that many people feel the same as you do.

Mark each statement in the left margin according to how much you agree or disagree with it. Please mark every one.

Write +1, +2, +3, or -1, -2, -3, depending on how you feel in each case.

+1: I AGREE A LITTLE
-1: I DISAGREE A LITTLE

+2: I AGREE ON THE WHOLE
-2: I DISAGREE ON THE WHOLE

+3: I AGREE VERY MUCH
-3: I DISAGREE VERY MUCH

1. The United States and Russia have just about nothing in common.

2. The highest form of government is a democracy and the highest form of democracy is a government run by those who are most intelligent.

3. Even though freedom of speech for all groups is a worthwhile goal, it is unfortunately necessary to restrict the freedom of certain political groups.

4. It is only natural that a person would have a much better acquaintance with ideas he believes in than with ideas he opposes.
5. Man on his own is a helpless and miserable creature.

6. Fundamentally, the world we live in is a pretty lonesome place.

7. Most people just don't give a "damn" for others.

8. I'd like it if I could find someone who would tell me how to solve my personal problems.

9. It is only natural for a person to be rather fearful of the future.

10. There is so much to be done and so little time to do it in.

11. Once I get wound up in a heated discussion I just can't stop.

12. In a discussion I often find it necessary to repeat myself several times to make sure I am being understood.

13. In a heated discussion I generally become so absorbed in what I am going to say that I forget to listen to what the others are saying.

14. It is better to be a dead hero than to be a live coward.

15. While I don't like to admit this even to myself, my secret ambition is to become a great man, like Einstein, or Beethoven, or Shakespeare.

16. The main thing in life is for a person to want to do something important.

17. If given the chance I would do something of great benefit to the world.

18. In the history of mankind there have probably been just a handful of really great thinkers.

19. There are a number of people I have come to hate because of the things they stand for.

20. A man who does not believe in some great cause has not really lived.
21. It is only when a person devotes himself to an idea or cause that life becomes meaningful.

22. Of all the different philosophies which exist in this world there is probably only one which is correct.

23. A person who gets enthusiastic about too many causes is likely to be a pretty "wissy-washy" sort of person.

24. To compromise with our political opponents is dangerous because it usually leads to the betrayal of our own sides.

25. When it comes to differences of opinion in religion we must be careful not to compromise with those who believe differently from the way we do.

26. In times like these, a person must be pretty selfish if he considers primarily his own happiness.

27. The worst crime a person could commit is to attack publicly the people who believe in the same thing he does.

28. In times like these it is often necessary to be more on guard against ideas put out by people or groups in one's own camp than by those in the opposing camp.

29. A group which tolerates too much difference of opinion among its own members cannot exist for long.

30. There are two kinds of people in this world: those who are for the truth and those who are against the truth.

31. My blood boils whenever a person stubbornly refuses to admit he's wrong.

32. A person who thinks primarily of his own happiness is beneath contempt.

33. Most of the ideas which get printed nowadays aren't worth the paper they are printed on.

34. In this complicated world of ours the only way we can know what's going on is to rely on leaders or experts who can be trusted.
35. It is often desirable to reserve judgment about what's going on until one has had a chance to hear the opinions of those one respects.

36. In the long run the best way to live is to pick friends and associates whose tastes and beliefs are the same as one's own.

37. The present is all too often full of unhappiness. It is only the future that counts.

38. If a man is to accomplish his mission in life it is sometimes necessary to gamble "all or nothing at all."

39. Unfortunately, a good many people with whom I have discussed important social and moral problems don't really understand what's going on.

40. Most people just don't know what's good for them.
BIBLIOGRAPHY

Articles and Periodicals


Hanson, D. J., "Dogmatism and Authoritarianism," Journal of Social Psychology, LXXVI (October 1968), 89-95.


Lehman, I. J., "Changes in Critical Thinking, Attitudes and Values from Freshman to Senior Years," *Journal of Educational Psychology*, LIV (December 1963), 305-315.


Plant, W. T., "Rokeach's Dogmatism Scale as a Measure of General Authoritarianism," *Psychological Reports*, VI (February 1960), 164.


Sanford, N., "Personality Development During the College Years," *Journal of Social Issues*, XII (No. 4 - 1956), 3-70.


Books


**Bulletins and Monographs**


